

**TSG-RAN Meeting #7
Madrid, Spain, 13 - 15 March 2000**

TSGRP#7(00)0106

Title: Agreed CRs to TS 25.433

Source: TSG-RAN WG3

Agenda item: 6.4.3

Tdoc_Num	Specification	CR_Num	Revision_Num	CR_Subject	CR_Category	WG_Status	Cur_Ver_Num	New_Ver_Num
R3-000225	25.433	002		Editorial Improvements of NBAP version 3.0.0	D	agreed	3.0.0	3.1.0
R3-000024	25.433	003		Insertion of missing mapping table; Functions to Elementary Procedures	F	agreed	3.0.0	3.1.0
R3-000025	25.433	004		Replacement of the Error Indication procedure with the procedure text agreed at RAN WG3 #9	F	agreed	3.0.0	3.1.0
R3-000081	25.433	005		Missing Cause Values in the RL Failure procedure	F	agreed	3.0.0	3.1.0
R3-000226	25.433	007		Scope of Transaction id	F	agreed	3.0.0	3.1.0
R3-000015	25.433	013		Repetition of compressed mode information elements.	F	agreed	3.0.0	3.1.0
R3-000012	25.433	014		Changing Eb/N0 to SIR.	B	agreed	3.0.0	3.1.0
R3-000138	25.433	015		TPC Step Size defined for TDD	F	agreed	3.0.0	3.1.0
R3-000259	25.433	017		Simplified Audit procedure	C	agreed	3.0.0	3.1.0
R3-000080	25.433	018		Use of Error Indication procedure on signalling	D	agreed	3.0.0	3.1.0

				bearers corresponding to the Node B control port				
R3-000088	25.433	020		Correction of number of possible CPICHs in a cell	F	agreed	3.0.0	3.1.0
R3-000046	25.433	022		CR to 25.433: Editorial Correction of the ASN.1 with the Syntax Checking of the NBAP : Common Module	C	agreed	3.0.0	3.1.0
R3-000219	25.433	023		CR to 25.433: Editorial Correction of the ASN.1 with the Syntax Checking of the NBAP : Elementary Procedure Module	C	agreed	3.0.0	3.1.0
R3-000284	25.433	025		CR to 25.433: Editorial Correction of the ASN.1 with the Syntax Checking of the NBAP : Information Element Module	C	agreed	3.0.0	3.1.0
R3-000222	25.433	026		CR to 25.433: Editorial Correction of the ASN.1 with the Syntax Checking of the NBAP : Constant Module	C	agreed	3.0.0	3.1.0
R3-000298	25.433	028		Modifications to RADIO LINK ADDITION procedure and related parameters	F	agreed	3.0.0	3.1.0
R3-000294	25.433	029		Frame Offset Correction	F	agreed	3.0.0	3.1.0
R3-000492	25.433	036		Alignment to R3 definition of puncturing limit range and step size	F	agreed	3.0.0	3.1.0
R3-000118	25.433	009		NBAP Extendibility	C	agreed	3.0.0	3.1.0

R3-000229	25.433	010		Correction of Antenna Diversity parameters for TDD	F	agreed	3.0.0	3.1.0
R3-000487	25.433	035		Clarification on measurement characteristics	F	agreed	3.0.0	3.1.0
R3-000494	25.433	019	1	Update of system information procedure	F	agreed	3.0.0	3.1.0

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.433 CR 002

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **TSG RAN #7**

list expected approval meeting # here
↑

for approval
for information

strategic
non-strategic (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: TSG-RAN WG3 **Date:** 24-28 Jan. 2000

Subject: Editorial Improvements of NBAP version 3.0.0

Work item:

Category: F Correction **Release:** Phase 2
A Corresponds to a correction in an earlier release Release 96
(only one category shall be marked with an X) B Addition of feature Release 97
C Functional modification of feature Release 98
D Editorial modification Release 99
Release 00

Reason for change: The current version of NBAP contains some editorial deficiencies and incorrect descriptions that need to be corrected.

Clauses affected: 2, 3.1, 3.3, 5, 7, 8.1, 8.2.1, 8.2.2, 8.2.3.2, 8.2.4, 8.2.5.2, 8.2.6.2, 8.2.7.2, 8.2.8, 8.2.9, 8.2.10, 8.2.11, 8.2.12, 8.2.13, 8.2.14, 8.2.15, 8.2.16, 8.2.17, 8.3.1, 8.3.2, 8.3.3, 8.3.4, 8.3.5, 8.3.6, 8.3.7, 8.3.8, 8.3.9, 8.3.10, 8.3.11, 8.3.12, 8.3.13, 8.3.14, 8.3.15, 8.3.16, 8.4, 9.1 [except 9.1.32 to 34, 9.1.39 to 46, 9.1.48(second), and 9.1.49], 9.2.1.1, 9.2.1.2, 9.2.1.5, 9.2.1.6, 9.2.1.7, 9.2.1.9, 9.2.1.10, 9.2.1.11, 9.2.1.12, 9.2.1.13, 9.2.1.15, 9.2.1.16, 9.2.1.20, 9.2.1.21, 9.2.1.22, 9.2.1.23, 9.2.1.24, 9.2.1.33, 9.2.1.34, 9.2.1.35, 9.2.1.36, 9.2.1.37, 9.2.1.38, 9.2.1.39, 9.2.1.41, 9.2.1.42, 9.2.1.43, 9.2.1.46, 9.2.1.51, 9.2.1.52, 9.2.1.55, 9.2.1.59, 9.2.1.60, 9.2.2.1, 9.2.2.3, 9.2.2.13, 9.2.2.19, 9.2.2.20, 9.2.2.24, 9.2.2.25, 9.2.2.26, 9.2.2.28, 9.2.2.29, 9.2.2.31, 9.2.2.32, 9.2.2.37, 9.2.2.38, 9.2.2.39, 9.2.2.44, 9.2.2.45, 9.2.2.47, 9.2.2.48, 9.2.2.50, 9.2.3.3, 9.2.3.5, 9.2.3.7, 9.2.3.8, 9.2.3.9, 9.2.3.11, 9.2.3.14, 9.2.3.15, 9.2.3.17, 9.2.3.19, 9.2.3.20, 9.2.3.22, 9.2.3.23, 9.2.3.24, 9.2.3.25, 9.3.3, and 9.3.4.

Other specs affected: Other 3G core specifications → List of CRs:
Other GSM core specifications → List of CRs:
MS test specifications → List of CRs:
BSS test specifications → List of CRs:
O&M specifications → List of CRs:

Other comments: The paragraph style of the last paragraph of 8.2.2.2 is changed (from paragraph style "B1" to "Normal") to make clear that the paragraph is not related to the "sub-heading" two paragraphs above the paragraph.

Two paragraphs of 8.2.17.2 have been removed and reinserted to get rid of the incorrectly inserted underline formatting of the paragraphs.

The first paragraph of 8.3.1.3 have been removed and reinserted to get rid of the incorrect paragraph format (the paragraph format is changed from paragraph style "Editor's note" to "Normal") to make clear that the paragraph is not an editor's note.

The "Allowed Slot Format Information" is changed to **bold** since it is a group and the group content (RACH Slot Format) is indented in chapter 9.1.2.1 and 9.1.5.1.

3G TS 25.433 V3.0.0 (2000-01)

Technical Specification

**3rd Generation Partnership Project;
Technical Specification Group Radio Access Network;
UTRAN Iub Interface NBAP Signalling
(3G TS 25.433 version 3.0.0 Release 1999)**



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Reference

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Keywords

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~~3G TS 25.433 version 3.0.0 Release 1999~~

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Foreword

This Technical Specification has been produced by the 3GPP.

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

Version x.y.z

where:

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

1 Scope

The present document specifies the standards for NBAP specification to be used 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.

- [1] 3G TS 25.401: "UTRAN Overall Description".
- [2] 3G TS 25.426: "UTRAN I_{ur} and I_{ub} 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] 3G TS 25.215: "Physical layer – Measurements (FDD)".
- [5] 3G TS 25.225: "Physical layer – Measurements (TDD)".
- [6] 3G TS 25.430: "UTRAN Iub General Aspect and Principle".
- [7] 3G TS 25.211: "Physical channels and mapping of transport channels onto physical channels (FDD)".
- [8] 3G TS 25.212: "Multiplexing and channel coding (FDD)".
- [9] 3G TS 25.213: "Spreading and modulation (FDD)".
- [10] 3G TS 25.214: "Physical layer procedures (FDD)".
- [11] X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)".
- [12] X.680, (12/94) "Information Technology - Abstract Syntax Notation One (ASN.1): Specification of basic notation".
- [13] X.681, (12/94) "Information Technology - Abstract Syntax Notation One (ASN.1): Information object specification"

3 Definitions, symbols and abbreviations

3.1 Definitions

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

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 successfully completed with the receipt of the response.

Unsuccessful

- A signalling message explicitly indicates that the EP failed.
- On time supervision expiry (i.e. absence of expected response). Whether or not any Class 1 procedure will have a timer on NBAP is FFS. To ~~de-be~~ sorted out when discussing the details of the error cases.

Class 2 EPs are considered always successful.

3.2 Symbols

No special symbols are defined in this document.

3.3 Abbreviations

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

ASN.1	Abstract Syntax Notation One
ATM	Asynchronous Transfer Mode
BCCH	Broadcast Control Channel
CCPCH	Common Control Physical Channel
CFN	Connection Frame Number
CRNC	Controlling Radio Network Controller
DCH	Dedicated Channel
DL	Downlink
DPCCCH	Dedicated Physical Control Channel
DPCH	Dedicated Physical Channel
DPDCH	Dedicated Physical Data Channel
DRNC	Drift Radio Network Controller
DSCH	Downlink Shared Channel
FDD	Frequency Division Duplex
FP	Frame Protocol
L1	Layer 1
L2	Layer 2
NBAP	Node B Application Part
O&M	Operation and Management
QoS	Quality of Service
RL	Radio Link
RNC	Radio Network Controller
RRC	Radio Resource Control
SRNC	Serving Radio Network Controller
TDD	Time Division Duplex
TFC	Transport Format Combination
TFCI	Transport Format Combination Indicator
TFCSet	Transport Format Combination Set
TFS	Transport Format Set

UE	User Equipment
UL	Uplink
UTRAN	UMTS Terrestrial Radio Access Network
<u>USCH</u>	<u>Uplink Shared Channel</u>

4 General

4.1 Procedure Specification Principles

Node B Application Part, NBAP, includes common procedures and dedicated procedures. It covers procedures for paging distribution, broadcast system information, request / complete / release of dedicated resources and management of logical resources (logical O&M [1]).

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.

4.2 Forwards and Backwards Compatibility

The forwards and backwards compatibility of the protocol is assured by a mechanism where all current and future the 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.

5 NBAP Services

The NBAP offers the following services:

5.14. Parallel Transactions:

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

6 Services Expected from Signalling Transport

Contents are missing.

7 Functions of NBAP

The NBAP protocol has 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.

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~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
~~3G TS 25.433 version 3.0.0 Release 1999~~

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

~~—Synchronisation Management.(TDD) This function allows the CRNC to manage the synchronisation of a TDD cell in a Node B.~~

- Radio Link Management. This function allows the CRNC to manage radio links using dedicated resources in a ~~Node B~~Node B.
- Radio Link Supervision. This function allows the CRNC to report failures and restorations of a Radio Link.
- Measurements on Dedicated Resources. This function allows the CRNC to initiate measurements in the ~~Node B~~Node B. The function also allows the Node B to report the result of the measurements.
- DL Power Drifting Correction (~~(FDD)-1~~). 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~~General error Error situationsSituations. This function allows reporting of general error situations, for which function specific error messages have not been defined.

These functions are implemented by one or several NBAP elementary procedures described in the following section.

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 1: Class 1

Elementary Procedure	Message	Successful Outcome	Unsuccessful Outcome	
		Response message	Response message	Timer
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 DELETE DELETION REQUEST	CELL DELETE DELETION RESPONSE		
Common Transport Channel Setup	COMMON TRANSPORT CHANNEL SETUP REQUEST	COMMON TRANSPORT CHANNEL SETUP RESPONSE	COMMON TRANSPORT CHANNEL SETUP FAILURE	
Common Transport Channel Reconfigure 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		
Audit	AUDIT REQUEST	AUDIT RESPONSE		
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	
Synchronised Compressed Mode Control Preparation	COMPRESSED MODE PREPARE	COMPRESSED MODE READY	COMPRESSED MODE FAILURE	

Table 2: 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 Control Commit	COMPRESSED MODE COMMIT
Compressed Mode Control Cancellation	COMPRESSED MODE CANCEL
Unblock Resource	UNBLOCK RESOURCE INDICATION
Error Indication	ERROR 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, AICH, ~~(FDD)-~~ FACH, PCH, and RACH.

8.2.1.2 Successful Operation

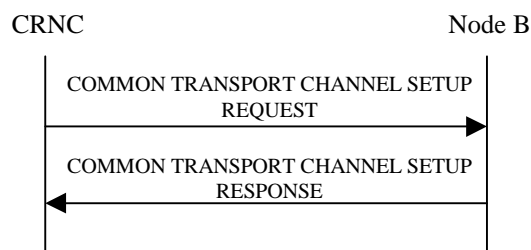


Figure 1: Common Transport Channel Setup procedure, **successful-Successful Operationcase**

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 FACHes, PCH and PICH related to that Secondary CCPCH], or

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

- one PRACH, and one RACH and one AICH ~~(FDD)~~ related to that PRACH at the time.

~~[FDD- 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. ~~[FDD-~~The handling of the optional *STTD* IE is FFS.]

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

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

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains one or several FACHes, 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. [FDD- The handling of the optional *STTD* IE for PICH is FFS.]

PRACH:

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

[FDD- The handling of the optional *STTD* IE for AICH ~~(FDD)~~ is FFS.]

After a successful procedure, the defined common transport channels and the common physical channels have adopted the operational state Enabled in Node B and the common transport channels exist on the Uu interface. The Node B shall store the new-value of *Configuration Generation ID* IE and it shall respond with the COMMON TRANSPORT CHANNEL SETUP RESPONSE message with the transport layer information for the configured common transport channels.

8.2.1.3 Unsuccessful Operation

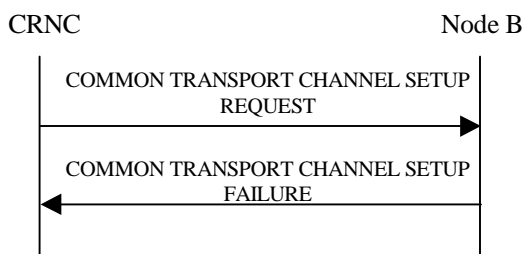


Figure 2: Common Transport Channel Setup procedure, unsuccessful- Unsuccessful Operation case

If the Node B is not able to support all part of the configuration, it shall reject the configuration of all the channels in the COMMON TRANSPORT CHANNEL SETUP REQUEST message. The *Cause Value* IE shall be set to an appropriate value. The new-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.

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Typical cause values are as follows:

Radio Network Layer Cause

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

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error

Miscellaneous Cause

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

8.2.1.4 Abnormal Conditions

If the C-ID in the COMMON TRANSPORT CHANNEL SETUP REQUEST message is not existing in the Node B, it shall respond with the COMMON TRANSPORT CHANNEL SETUP FAILURE message with the Cause IE = ~~'unknown-'~~"Unknown C-ID-".

8.2.2 Common Transport Channel Reconfiguration

8.2.2.1 General

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

8.2.2.2 Successful Operation

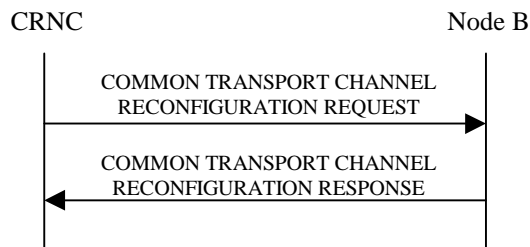


Figure 3: Common Transport Channel Reconfiguration, ~~successful~~ Successful Operation

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

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

- FACH:** When one or several FACHes are present Node B reconfigures the indicated FACHes.
- [FDD]- If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *Max FACH Power* IE, the Node B shall reconfigure the maximum power that the FACH may use.]
- If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *ToAWS* IE, the Node B shall reconfigure the time of arrival window startpoint that the FACH shall use.
- If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *ToAWE* IE, the Node B shall reconfigure the time of arrival window endpoint that the FACH shall use.
- PCH:** When one PCH [TDD- or several PCHs] is present Node B reconfigures the indicated PCH [TDD- PCHs].
- [FDD- If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *PCH Power* IE, the Node B shall reconfigure the power that the PCH shall use.]
- If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *ToAWS* IE, the Node B shall reconfigure the time of arrival window startpoint that the PCH shall use.
- If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *ToAWE* IE, the Node B shall reconfigure the time of arrival window endpoint that the PCH shall use.
- PICH:** When a PICH is present Node B reconfigures 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 reconfigures 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 reconfigures 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.

After a successful procedure, the channels have adopted the new configuration in Node B. Node B shall store the new value of *Configuration Generation ID* IE, and the Node B shall respond with the COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE message.

8.2.2.3 Unsuccessful Operation

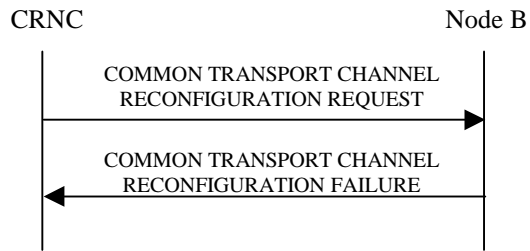


Figure 4: Common Transport Channel Reconfiguration procedure, ~~unsuccessful~~ Unsuccessful Operation

If the Node B is not able to support all parts of the configuration, it shall reject the configuration of all the channels in the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message. The *Cause Value* IE shall be set to an appropriate value. The ~~new~~-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 SETUP FAILURE message,~~ the Node B shall respond with the COMMON TRANSPORT CHANNEL RECONGURATION FAILURE message.

Typical cause values are as follows:

Radio Network Layer Cause

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

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error

Miscellaneous Cause

- O&M Intervention
- Unspecified ~~Failure~~
- Control processing overload
- HW failure

8.2.2.4 Abnormal Conditions

If the C-ID in the COMMON TRANSPORT CHANNEL RECONGURATION REQUEST message is not existing in the Node B, it shall respond with the COMMON TRANSPORT CHANNEL RECONGURATION FAILURE message with the *Cause* IE = '~~unknown~~'Unknown C-ID'.

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 setup by the Common Transport Channel Setup procedure in a cell.

8.2.3.2 Successful Operation

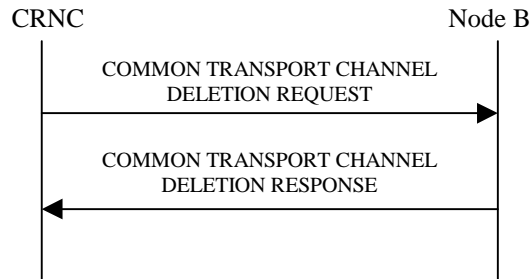


Figure 5: Common Transport Channel Deletion procedure, successful Successful Operation case

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 FACHes 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 PCH 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. Node B shall store the new 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, 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.

8.2.4.2 Successful Operation

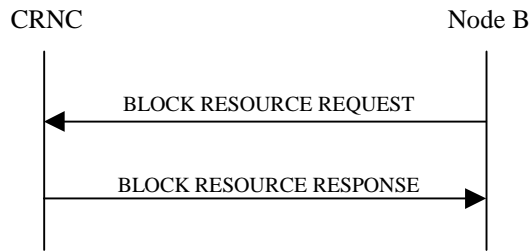


Figure 66: Block Resource procedure, Successful Operation

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.

When Since the only logical resource that can be indicated is a cell, all associated physical channels and transport channels 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 shall consider the logical resources 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

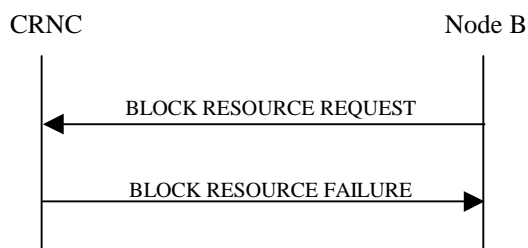


Figure 77: Block Resource procedure, Unsuccessful Operation

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~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
~~3G TS 25.433 version 3.0.0 Release 1999~~

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

8.2.4.4 Abnormal Conditions

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8.2.5 Unblock Resource

8.2.5.1 General

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

8.2.5.2 Successful Operation



Figure 88: Unblock Resource procedure, Successful Operation

The procedure is initiated with an UNBLOCK RESOURCE INDICATION message sent from the Node B to the CRNC. Upon reception of the UNBLOCK RESOURCE INDICATION message, the CRNC may permit the use of the logical resources.

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

8.2.5.3 Abnormal Conditions

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8.2.6 Audit Required

8.2.6.1 General

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

8.2.6.2 Successful Operation

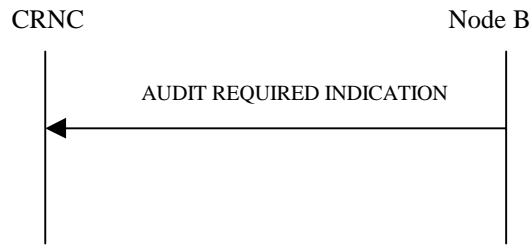


Figure 9-9: Audit Required procedure, Successful Operation case

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 indication procedure.

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

8.2.6.3 Abnormal Conditions

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8.2.7 Audit

8.2.7.1 General

This procedure is executed by the CRNC to perform an audit of the configuration and status of the logical resources in the Node B. Additionally, the audit may cause the CRNC and Node B to re-sync to the logical resources known by the CRNC and to the status information from the Node B.

8.2.7.2 Successful Operation

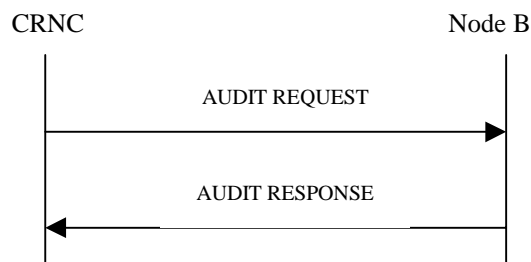


Figure 10-10: Audit procedure, Successful Operation case

The procedure is initiated with an AUDIT REQUEST message sent from the CRNC to the Node B. The configuration returned by the ~~Node B~~ Node B in the AUDIT RESPONSE shall be the configuration existing upon reception of the AUDIT REQUEST. Upon reception by the Node B, with each pair of *C-ID* IE *Configuration Generation ID* IE that is present in the message, the Node B compares the stored Configuration Generation ID for the corresponding cell.

For each cell where the *Configuration Generation ID* IE value does not match the stored Configuration Generation ID value, the Node B shall not take any action.

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For each cell where the *Configuration Generation ID* IE value matches the stored Configuration Generation ID value, the Node B shall include the *Cell Information* IE group for that cell in the AUDIT RESPONSE message.

The following condition applies to the [FDD - Primary SCH Information IE group, Secondary SCH Information IE group], [TDD - SCH Information IE group, PSCH Information IE group], Primary CCPCH Information IE group, Secondary CCPCH Information IE group, [FDD - Primary CPICH Information IE group, Secondary CPICH Information IE group], BCH Information IE group, PCH Information IE group, PICH Information IE group, FACH Information IE group, RACH Information IE group, and [FDD - AICH Information IE group]. The Node B shall include the IE group within the *Cell Information* IE group, if that resource is present in the Node B for that cell.

The Node B shall include in the AUDIT RESPONSE message a *Communication Control Port Information* IE group for each communication control port present in the Node B

The Node B shall include in the AUDIT RESPONSE message a *Local Cell Information* IE group for each local cell present in the Node B. ~~The Node B shall include the *Number Of Channel Elements* IE if the value is known by the Node B.~~ The Node B shall include the *Maximum DL Power Capability* IE if the value is known by the Node B.

For each cell existing in the Node B but not indicated in the AUDIT REQUEST message, the associated cell configuration information shall be removed from the Node B including any related common physical channels and common transport channels. For each cell not existing in the Node B but indicated in the AUDIT REQUEST message, the Node B shall not take any action.

Upon reception by the CRNC of the AUDIT RESPONSE message, the CRNC compares the received list of C-ID with the expected list of C-IDs.

For each missing cell, a configuration error has occurred and recovery actions should be taken by the CRNC.

8.2.7.3 Unsuccessful Operation

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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 ~~common~~ measurements on common resources in a Node B.

8.2.8.2 Successful Operation

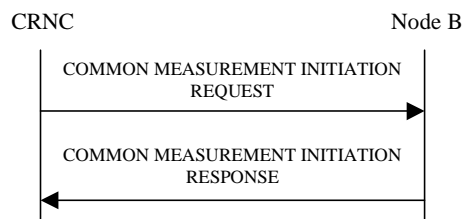


Figure 1144: Common Measurement Request Initiation procedure: Successful Operation

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.

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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.]

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

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

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

If the *Report Characteristics* IE ~~is set to indicates~~-'Event A', the Node B shall initiate a 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 indicates~~-'Event B', the Node B shall initiate a 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 indicates~~-'Event C', the Node B shall initiate a Measurement Reporting procedure when the measured entity rises more than the requested threshold within the requested time.

If the *Report Characteristics* IE ~~is set to indicates~~-'Event D', the Node B shall initiate a 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 indicates~~-'Event E', the Node B shall initiate a Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). The Node B shall also initiate a Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time' (Report B). If the *Report Periodicity Frequency* IE is provided, the Node B shall initiate Measurement Reporting procedures periodically, with the requested frequency, between Report A and Report B. 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 indicates~~-'Event F', the Node B shall initiate a Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). The Node B shall also initiate a Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time' (Report B). If the *Report Periodicity Frequency* IE is provided, the Node B shall initiate Measurement Reporting procedures periodically, with the requested frequency, between Report A and Report B. 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 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 a Measurement Reporting procedure immediately, and then continue with the measurements as ~~specified in the COMMON MEASUREMENT INITIATION REQUEST message in normal operation.~~

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 indicated~~-'On-Demand', the COMMON MEASUREMENT INITIATION RESPONSE message shall contain the measurement result.

8.2.8.3 Unsuccessful Operation

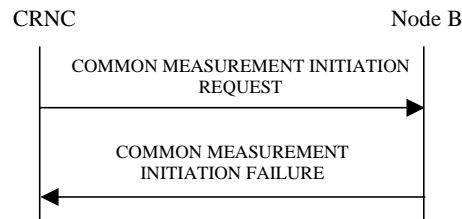


Figure 1242: Common Measurement Request Initiation procedure: Unsuccessful Operation

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

Typical cause values are as follows:

Radio Network Layer Cause

- Measurement not supported for the object.

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

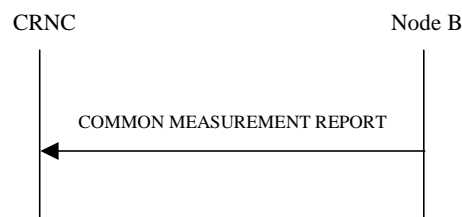


Figure 1343: Common Measurement Reporting procedure: Successful Operation

If the requested measurement reporting criteria are met, the Node B shall initiate a Measurement Reporting procedure. The COMMON MEASUREMENT REPORT message shall use the Node B control port. Unless specified below, the meaning of the parameters are given in other specifications.

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.

8.2.9.3 Abnormal Conditions

-

8.2.10 Common Measurement Termination

8.2.10.1 General

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

8.2.10.2 Successful Operation



Figure 1414: 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



Figure 1515: 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 no longer can be reported.

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 eOperation

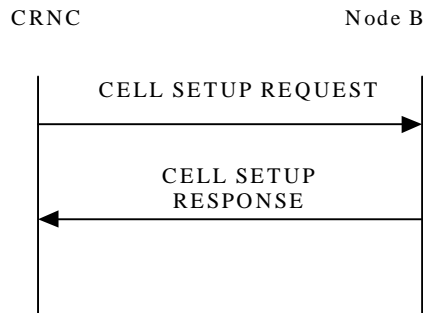


Figure 16: Cell Setup procedure: Successful Operation

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 the *Secondary CPICH Information* IE group the Node B shall configure and activate the Secondary CPICH in the cell according to received configuration data.]

The *Maximum ~~transmission~~ 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.

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

[FDD- When the cell is successfully configured CPICH(s), Primary SCH, Secondary SCH, Primary CCPCH and BCH exist.][TDD- When the cell is successfully configured PSCH, SCH, Primary CCPCH and BCH exist and the switching-points for the TDD frame structure are defined.]

8.2.12.3 Unsuccessful eOperation

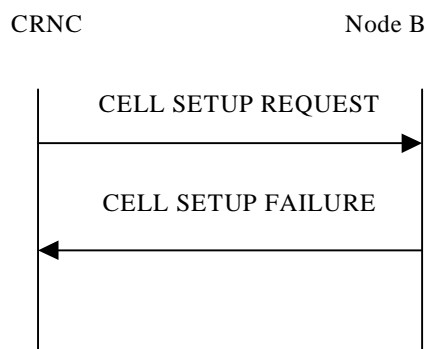


Figure 17: Cell Setup procedure: Unsuccessful Operation

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~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
~~3G TS 25.433 version 3.0.0 Release 1999~~

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 Non 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.

8.2.12.4 Abnormal Conditions

If the CELL SETUP REQUEST message includes a Local Cell ID IE that is Non Existing in Node B the Node B shall send the CELL SETUP FAILURE message as response.

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

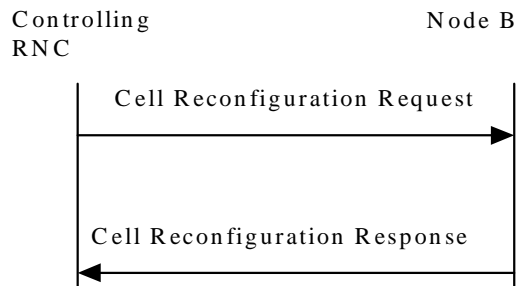


Figure 18: Cell Reconfiguration procedure: Successful Operation

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 group 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 group 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 group the Node B shall reconfigure Primary CPICH power in the cell according to the *Primary CPICH Power* IE value. ~~Node B~~ 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 the *Secondary CPICH Information* IE group the Node B shall reconfigure Secondary CPICH power in the cell according to the *Secondary CPICH Power* IE value.]

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

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

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~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
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[TDD - If the CELL RECONFIGURATION REQUEST message includes the *Primary CCPCH Information* IE group the Node B shall reconfigure P-CCPCH power in the cell according to the *P-CCPCH Power* IE value. ~~Node B~~ 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 group the Node B shall reconfigure switching-point structure in the cell according to the *Timeslot* IE value.]

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.

8.2.13.3 Unsuccessful Operation

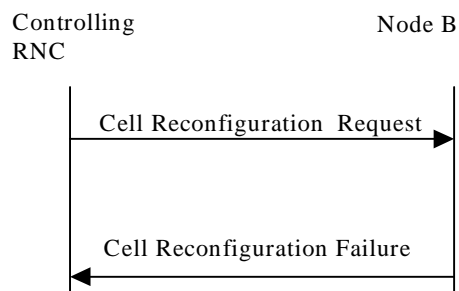


Figure 19: Cell Reconfiguration procedure: Unsuccessful Operation

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

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

The Cause IE shall be set to an appropriate value.

(Note.: Remark received that at WG3#7, in tdoc D63 (secretary minutes), it was stated that the failure message should be added with a list of cause values, with one cause value per failed reconfiguration item. It is not clear what functional impact this have and how it should be coded in the CELL RECONFIGURATION FAILURE message.)

8.2.13.4 Abnormal Conditions

If the CELL RECONFIGURATION REQUEST message includes a *Local Cell-IDC-ID* IE that is Non Existing in Node B the Node B shall send the CELL RECONFIGURATION FAILURE message as response.

The Cause IE shall be set to an appropriate value.

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 eOperation

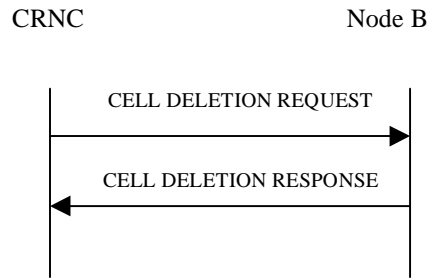


Figure 20: Cell Deletion procedure: Successful Operation

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 channel within the cell created by the Cell Setup procedure or Common Transport Channel Setup procedure.

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

8.2.14.3 Unsuccessful eOperation

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8.2.14.4 Abnormal Conditions

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

8.2.15 Resource Status Indication

8.2.15.1 General

This procedure is used in six different cases:

1. When a Local Cell becomes Existing at the Node B, it shall be made available to the RNC
2. When a Local Cell is to be deleted in Node B, i.e. become Not Existing, the Local Cell shall be withdrawn from the CRNC
3. When the capabilities of the Local Cell changes at the Node B
4. When a cell has changed its capability and/or its resource operational state at the Node B
5. When common physical channels and/or common transport channels have changed their capabilities at a Node B
6. When a communication control port changed its resource operational state at the Node B

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

8.2.15.2 Successful Operation

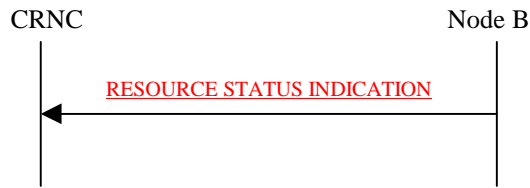


Figure 21: Resource Status Indication procedure: Successful Operation

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

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 Local Cell Id IE and the Add/Delete Indicator IE set equal to 'Add'.

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 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.

When the capabilities of a Local Cell changes at the Node B, the Node B shall report the new capability by sending a RESOURCE STATUS INDICATION message with the Local Cell Id. The Add/Delete Indicator IE shall not be included in the message. The Cause IE in the RESOURCE STATUS INDICATION message shall be set to the appropriate value.

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 C-ID IE. The Cause IE in the RESOURCE STATUS INDICATION message shall be set to the appropriate value.

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 logical resource. The Cause IE in the RESOURCE STATUS INDICATION message shall be set to the appropriate value.

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

8.2.15.3 Abnormal Conditions

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8.2.16 System Information Update

8.2.16.1 General

The System Information Update procedure performs the scheduling and provision of system information segments broadcast on the BCCH, to the Node B.

8.2.16.2 Successful Operation

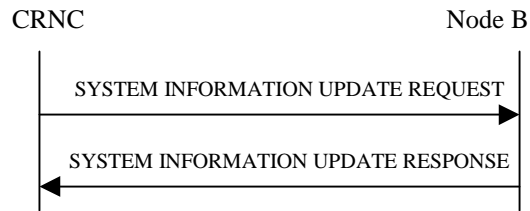


Figure 22: System Information Update procedure: Successful Operation Case

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

If the SYSTEM INFORMATION UPDATE message includes the BCCH Modification Time IE, the new segments provided 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 new segments shall be applied as soon as possible.

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 SIB SG REP IE and SIB SG POS IE such that:

$$- \text{SFN mod IB_SG_REP} = \text{IB_SG_POS}$$

If the SYSTEM INFORMATION UPDATE REQUEST message contains Master Information Block (MIB) segments in addition to SIB segments, the MIB segments shall be updated last in the physical channel scheduling cycle by the Node B.

The Segment Type IE shall be used by the Node B to concatenate several segments into one BCH transport block. The allowed combinations of concatenation are specified in TS 25.331.

If the SIB Deletion Indicator IE value is set to 'Deletion' the Node B shall delete the SIB of the type indicated by the SIB Type IE from the transmission schedule on BCCH.

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 and use the expiration timer feature.

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

8.2.16.3 Unsuccessful Operation

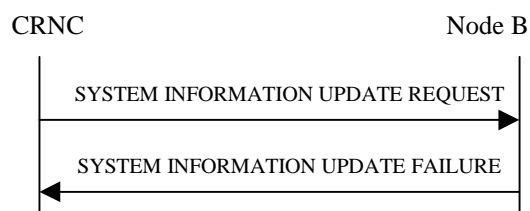


Figure 23: System Information Update procedure: Unsuccessful Operation Case

~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
~~3G TS 25.433 version 3.0.0 Release 1999~~

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. Possible cause values are:

Radio Network Layer Cause

- Insufficient physical channel resources
- Unknown C-ID
- SIB Origination in Node B not Supported

Miscellaneous Cause

- Hardware failure
- Control Processor Processing overload
- ~~C ID not defined~~
- O&M Intervention
- Unspecified failure
- ~~SIB origination in Node B not supported~~

In this case, 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

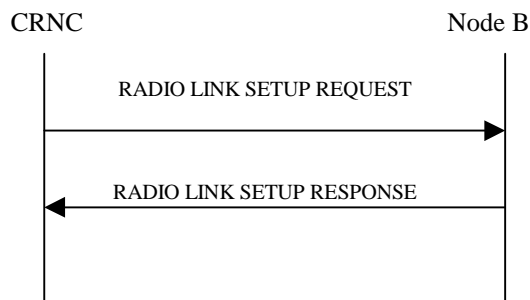


Figure 24: Radio Link Setup procedure: Successful Operation

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.

~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~ X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)" X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)" X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)" **3G TS 25.433 version 3.0.0 Release 1999**

~~[FDD – The RL Setup procedure can be used to setup 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.]~~

~~[FDD – The RL Setup procedure can be used to setup 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 setup of one radio link including one or more transport channels. The transport channels can be a mix of DCHs, DSCHs, and USCHs. The Radio Link Setup Request message shall include the required TFS and TFCS for the DCH, DSCH and USCH channels.]

~~[TDD – The RL Setup procedure is used for setup of one radio link including one or more transport channels. The transport channels can be a mix of DCHs, DSCHs, and USCHs. The Radio Link Setup Request message shall include the required TFS and TFCS for the DCH, DSCH and USCH channels.]~~

[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 indicates, "may be combined with already existing RLs", then Node B shall decide for either of the alternatives. 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~~ Node B shall choose which RL(s) to combine it with.]

If the RADIO LINK SETUP REQUEST message includes the *DCH Combination Indicator* IE for a DCH to be added, the Node B shall

- Treat all DCHs with the same value of this IE as a set of co-ordinated DCHs and
- Include this DCH in the new configuration only if it can include all DCHs with the same value of the *DCH Combination Indicator* IE in the new configuration

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

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

The included *RLC Mode* IE may be used by the ~~Node B~~ Node B to optimise the power control.

[FDD]- ~~In FDD mode, the~~ The *UL Eb/No Target* IE included in the message shall be used by the Node B as initial UL Eb/No target for the UL power control.]

The Node B shall start the DL transmission using the initial DL power specified in the message. The DL power can then vary accordingly to the fast power control, but shall always be kept within the maximum and minimum limit specified in the RL SETUP REQUEST message.

If the RLs are successfully setup, 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~~ 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~~ 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 – The ~~Node B~~ 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 specify for only one of the coordinated DCHs.

8.2.17.3 Unsuccessful Operation

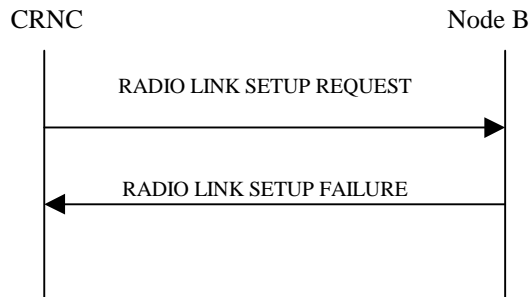


Figure 25: Radio Link Setup procedure: Unsuccessful Operation

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

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

Typical cause values are as follows:

Radio Network Layer Cause

- RL Already Activated/allocated

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error

Miscellaneous Cause

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

8.2.17.4 Abnormal Conditions

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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.

8.3.1.2 Successful eQ operation

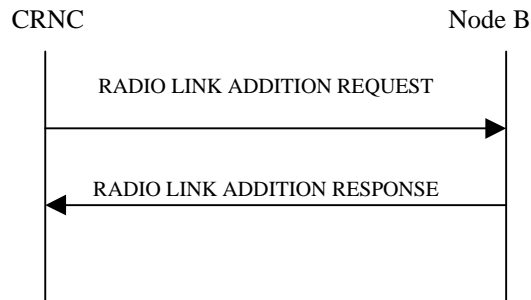


Figure: 26 Radio Link Addition procedure: Successful Operation

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.

[FDD - The *Diversity Control Field* IE indicates for each RL whether the Node B shall combine the new RL with existing RL(s) or not.] [TDD - The *Diversity Control Field* IE indicates whether the Node B shall reuse the Iub interface Transport Bearers of the old RL for the new RL.] If the *Diversity Control Field* IE indicates, "may be combined with already existing RLs", then Node B shall decide for any of the alternatives. When a new RL is to be combined, the Node B shall choose which RL(s) to combine it with.

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. If no *Initial DL Transmission power* IE is included, the Node B shall use any transmission power level currently used on already existing RLs for this UE.

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 may activate SSDT for the concerned new RL, with the indicated cell identity used for that RL.]

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

[FDD - 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.]

[FDD - 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 of the RL in the RADIO LINK ADDITION RESPONSE message.]

[TDD - In the case of not reusing the transport bearers of the old RL for the new RL, the Node B shall indicate in the RADIO LINK ADDITION RESPONSE message with the "Diversity Indication" that no transport bearer reuse 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, DSCH and 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 co-ordinated DCHs.

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

[FDD] After sending of the RADIO LINK ADDITION RESPONSE message the Node B shall continuously attempt to obtain UL synchronisation and start reception on the new RL. The Node B shall start transmission on the new RL after synchronisation is achieved in the Iub user plane as specified in 25.427.

8.3.1.3 Unsuccessful Operation

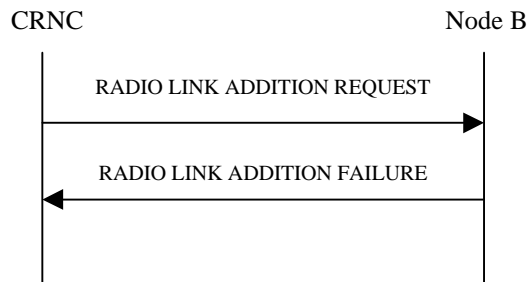


Figure 27: **Radio Link** Addition procedure: Unsuccessful **Operation**

If the establishment of at least one RL is unsuccessful, the Node B shall send a RADIO LINK ADDITION FAILURE as response indicating the failure cause.

If the establishment of at least one RL is unsuccessful, the Node B shall send a RADIO LINK ADDITION FAILURE as response indicating the failure cause.

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

Typical cause values are as follows:

Radio Network Layer Cause

- RL Already Activated/allocated

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error

Miscellaneous Cause

- O&M Intervention
- Unspecified Failure
- 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.

8.3.2.2 Successful Operation

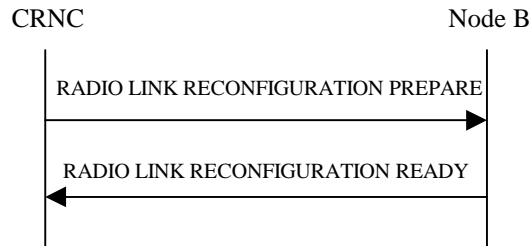


Figure 28: Synchronised Radio Link Reconfiguration procedure, Successful Operation Case

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 ~~DRNS-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.

DCH Modification:

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Frame Handling Priority* IE for a DCH to be modified, 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 RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Format Set* (~~UL~~) IE for the UL of a DCH to be modified, the Node B shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Format Set* (~~DL~~) IE for the DL of a DCH to be modified, the Node B shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *UL DCH-FP Mode* IE for a DCH to be modified, the Node B shall apply the new ~~DCH-FP~~ Mode in the Uplink of the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *ToAWS* IE for a DCH to be modified, the Node B shall apply the new ToAWS in the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *ToAWE* IE for a DCH to be modified, the Node B shall apply the new ToAWE in the user plane for this DCH in the new configuration.

DCH Addition:

If the RADIO LINK RECONFIGURATION PREPARE message includes any DCH to be added to 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 and include these DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *DCH Combination Indicator* IE for a DCH to be added, the Node B shall.

~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)" X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)" X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)" 3G TS 25.433 version 3.0.0 Release 1999~~

1. treat all DCHs with the same value of this IE as a set of coordinated DCHs and
2. include this DCH in the new configuration only if it can include all DCHs with the same value of the *DCH Combination Indicator* IE in the new configuration

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 may use the included *RLC Mode* IE to optimise the power control.

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

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

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

DCH Deletion:

If the RADIO LINK RECONFIGURATION ~~PREPARE 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 of all 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 the *Uplink Scrambling Code* IE, the Node B shall apply this Uplink Scrambling Code to the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes one or more *Uplink Channelisation Code* IEs, the Node B shall apply the new Uplink Channelisation Code(s) in the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes one or more *Downlink Channelisation Code* IEs, the Node B shall apply the new Downlink Channelisation Code(s) in the new configuration.]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes one or more *UL DPCH Information* IE groups, the Node B shall apply the new UL physical channel(s) setting in the new configuration.]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes one or more *DL DPCH Information* IE groups, the Node B shall apply the new physical channel(s) setting in the new configuration.]

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

The Node B shall use the *TFCS (DL) IE for the DL* when reserving resources for the downlink of the new configuration. The ~~DRNS-Node B~~ shall apply the new TFCS in the Downlink of [TDD – the CCTrCH of] the new configuration.

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes on the *UL DPCCCH Structure* IE, group the Node B shall set the new Uplink DPCCCH Structure to the new configuration.]

If the RADIO LINK RECONFIGURATION PREPARE 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 RADIO LINK RECONFIGURATION PREPARE 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.

SSDT Activation/Deactivation:

~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
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[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *SSDT Indication* IE set to "SSDT Active in the UE", the Node B may activate SSDT using the *SSDT Cell Identity* IE and *SSDT Cell Identity Length* IE in the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *SSDT Indication* IE set to "SSDT not Active in the UE", the Node B shall deactivate SSDT in the new configuration.]

DSCH [TDD – and/or USCH] Addition/Modification/Deletion:

[FDD]- It is FFS how the Node B shall treat any included DSCH Information.]

[TDD – The RADIO LINK RECONFIGURATION PREPARE message shall include DSCH information and USCH information for the DSCHs and USCHs to be added/modified/deleted. The Node B shall use this information to add/modify/delete the indicated DSCH and USCH channels to/from the radio link, in the same way as the DCH info is used to add/modify/release DCHs. – It shall include in the RADIO LINK RECONFIGURATION READY message the Transport Layer Address and the Binding ID of the DCHs/DSCHs/USCHs being added or modified.]

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.

In case of a set of coordinated DCHs requiring a new transport bearer on Iub DCH-to-be-added group or DCH-to-be-modified group 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 group shall be included only for one of the combined RLs.

8.3.2.3 Unsuccessful Operation

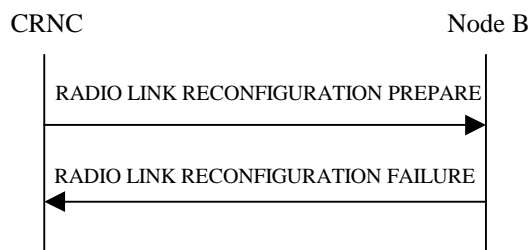


Figure 29: Synchronised Radio Link Reconfiguration procedure, Unsuccessful Operation Case

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

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

Typical cause values are as follows:

Radio Network Layer Cause

- RL Already Activated/allocated

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error

Miscellaneous Cause

- O&M Intervention

- Unspecified Failure
- Control processing overload
- HW failure

8.3.2.4 Abnormal Conditions

If only a subset of all the DCHs belonging to a set of coordinated 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 ~~with~~.

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 Preparation procedure.

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

8.3.5.2 Successful Operation

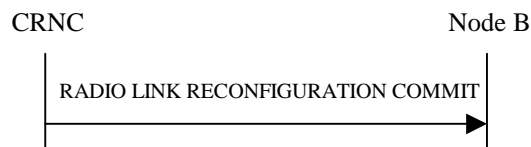


Figure 30: Synchronised Radio Link Reconfiguration Commit procedure, Successful Operation

The Node B shall switch to the new configuration previously prepared by the Synchronised RL Reconfiguration procedure at the CFN requested by the CRNC when receiving the RADIO LINK RECONFIGURATION COMMIT message from the CRNC.

8.3.5.3 Abnormal Conditions

If the Node B receives the RADIO LINK RECONFIGURATION COMMIT message from the CRNC when there is no new configuration for the Radio Link(s) within the Node B, previously prepared by the Synchronised Radio Link Preparation procedure, the message shall be ignored.

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 procedure.

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

8.3.4.2 Successful Operation



Figure 31: Synchronised Radio Link Reconfiguration Cancellation Procedure, Successful Operation Case

The **Node B** shall release the new configuration previously prepared by the Synchronised RL Reconfiguration Preparation procedure and continue using the old configuration when receiving the RADIO LINK RECONFIGURATION CANCEL message from the CRNC.

8.3.4.3 Abnormal Conditions

If the **Node B** receives the RADIO LINK RECONFIGURATION CANCEL message from the CRNC when there is no new configuration for the Radio Link(s) within the Node B, previously prepared by the Synchronised Radio Link Preparation procedure, the message shall be ignored.

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 RL 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.

8.3.5.2 Successful Operation

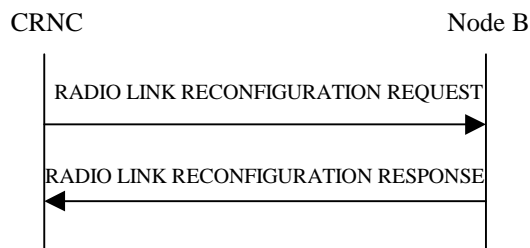


Figure 32: Unsynchronised Radio Link Reconfiguration Procedure, Successful Operation Case

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.

DCH Modification:

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Frame Handling Priority* IE for a DCH to be modified, 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.

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If the RADIO LINK RECONFIGURATION REQUEST message includes the *Transport Format Set* (~~UL~~) IE for the UL of a DCH to be modified, the Node B shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *Transport Format Set* (~~DL~~) IE for the DL of a DCH to be modified, the Node B shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *UL DCH-FP Mode* IE for a DCH to be modified, the Node B shall apply the new ~~DCH-FP Mode~~ in the Uplink of the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *ToAWS* IE for a DCH to be modified, the Node B shall apply the new ToAWS in the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *ToAWE* IE for a DCH to be modified, the Node B shall apply the new ToAWE in the user plane for this DCH in the new configuration.

DCH Addition:

If the RADIO LINK RECONFIGURATION REQUEST message includes any DCH to be added to 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 and include these DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *DCH Combination Indicator* IE for a DCH to be added, the ~~DRNS-Node B~~ shall.

1. Treat all DCHs with the same value of this IE as a set of coordinated DCHs and
2. Include this DCH in the new configuration only if it can include all DCHs with the same value of the *DCH Combination Indicator* IE in the new configuration.

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 ~~DRNS-Node B~~ once the new configuration has been activated.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *RLC Mode* IE, the Node B may use this information to optimise the power control.

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

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

The Node B shall use the included *ToAWE* IE for a DCH to be added as the new Time of Arrival Window End Point in the user plane for 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 of all 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:

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *TFCS (UL)* IE, the Node B shall apply the new TFCS in the Uplink of [TDD – the CCTrCH of] the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *TFCS (DL)* IE, the Node B shall apply the new TFCS in the Downlink of [TDD – the CCTrCH of] the new configuration.

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~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
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If the RADIO LINK RECONFIGURATION REQUEST 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 RADIO LINK RECONFIGURATION REQUEST 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.

DSCH [TDD – and/or USCH] Addition/Modification/Deletion:

-[FDD]- It is FFS how the Node B shall treat any included DSCH Information.]

-[TDD – The RADIO LINK RECONFIGURATION REQUEST message shall include DSCH information and USCH information for the DSCHs and USCHs to be added/modified/deleted. The ~~Node B~~ Node B shall use this information to add/modify/delete the indicated DSCH and USCH channels to/from the radio link, in the same way as the DCH info is used to add/modify/release DCHs. – It shall include in the RADIO LINK RECONFIGURATION RESPONSE message the Transport Layer Address and the Binding ID of the DCHs/DSCHs/USCHs being added or modified.]

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 case of a set of coordinated DCHs requiring a new transport bearer on Iub, the DCH-to-be-added group or DCH-to-be-modified group shall be included 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 group shall be included only for one of the combined Radio Links.

8.3.5.34 Unsuccessful Operation

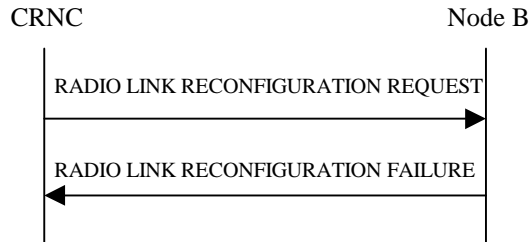


Figure 33: Unsyncronised Radio Link Reconfiguration procedure, ~~Successful~~ Unsuccessful Operation Case

If the ~~DRNS~~ 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 ~~Synchronised~~ Unsyncronised Radio Link Reconfiguration procedure as having failed.

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

Typical cause values are as follows:

Radio Network Layer Cause

- RL Already Activated/allocated

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error

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~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
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Miscellaneous Cause

- O&M Intervention
- Unspecified **Failure**
- Control processing overload
- HW failure

8.3.5.42 Abnormal Conditions

If only a subset of all the DCHs belonging to a set of coordinated DCHs is requested to be deleted, the Node B shall regard the ~~Synchronised-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.

8.3.6.2 Successful Operation

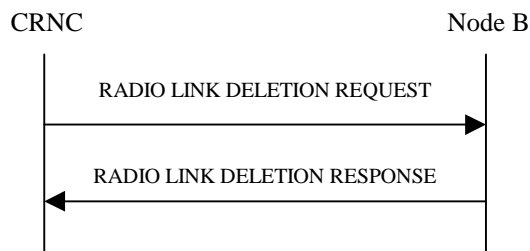


Figure 34: Radio Link Deletion procedure: Successful OperationCase

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 in the message and release all associated resources and respond to the CRNC with a RADIO LINK DELETION RESPONSE message.

8.3.6.3 Unsuccessful Operation

-

8.3.6.4 Abnormal Conditions

-

8.3.7 Downlink Power Control (for [FDD-only])

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 RRC connection within the ~~Node B~~ Node B. The Downlink Power Control ~~DL POWER CONTROL~~ procedure may be initiated by the CRNC at any time when the ~~Node B~~ Node B communication context exists, irrespective of other ongoing CRNC initiated dedicated NBAP procedures towards this ~~Node B~~ Node B communication context. The only exception

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occurs when the CRNC has requested the deletion of the last RL via this ~~Node B~~ Node B, in which case the Downlink Power Control ~~DL POWER CONTROL~~ procedure shall no longer be initiated.

8.3.7.2 Successful Operation



Figure 35: Downlink Power Control ~~Procedure~~ procedure: Successful Operation

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

On reception, if the message contains the *DL Reference Power* IE, the Node B shall perform the power balancing (see below) for all radio links associated with the context identified by the *Node B Communication Context Id* IE.

Alternatively, if the message contains the *DL Reference Power Information* IE group, the Node B shall perform the power balancing (see below) for all radio links addressed in the message.

The Node B performs the power balancing by using the received power.

Editor's Note: FFS (currently we only have "using the received desired DL reference power as a reference for adjusting the applied DL power"), which I don't think is sufficiently precise!

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 ~~dedicated~~ measurements on dedicated resources in a Node B.

8.3.8.2 Successful Operation

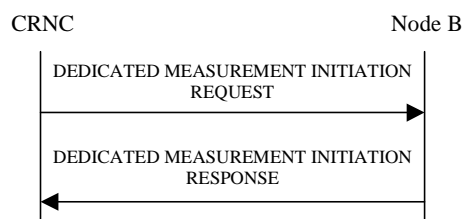


Figure 36: Dedicated Measurement Initiation Request procedure: Successful Operation

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 that can be contacted via the current communication

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control port. Otherwise, this measurement request shall apply for the requested Node B Communication Context Id only.

If no RL Information is provided in the *Dedicated Measurement Object* IE, the measurement reports shall give the aggregated result for all radio links within the requested Node B Communication Context. If RL Information is provided in the request, the measurement request shall apply for the requested radio links individually.

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

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

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

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

If the *Report Characteristics* IE ~~is set to~~ indicates 'Event A', the Node B shall initiate a 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~~ indicates 'Event B', the Node B shall initiate a 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~~ indicates 'Event C', the Node B shall initiate a Measurement Reporting procedure when the measured entity rises more than the requested threshold within the requested time.

If the *Report Characteristics* IE ~~is set to~~ indicates 'Event D', the Node B shall initiate a 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~~ indicates 'Event E', the Node B shall initiate a Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). The Node B shall also initiate a Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time' (Report B). If the *Report Periodicity Frequency* IE is provided, the Node B shall ~~send shall~~ initiate Measurement Reporting procedures periodically, with the requested frequency, between Report A and Report B. 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~~ indicates 'Event F', the Node B shall initiate a Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). The Node B shall also initiate a Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time' (Report B). If the *Report Periodicity Frequency* IE is provided, the Node B shall ~~send shall~~ initiate Measurement Reporting procedures periodically, with the requested frequency, between Report A and Report B. 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 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 a Measurement Reporting procedure immediately, and then continue with the measurements as ~~specified in the DEDICATED MEASUREMENT INITIATION REQUEST message~~ in normal operation.

If the ~~Node B~~ Node B was able to initiate the measurement requested by the ~~DRNC-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 the *Report Characteristics* IE ~~is set to indicated~~ "On-Demand", the ~~DEDICATED COMMON~~ 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.

8.3.8.3 Unsuccessful Operation

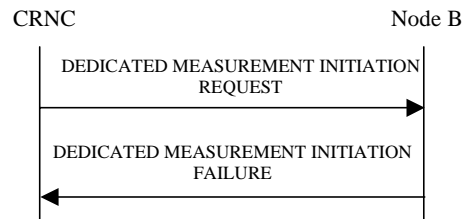


Figure 37: Dedicated Measurement Request procedure: Unsuccessful Operation

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

Typical cause values are as follows:

Radio Network Layer cause

- Measurement not supported for the object

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~~ Node B is allowed to initiate the Dedicated Measurement Reporting ~~DEDICATED MEASUREMENT REPORTING message procedure~~ at any time after ~~having sent the RADIO LINK SETUP RESPONSE message~~ establishing a Radio Link, as long as the ~~Node B~~ Node B communication context exists.

8.3.9.2 Successful Operation

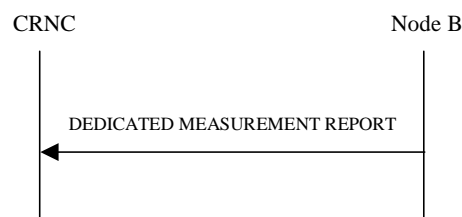


Figure 38: Dedicated Measurement Reporting procedure: Successful Operation

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If the requested measurement reporting criteria are met, the Node B shall initiate a Measurement Reporting procedure. The DEDICATED MEASUREMENT REPORT message shall use the communication control port assigned to the Node B communication context. 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.

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.

8.3.10.2 Successful Operation

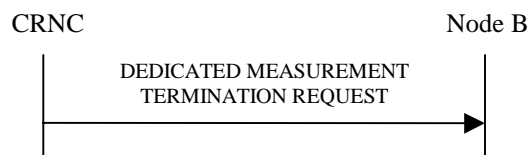


Figure 39: Dedicated Measurement Termination procedure: Successful Operation

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 Measurement Initiation procedure can no longer be reported. The Node B is allowed to initiate the DEDICATED MEASUREMENT FAILURE INDICATION message at any time after having sent the RADIO LINK SETUP RESPONSE message, as long as the Node B communication context exists.

8.3.11.2 Successful Operation



Figure 40: 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 no longer can be reported.

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.

8.3.12.2 Successful Operation



Figure 41: Radio Link Failure procedure: Successful Operation

When Node B detects that one or more radio link is no longer available, it sends the RADIO LINK FAILURE INDICATION message to CRNC indicating the failed radio links with the most appropriate cause values in the *Cause* IE. ~~Possible cause values may be:~~

When the Radio Link Failure procedure is used to notify the non-achievement or loss of UL synchronisation, the message is sent when the UL synchronisation of the radio link is not achieved at the RL ~~setup~~Setup, or RL Addition procedures, or it is lost during ~~the an~~ active connection.

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 re-achievement of uplink synchronisation.

8.3.13.2 Successful Operation

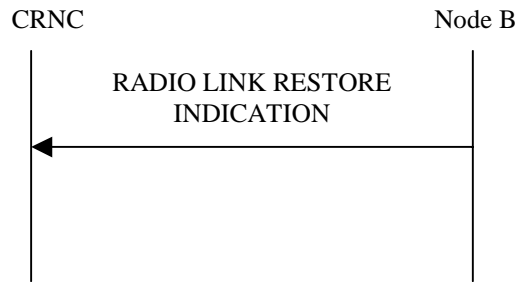


Figure 42: Radio Link Restoration procedure: Successful Operation

The Node B may initiate this procedure only if it has previously used the RL Failure procedure to notify the loss of uplink synchronisation. If the uplink synchronisation is re-established, the Node B shall send the RL RESTORE INDICATION message to the CRNC.

The Node B shall not send RADIO LINK RESTORE INDICATION message if Radio Link Deletion procedure has already been activated in the Node B after the RADIO LINK FAILURE INDICATION sent by the Node B.

8.3.13.3 Abnormal Conditions

=

8.3.14 Compressed Mode Preparation (for [FDD-only])

8.3.14.1 General

The Compressed Mode Preparation procedure is used to prepare the compressed mode in the ~~NodeB~~Node B for one UE-UTRAN connection.

8.3.14.2 Successful Operation

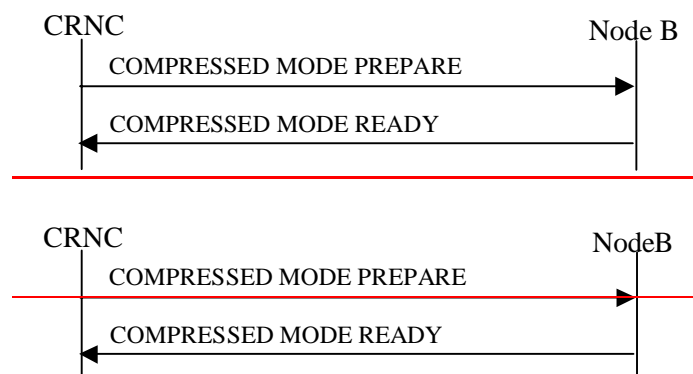


Figure 43: Compressed Mode Preparation procedure, Successful Operation

The Compressed Mode Preparation procedure is initiated by the CRNC by sending the COMPRESSED MODE PREPARE message to the ~~NodeB~~Node B.

If the proposed modifications are allowed by the ~~NodeB~~Node B and the ~~NodeB~~Node B has successfully initialised the required resources, the ~~NodeB~~Node B shall respond to the CRNC with COMPRESSED MODE READY message.

If the *Compressed Mode Method* IE is set to 'None', the ~~NodeB~~Node B shall terminate the compressed mode even if the COMPRESSED MODE PREPARE message was received before the end of the compressed mode period.

8.3.14.3 Unsuccessful Operation

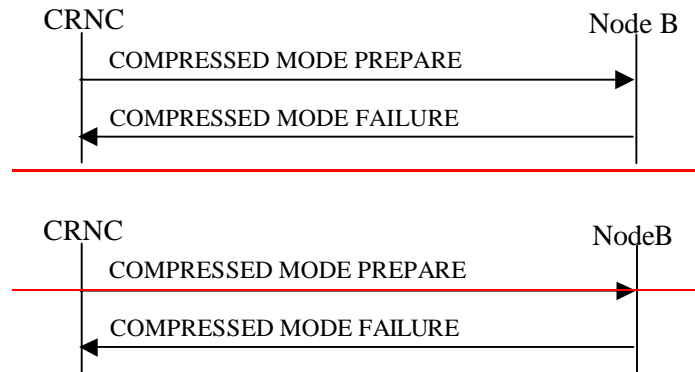


Figure 44: Compressed Mode Preparation procedure, **unsuccessful** Unsuccessful Operation case

If the requested reconfiguration fails for one or more RLS the **Node B** shall abort the procedure and send the COMPRESSED MODE FAILURE message to the CRNC, indicating the reason for failure.

Typical cause values are:

Radio Network Layer Causes:

- Requested Configuration not Supported

Miscellaneous Causes:

- Not enough User Plane Processing Resources

8.3.14.4 Abnormal Conditions

-

8.3.15 Compressed Mode Commit ~~(for [FDD-only])~~

8.3.15.1 General

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

8.3.15.2 Successful Operation

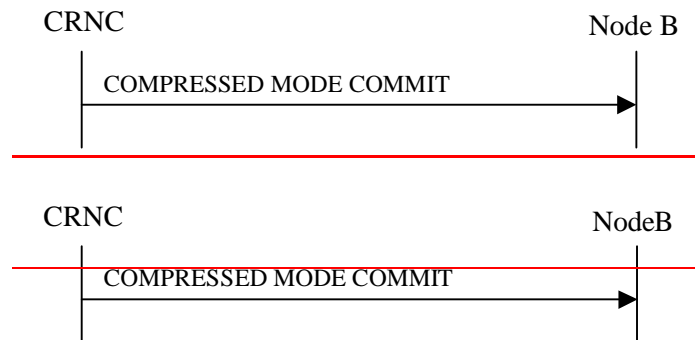


Figure 45: Compressed Mode Commit procedure, Successful Operation

The ~~NodeB~~Node B shall initiate the compressed mode in accordance with the settings prepared by the Compressed Mode Preparation procedure at the CFN requested by the CRNC when receiving the COMPRESSED MODE COMMIT message from the CRNC.

8.3.15.3 Abnormal Conditions

-

8.3.16 Compressed Mode Cancellation (for [FDD-only])

8.3.16.1 General

The Compressed Mode Cancellation procedure is used to cancel the compressed mode in the ~~NodeB~~Node B for one UE-UTRAN connection.

8.3.16.2 Successful Operation

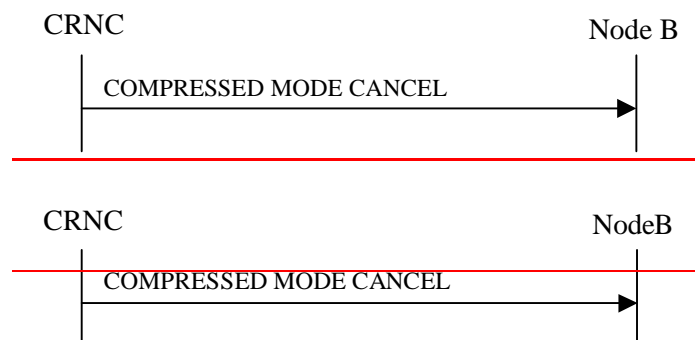


Figure 46: Compressed Mode Cancellation procedure, Successful Operation

The ~~NodeB~~Node B shall abort the compressed mode if it receives the COMPRESSED MODE CANCEL message.

8.3.16.3 Abnormal Conditions

-

8.4 Error Handling Procedures

8.4.1 Error Indication

This procedure is used by both ~~Node B~~ and its CRNC to report detected errors or any other problems in one incoming message if they cannot be reported by any other procedure.

When ~~Node B~~ or CRNC detect an erroneous message (or a message, which for some other reasons cannot be processed), it sends an ERROR INDICATION message with the most appropriate cause value.

The message contains as a transparent L3 information the erroneous message (coded), CRNC communication context ID (in UL), and ~~Node B~~ communication context ID (in DL), if the ~~Node B~~ is able to deduce it from the erroneous message.

Possible error cause can be:

- Unknown message ID: the message contains a message ID that is not known to the receiver
- Unknown Information element: the message contains an information element that is not known or cannot be interpreted by the receiver
- Procedural errors: the message is not compatible with the status of the receiver.
- Unknown failure reason: requested procedure failed to process by unknown reason

The message is sent using the Dedicated NBAP signalling connection of the incoming message, or using the Common NBAP if the incoming message was sent via Common NBAP.

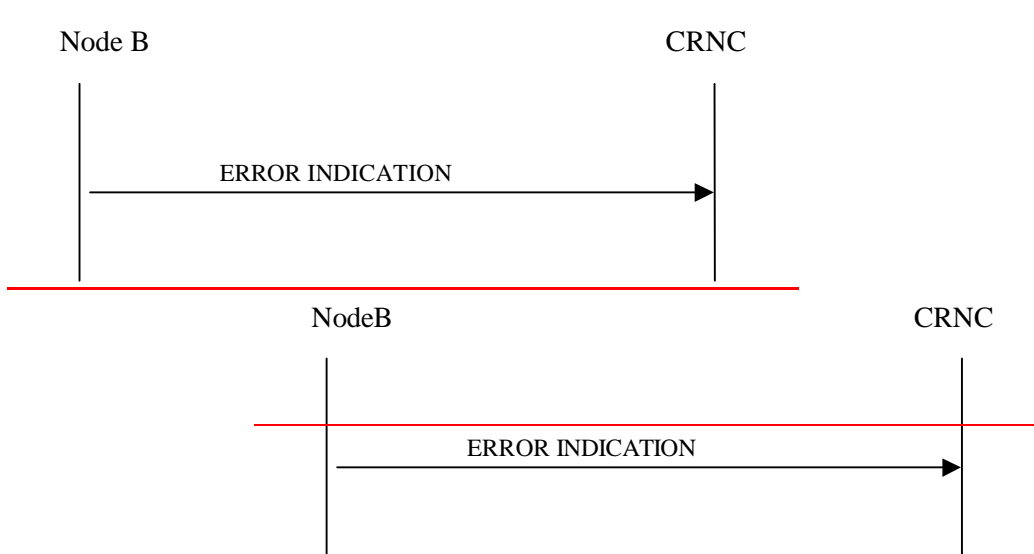


Figure 47: Error Indication

9 Elements for NBAP communication

9.1 Message functional definition and content

9.1.1 Message Contents

An information element can be of the following *types*:

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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 correspondent footnote

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 ~~mandatory, optional or~~ conditional. ~~Each group may be also repeated within one message.~~ 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 COMMON TRANSPORT CHANNEL SETUP REQUEST

9.1.2.1 FDD Message

<u>Information Element/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE type and reference</u>	<u>Semantics description</u>
Message Discriminator	M			
Message Type	M			
Transaction ID	M			
C-ID	M			
Configuration Generation ID	M			
CHOICE common physical channel to be configured				
<i>Secondary CCPCH</i>				
Secondary CCPCH		1		
Common Physical Channel ID	M			
FDD S-CCPCH Offset	M			Corresponds to 25.211: s-CCPCH,k
DL Scrambling Code	M			
FDD DL Channelisation Code Number	M			
TFCS	M			For the DL.
Secondary CCPCH Slot Format	M			
Pilot Bits Used Indicator	M			
Multiplexing Position	M			
STTD Indicator	M			
FACH Parameters	C-choiceCh	0..<maxnoofFACHs>		
Common transport channel ID	M			
Transport Format Set	M			For the DL.
ToAWS	M			
ToAWE	M			
Max FACH Power	M		DL Power	Maximum allowed power on the FACH.
PCH Parameters	C-choiceCh	0..1		
Common Transport Channel ID	M			
Transport Format Set	M			For the DL.
ToAWS	M			
ToAWE	M			
PCH Power	M		DL Power	
PICH Parameters		1		
Common Physical Channel ID	M			
DL Scrambling Code	M			
FDD DL Channelisation Code Number	M			
PICH Power	M		DL Power	Power to be used on the PICH.
PICH Mode	M			Number of PI per frame
STTD Indicator	M			
<i>PRACH</i>				

PRACH		1		
Common Physical Channel ID	M			
Scrambling Code Word Number	M			
TFCS	M			For the UL.
Preamble Signatures	M			
Allowed Slot Format Information		1..<maxSF>		
RACH Slot Format	M			
RACH Sub Channel Numbers	M			
Puncture Limit	M			For the UL
RACH Parameters		1		
Common Transport Channel ID	M			
Transport Format Set	M			For the UL.
AICH Parameters		1		
Common Physical Channel ID	M			
DL Scrambling Code	M			
AICH Transmission Timing	M			
FDD DL Channelisation Code Number	M			
AICH Power	M		DL Power	
STTD Indicator	M			

Condition	Explanation
<i>ChoiceCh</i>	One of the channels FACH or PCH or both must be present.

Range bound	Explanation
<i>MaxnoofFACHs</i>	Maximum number of FACHs that can be defined on a Secondary CCPCH.
<i>MaxSF</i>	Maximum number of SF for a PRACH

9.1.2.2 TDD Message

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Transaction ID	M			
C-ID	M			
Configuration Generation ID	M			
<i>CHOICE common physical channels to be configured</i>				
<i>Secondary CCPCHs</i>				
CCTrCH ID	M			For DL CCTrCH supporting one or several Secondary CCPCHs
TFCS	M			For DL CCTrCH supporting one or several

				Secondary CCPCHs
Secondary CCPCH		1..<maxnoofS-CCPCHs>		
Common physical channel ID	M			
TDD Channelisation Code	M			
Time Slot	M			
Burst Type	M			Long or short midamble
Midamble shift	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
S-CCPCH Power	M		DL Power	
STTD Indicator	M			
<i>PRACH</i>				
PRACH	M			
Common physical channel ID	M			
Time Slot	M			
TDD Channelisation Code	M			
Max PRACH Midamble Shifts	O			
PRACH Midamble	M			
<i>CHOICE common transport channels to be configured</i>				
<i>FACH</i>				
FACH	C ChoiceCh	1..<maxnoofFACHs>		
Common transport channel ID	M			
Transport Format Set	M			For the DL.
ToAWS	M			
ToAWE	M			
<i>PCH</i>				
PCH	C ChoiceCh	1..<maxnoofPCHs>		
Common transport channel ID	M			
Transport Format Set	M			For the DL.
ToAWS	M			
ToAWE	M			
PICH Parameters				
Common Physical Channel ID	M	1		
TDD Channelisation Code	M			
Time Slot	M			
Burst type	O			
Midamble shift	M			
TDD Physical Channel Offset	M			
Repetition period	M			
Repetition length	M			
Paging Indicator Length	M			
PICH Power	M			

X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". 3G TS 25.433 version 3.0.0 Release 1999

RACH		1		
RACH				
Common transport channel ID	M			

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

Range bound	Explanation
MaxnoofS-CCPCHs	Maximum number of Secondary CCPCHs per CCTrCH.
MaxnoofCCTrCHs	Maximum number of CCTrCHs that can be defined in a cell.
MaxnoofFACHs	Maximum number of FACHs that can be defined on a Secondary CCPCH.
MaxnoofPCHs	Maximum number of PCHs that can be defined on a Secondary CCPCH.

9.1.3 COMMON TRANSPORT CHANNEL SETUP RESPONSE

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Transaction ID	M			
CHOICE <i>common transport channel configured</i>				
<i>FACH</i>				
FACH Parameters	C-choiceCh	0..<maxnoofFACHs>		
Common Transport Channel ID	M			
Binding ID	M			
Transport layer address	M			
<i>PCH</i>				
PCH Parameters	C-choiceCh	0..1		
Common transport channel ID	M			
Binding ID	M			
Transport layer address	M			
<i>RACH</i>				
RACH parameters		1		
Common transport channel ID	M			
Binding ID	M			
Transport layer address	M			
Criticality Diagnostics	O			

X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". 3G TS 25.433 version 3.0.0 Release 1999

Condition	Explanation
<i>ChoiceCh</i>	One of the channels FACH or PCH or both must be present.

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

9.1.4 COMMON TRANSPORT CHANNEL SETUP FAILURE

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Transaction ID	M			
Cause	M			
Criticality diagnostics	O			

9.1.5 COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST

9.1.5.1 FDD Message

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Transaction ID	M			
C-ID	M			
Configuration Generation ID	M			
FACH parameters		<i>0..<maxFACHCell></i>		
Common Transport Channel ID	M			
Max FACH Power	O		DL Power	Maximum allowed power on the FACH.
ToAWS	O			
ToAWE	O			
PCH Parameters		<i>0..1</i>		
Common Transport Channel ID	M			
PCH Power	O		DL Power	Power to be used on the PCH.
ToAWS	O			
ToAWE	O			
PICH Parameters		<i>0..1</i>		
Common Physical Channel ID	M			
PICH Power	M		DL Power	Power to be used on the PICH.
PRACH Parameters		<i>0..<maxnoofPRACHs></i>		
Common Physical Channel ID	M			
Preamble Signatures	M			
Allowed Slot Format Information		<i>0..<maxSF></i>		
<u>RACH</u> Slot Format	M			
RACH Sub Channel Numbers	O			
AICH Parameters		<i>0..<maxnoofPRACHs></i>		
Common Physical Channel ID	M			
AICH Power	M		DL Power	Power to be used on the AICH.

Range bound	Explanation
<i>MaxFACHCell</i>	Maximum number of FACHs that can be defined in a Cell
<i>maxnoofPRACHs</i>	Maximum number of PRACHs and AICHs that can be defined in a Cell
<i>maxSF</i>	Maximum number of SF for a PRACH

9.1.5.2 TDD Message

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Transaction ID	M			
C-ID	M			
Configuration Generation ID	M			
CHOICE common physical channels to be reconfigured				
<i>Secondary CCPCHs</i>				
CCTrCH ID	M			For DL CCTrCH supporting one or several Secondary CCPCHs
Secondary CCPCH		0..<MaxnoofSCCPCHs>		
Common physical channel ID	M			
S-CCPCH Power	M			DL power
<i>PICH</i>				
PICH Parameters		0..1		
Common physical channel ID	M			
PICH Power	M			
CHOICE common transport channels to be reconfigured				
<i>FACH</i>				
FACH parameters		0..<MaxnoofFACHs>		
Common Transport Channel ID	M			
ToAWS	O			
ToAWE	O			
<i>PCH</i>				
PCH parameters		0..<MaxnoofPCHs>		
Common Transport Channel ID	M			
ToAWS	O			
ToAWE	O			

Range bound	Explanation
<i>MaxFACHCell</i>	Maximum number of FACHs that can be repeated in a Cell
<i>MaxnoofPCHs</i>	Maximum number of PCHs that can be defined in a cell.

9.1.6 COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Transaction ID	M			
Criticality diagnostics	O			

9.1.7 COMMON TRANSPORT CHANNEL RECONFIGURATION FAILURE

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Transaction ID	M			
Cause	M			
Criticality diagnostics	O			

9.1.8 COMMON TRANSPORT CHANNEL DELETION REQUEST

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Transaction ID	M			
C-ID	M			
Common Physical Channel ID	M			Indicates the Common Physical Channel for which the Common Transport Channels (together with the Common Physical Channel) shall be deleted.
Configuration Generation ID	M			

9.1.9 COMMON TRANSPORT CHANNEL DELETION RESPONSE

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Transaction ID	M			
Criticality diagnostics	O			

9.1.10 BLOCK RESOURCE REQUEST

Information Element Name	IE/Group	Presence	Range	IE type and reference	Semantics description
Message Discriminator		M			
Message Type		M			
Transaction ID		M			
C-ID		M			
Blocking Priority Indicator		M			
Shutdown Timer		C-BlockNormal			

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

9.1.11 BLOCK RESOURCE RESPONSE

Information Element Name	IE/Group	Presence	Range	IE type and reference	Semantics description
Message Discriminator		M			
Message Type		M			
Transaction ID		M			
Criticality diagnostics		O			

9.1.12 BLOCK RESOURCE FAILURE

Information Element Name	IE/Group	Presence	Range	IE type and reference	Semantics description
Message Discriminator		M			
Message Type		M			
Transaction ID		M			
Cause		M			
Criticality diagnostics		O			

9.1.13 UNBLOCK RESOURCE INDICATION

Information Element Name	IE/Group	Presence	Range	IE type and reference	Semantics description
Message Discriminator		M			
Message Type		M			
Transaction ID		M			
C-ID		M			

9.1.14 AUDIT REQUIRED INDICATION

Information Element Name	IE/Group	Presence	Range	IE type and reference	Semantics description
Message Discriminator		M			
Message Type		M			
Transaction ID		M			

9.1.15 AUDIT REQUEST

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Transaction ID	M			
Cell parameters		0.. <maxCellinNodeB>		
C-ID	M			
Configuration Generation Id	M			

Range bound	Explanation
MaxCellinNodeB	Maximum number of cell that can be configured in Node B

9.1.16 AUDIT RESPONSE

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Transaction ID	M			
Cell Information		0.. <maxCellinNodeB maxUCIDinNodeB>		
C-ID	M			
Resource Operational State	M			
Availability Status	M			
Maximum DL Power Capability	FFS			
Minimum Spreading Factor	FFS			

X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)" X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)" X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)" 3G TS 25.433 version 3.0.0 Release 1999

Primary SCH Information		0..1		
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
Secondary SCH Information		0..1		
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
Primary CPICH Information		0..1		
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
Secondary CPICH Information		0..<maxSCPIC HCell>		
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
Primary CCPCH Information		0..1		
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
BCH Information		0..1		
Common Transport Channel ID	M			
Resource Operational State	M			
Availability Status	M			
Secondary CCPCH Information		0..<maxSCCP CHCell>		
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
PCH Information		0..<maxPCHC ell >		
Common Transport Channel ID	M			
Resource Operational State	M			
Availability Status	M			
PICH Information		0..1		
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
FACH Information		0..<maxFACH Cell>		
Common Transport	M			

X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"
~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
~~3G TS 25.433 version 3.0.0 Release 1999~~

Channel ID				
Resource Operational State	M			
Availability Status	M			
PRACH Information		0..<maxPRACHCell>		
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
RACH Information		0..<maxRACHCell>		
Common Transport Channel ID	M			
Resource Operational State	M			
Availability Status	M			
AICH Information		0..<maxRACHCell>		
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
SCH Information		0..1		
Common Transport Channel ID	M			
Resource Operational State	M			
Availability Status	M			
PSCH Information		0..1		
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
Communication Control Port Information		0..<maxCCPinNodeB>		
Communication Control Port ID	M			
Resource Operational State	M			
Availability Status	M			
Local Cell Information		0..<maxLocalCellinNodeB>		
Local Cell ID	M			
Number of Channel Elements	⊖			
Maximum DL Power Capability	O			
Criticality diagnostics	O			

X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". 3G TS 25.433 version 3.0.0 Release 1999

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
maxLocalCellinNodeB	Maximum number of Local Cells that can exist in the Node B
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
maxRACHCell	Maximum number of RACHes that can be defined in a Cell
maxPCHCell	Maximum number of PCHes that can be defined in a Cell
maxPICHCell	Maximum number of PICHes that can be defined in a Cell

9.1.17 COMMON MEASUREMENT INITIATION REQUEST

Information Element/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Discriminator	M			
Message Type	M			
Transaction Id	M			
Measurement Id	M			
Common Measurement Object Type	M			
CHOICE Common Measurement Object Type				
"Cell"				
C-ID	M			
Time Slot	O			TDD only
"RACH"				
C-ID	M			
Common transport channel ID	M			
Common Measurement Type	M			
Measurement Characteristics	M			
Report Characteristics	M			

9.1.18 COMMON MEASUREMENT INITIATION RESPONSE

Information Element/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Discriminator	M			
Message Type	M			
Transaction Id	M			
Measurement Id	M			
CHOICE Common Measurement Object Type				
"Cell"				
Common Measurement value	M			
"RACH"				
Common Measurement Value	M			
SFN	O			Common Measurement Time Reference
Criticality Diagnostics	O			

9.1.19 COMMON MEASUREMENT INITIATION FAILURE

Information Element/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Discriminator	M			
Message Type	M			
Transaction Id	M			
Measurement Id	M			
Cause	M			
Criticality diagnostics	O			

9.1.20 COMMON MEASUREMENT REPORT

Information Element/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Discriminator	M			
Message Type	M			
Transaction Id	M			
Measurement Id	M			
CHOICE Common Measurement Object Type				
"Cell"				
Common Measurement value	M			
"RACH"				
Common Measurement Value	M			
SFN	O			Common Measurement Time Reference

9.1.21 COMMON MEASUREMENT TERMINATION REQUEST

Information Element/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Discriminator	M			
Message Type	M			
Transaction Id	M			
Measurement Id	M			

9.1.22 COMMON MEASUREMENT FAILURE INDICATION

Information Element/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Discriminator	M			
Message Type	M			
Transaction Id	M			
Measurement Id	M			
Cause	M			

9.1.23 CELL SETUP REQUEST

9.1.23.1 FDD Message

Information Element/Group Name	Presence	Range	IE type and Reference	Semantics description
Message discriminator	M			
Message Type	M			
Transaction ID	M			
Local Cell Id	M			
C-Id	M			
Configuration Generation Id	M			
T Cell	M			
UARFCN	M			Indicates UL/DL Frequency
Maximum transmission power	M			
Primary scrambling code	M			
Primary SCH Information		1		
Common Physical Channel ID	M			
Primary SCH Power	M		DL Power	
TSTD Indicator	M			
Secondary SCH Information		1		
Common Physical Channel ID	M			
Secondary SCH power	M		DL Power	
TSTD Indicator	M			
Primary CPICH Information		1		
Common Physical Channel ID	M			
Primary CPICH power	M			
Transmit Diversity Indicator	M			
Secondary CPICH Information		0..1		
Common Physical Channel ID	M			
DL Scrambling code	M			
FDD DL Channelisation Code Number	M			
Secondary CPICH Power	M		DL Power	
Transmit Diversity Indicator	M			
Primary CCPCH Information		1		
Common Physical Channel ID	M			
BCH Information		1		
Common Transport Channel ID	M			
BCH Power	M		DL Power	
STTD Indicator	M			

9.1.23.2 TDD Message

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Message discriminator	M			
Message Type	M			
Transaction ID	M			
Local Cell Id	M			
C-Id	M			
Configuration Generation Id	M			
UARFCN	M			
Cell Parameter ID	M			
Maximum Transmission Power	M			
Transmission Diversity Applied	M			On DCHs
Sync Case	M			
PSCH Information		1		
Common physical channel ID	M			
CHOICE Sync Case				
Case 1				The same TS is used for PCCPCH
Time Slot	M			
Case 2 and Case 3				In Case 2 the same TS is used for PCCPCH
PSCH Time Slot	M			
PSCH Power	M		DL Power	DL Power
TSTD Indicator	M			
PCCPCH Information		1		
Common physical channel ID	M			
CHOICE Sync Case				
Case 3				
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
PCCPCH Power	M			
STTD Indicator	M			
Time Slot Configuration		1 .. 15		
Time Slot	M			
Time Slot Status	M			
Time Slot Direction	M			

Condition	Explanation
Case 3	This IE is only present if the PSCH & PCCPCH Allocation Sync Case is equal to 3

9.1.24 CELL SETUP RESPONSE

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Message discriminator	M			
Message Type	M			
Transaction ID	M			
Criticality diagnostics	O			

9.1.25 CELL SETUP FAILURE

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Message discriminator	M			
Message Type	M			
Transaction ID	M			
Cause	M			
Criticality diagnostics	O			

9.1.26 CELL RECONFIGURATION REQUEST

9.1.26.1 FDD Message

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Message discriminator	M			
Message Type	M			
Transaction ID	M			
C-ID	M			
Configuration Generation Id	M			
Maximum transmission power	O			
Primary SCH Information		0,1		
Common Physical Channel ID	M			
Primary SCH power	M		DL Power	
Secondary SCH Information		0,1		
Common Physical Channel ID	M			
Secondary SCH power	M		DL Power	
Primary CPICH Information		0,1		
Common Physical Channel ID	M			
Primary CPICH power	M			
Secondary CPICH Information		0,1		
Common Physical Channel ID	M			
Secondary CPICH Power	M		DL Power	
Primary CCPCH Information		0,1		
BCH Information		1		
Common Transport Channel ID	M			
BCH Power	M		DL Power	

9.1.26.2 TDD Message

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Message discriminator	M			
Message Type	M			
Transaction ID	M			
C-Id	M			
Configuration Generation ID	M			
PSCH Information		0,1		
Common Physical Channel ID	M			
PSCH Power	M		DL Power	
PCCPCH Information		0,1		
Common Physical Channel ID	M			
PCCPCH Power	M			

X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". 3G TS 25.433 version 3.0.0 Release 1999

Maximum Transmission Power	O			
Time Slot Configuration		01..15		
Time Slot	M			
Time Slot Status	M			
Time Slot Direction	M			

9.1.27 CELL RECONFIGURATION RESPONSE

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Message discriminator	M			
Message Type	M			
Transaction ID	M			
Criticality diagnostics	O			

9.1.28 CELL RECONFIGURATION FAILURE

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Message discriminator	M			
Message Type	M			
Transaction ID	M			
Cause	M			
Criticality diagnostics	O			

9.1.29 CELL DELETION REQUEST

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Message discriminator	M			
Message Type	M			
Transaction ID	M			
C-ID	M			

9.1.30 CELL DELETION RESPONSE

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Message discriminator	M			
Message Type	M			
Transaction ID	M			
Criticality diagnostics	O			

9.1.31 RESOURCE STATUS INDICATION

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Transaction ID	M			
Indication Type	M			
CHOICE Indication Type				
"No Failure"				
Local Cell Information		1.. <maxLocalCellinNo deB >		
Local Cell ID	M			
Add/Delete Indicator	M			
Number of Channel Elements	M			
Maximum DL Power Capability	M			
"Service Impacting"				
Local Cell Information		0.. <maxLocalCell inNodeB>		
Local Cell ID	M			
Number of Channel Elements	⊖			
Maximum DL Power Capability	O			
Communication Control Port Information		0.. <maxCCPinNo deB>		
Communication Control Port ID	M			
Resource Operational State	M			
Availability Status	M			
Cell Information		0.. <maxCellinNo deB>		
C-ID	M			
Resource Operational State	M			
Availability Status	M			
Maximum DL Power Capability	FFS			
Minimum Spreading Factor	FFS			
Primary SCH Information		0..1		
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
Secondary SCH Information		0..1		
Common Physical Channel ID	M			

Resource Operational State	M			
Availability Status	M			
Primary CPICH Information			0..1	
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
Secondary CPICH Information			0..<maxSCPICHCell>	
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
Primary CCPCH Information			0..1	
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
BCH Information			0..1	
Common Transport Channel ID	M			
Resource Operational State	M			
Availability Status	M			
Secondary CCPCH Information			0..<maxSCCPCHCell>	
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
PCH Information			0..<maxPCHCell>	
Common Transport Channel ID	M			
Resource Operational State	M			
Availability Status	M			
PICH Information			0..1	
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
FACH Information			0..<maxFACHCell>	
Common Transport Channel ID	M			
Resource Operational State	M			

Availability Status	M			
PRACH Information			0..<maxPRACH HCell>	
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
RACH Information			0.. <maxPRACH Cell>	
Common Transport Channel ID	M			
Resource Operational State	M			
Availability Status	M			
AICH Information			0.. <maxPRACH Cell>	
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
SCH Information			0..1	
Common Transport Channel ID	M			
Resource Operational State	M			
Availability Status	M			
PSCH Information			0..1	
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
Cause	O			

Range bound	Explanation
<i>maxLocalCellinNodeB</i>	Maximum number of Local Cells that can exist in the Node B
<i>maxCellinNodeB</i>	Maximum number of C ID that can be configured in Node B
<i>maxSCPICHCell</i>	Maximum number of Secondary CPICH that can be defined in a Cell.
<i>maxSCCPCHCell</i>	Maximum number of Secondary CCPCH that can be defined in a Cell.
<i>maxFACHCell</i>	Maximum number of FACHes that can be defined in a Cell
<i>maxPCHCell</i>	Maximum number of PCHes that can be defined in a Cell
<i>maxPRACHCell</i>	Maximum number of PRACHes and AICHes that can be defined in a Cell
<i>maxCCPinNodeB</i>	Maximum number of communication control ports that can exist in the Node B

9.1.32 SYSTEM INFORMATION UPDATE REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Transaction ID	M			
C-ID	M			
BCCH Modification Time	O			
MIB/SIB Information		1..maxIB		
IB Type	M			
SIB Deletion Indicator	C-NotMIB			
CHOICE <i>DeletionIndicator</i>				
<i>NoDeletion</i>				
SIB Originator	C-NotMIB			
Segment Information		1..maxIBSEG		
Segment Type	M			
IB SG REP	M			
IB SG POS	M			
IB SG	C – CRNCOri gination			

Range bound	Explanation
1..maxIB	Maximum number of information Blocks supported in a physical channel scheduling cycle
1..maxIBSEG	Maximum number of segments for one Information Block

Condition	Explanation
CRNCOri gination	The IE shall be present if <i>the SIB Originator</i> IE is set to 'CRNC'
NotMIB	This IE shall be present if the IB Type is not equal to "MIB"

9.1.33 SYSTEM INFORMATION UPDATE RESPONSE

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Transaction ID	M			
Criticality diagnostics	O			

~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
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~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
~~3G TS 25.433 version 3.0.0 Release 1999~~

9.1.34 SYSTEM INFORMATION UPDATE FAILURE

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Transaction ID	M			
Cause	M			
Criticality diagnostics	O			

9.1.35 RADIO LINK SETUP REQUEST

9.1.35.1 FDD message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
CRNC Communication Context ID	M			
Transaction ID	M			
UL DPCH Information		1		
UL Scrambling Code	M			
Min UL Channelisation Code length	M			
Max Number of UL DPDCHs	C – CodeLen			
puncture limit	M			For UL
Transport Format Combination Set	M			for UL
UL DPCCH Slot Format	M			
UL Eb/No Target	M		Uplink Eb/No	
Diversity mode	M			
D Field Length	C – FB			
SSDT cell ID Length	O			
S Field Length	O			
DL DPCH Information				
TFC Transport Format Combination Set	M			For DL
DL DPCH Slot Format	M			
TFCI signalling mode	M			
TFCI presence	C- SlotFormat			
Multiplexing Position	M			
Power Offset Information		1		
PO1	M		Power Offset	Power offset for the TFCI bits
PO2	M		Power Offset	Power offset for the TPC bits
PO3	M		Power Offset	Power offset for the pilot bits
Delta TPC	M			
DCH Information		1 to <maxnoofDCHs>		
DCH ID	M			
DCH Combination Ind	O			
RLC mode	M			
Transport Format Set	M			For UL
Transport Format Set	M			For DL
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP mode	M			
ToAWS	M			
ToAWE	M			
RL ID	O			RL Supporting the DSCH
DSCH TFC	O			

DSCH Information		0 to <maxnoofDSCHs >		
DSCH ID	M			
Transport Format Set	M			For DSCH
Frame handling Priority	M			
ToAWS	M			
ToAWE	M			
RL Information		1 to <maxnoofRLs>		
RL ID	M			
C-ID	M			
Frame Offset	M			
Chip Offset	M			
Propagation Delay	O			
Diversity Control Field	C – NotFirstRL			
DL Code Information		1 to <maxnoof- DLCodes		
DL Scrambling Code	M			
FDD DL Channelisation Code Number	M			
Initial DL transmission Power	M		DL Power	
Maximum DL power	M		DL Power	
Minimum DL power	M		DL Power	
SSDT Cell Identity	O			

Condition	Explanation
CodeLen	This IE is present only if "Min UL Channelisation Code length" equals to 4
FB	This IE is present only if Feed Back mode diversity is activated.
NotFirstRL	This IE is present only if the RL is not the first one in the RL Information.
SlotFormat	This IE is only present if the DL DPCH slot format is equal to any of the value 12 to 16.

Range bound	Explanation
MaxnoofDSCHs	Maximum no-number of DSCHs for one UE.
MaxnoofDCHs	Maximum no-number of DCHs for one UE.
MaxnoofRLs	Maximum no-number of RLs for one UE.
MaxnoofDLCodes	Maximum no-number of DL code information.

9.1.35.2 TDD message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
CRNC Communication Context ID	M			
Transaction ID	M			
UL CCTrCH Information		0 to <maxno CCTrCH>		
CCTrCH ID	M			
TFCSTransport Format Combination Set	M			
TFCI Coding	M			
Puncture Limit	M			
UL DPCH Information		0 to <maxnoOfDPCH>		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
DL CCTrCH Information		0 to <maxno CCTrCH>		
CCTrCH ID	M			
TFCSTransport Format Combination Set	M			
TFCI Coding	M			
Puncture Limit	M			
DL DPCH information		0 to <maxnoOfDPCH>		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
DCH Information		1-0 to <maxnoofDCHs>		
DCH ID	M			
RLC mode	M			
CCTrCH ID	M			UL CCTrCH in which the DCH is mapped
CCTrCH ID	M			DL CCTrCH in which the DCH is mapped
DCH Combination Ind	O			

~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~ ~~3G TS 25.433 v3.0.0 (2000-01)~~
~~(PER)"~~ ~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~ ~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~ ~~3G TS 25.433 version 3.0.0 Release 1999~~

Transport Format Set	M			For UL
Transport Format Set	M			For DL
Frame Handling Priority	O			
Payload CRC Presence Indicator	M			
UL FP mode	M			
ToAWS	M			
ToAWE	M			
DSCH Information		0 to <MaxnoofDSCHs >		
DSCH ID	M			
CCTrCH ID	M			DL CCTrCH in which the DSCH is mapped
Transport Format Set	M			For DSCH
Frame handling Priority	M			
ToAWS	M			
ToAWE	M			
USCH Information		0 to <MaxnoofUSCHs >		
USCH ID	M			
CCTrCH ID	M			UL CCTrCH in which the USCH is mapped
Transport Format Set	M			For USCH
RL Information		1		
RL ID	M			
C-ID	M			
Frame TDD Physical Channel Offset	M			
Initial DL transmission Power	M		DL Power	
Maximum DL power	M		DL Power	
Minimum DL power	M		DL Power	

Range bound	Explanation
MaxnoofDCHs	Maximum no-number of DCHs for one UE.
maxnoOfDPCH	Maximum number of DPCH in one CCTrCH
maxnoCCTrCH	no-Number of -CCTrCH for one UE.
MaxnoofDSCHs	Maximum number of DSCH for one UE
MaxnoofUSCHs	Maximum number of USCH for one UE

9.1.36 RADIO LINK SETUP RESPONSE

9.1.36.1 FDD message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
CRNC Communication Context ID	M			
Transaction ID	M			
Node B Communication Context ID	M			
Communication Control Port ID	M			
RL Information Response		1 to <maxnoofRLs>		
RL ID	M			
UL interference level	M			
Diversity Indication	C-NotFirstRL			
CHOICE <i>diversity Indication</i>				
<i>Combining</i>				
RL ID	M			Reference RL ID for the combining
<i>Non Combining or IE not present</i>				
DCH Information Response		0 to <maxnoofDCHs>		Only one DCH per set of coordinated DCH shall be included
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
DSCH Information Response		0 to <Numof DSCH>		
DSCH ID	M			
Binding ID	M			
Transport Layer Address	M			
SSDT Support Indicator	M			
Criticality diagnostics	O			

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 no -number of RLs for one UE.
MaxnoofDCHs	Maximum no -number of DCH per UE.
MaxnoofDSCHs	Maximum no -number of DSCHs for one UE.

9.1.36.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
CRNC Communication Context ID	M			
Transaction ID	M			
Node B Communication Context ID	M			
Communication Control Port ID	M			
RL Information Response		1		
RL ID	M			
UL interference level	M			
DCH Information Response		1 to <maxnoofDCH>		Only one DCH per set of coordinated DCH shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
DSCH Information Response		0 .. <Maxnoof DSCHs>		
DSCH ID	M			
Binding ID	M			
Transport Layer Address	M			
USCH Information Response		0 .. <Maxnoof USCHs>		
USCH ID	M			
Binding ID	M			
Transport Layer Address	M			
Criticality diagnostics	O			

Range bound	Explanation
MaxnoofDCHs	Maximum no -number of DCH per UE.
MaxnoofDSCHs	Maximum number of DSCHs for one UE
MaxnoofUSCHs	Maximum number of USCHs for one UE

9.1.37 RADIO LINK SETUP FAILURE

9.1.37.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
CRNC Communication Context ID	M			
Transaction ID	M			
Node B Communication Context ID	M			
Communication Control Port ID	O			
Unsuccessful RL Information Response		1 to <maxnoofRLs>		
RL ID	M			
Cause	M			
Successful RL Information Response		0 to <maxnoofRLs-1>		
RL ID	M			
UL interference level	M			
Diversity Indication	C-NotFirstRL			
CHOICE <i>diversity Indication</i>				
<i>Combining</i>				
RL ID	M			Reference RL ID for the combining
<i>Non Combining or IE not present</i>				
DCH Information Response		0 to <maxnoofDCHs>		Only one DCH per set of coordinated DCH shall be included
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
DSCH Information Response		0 to <Numof DSCH>		
DSCH ID	M			
Binding ID	M			
Transport Layer Address	M			
SSDT Support Indicator	M			
Criticality diagnostics	O			

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.

X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)" X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)" X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)" 3G TS 25.433 version 3.0.0 Release 1999

Range bound	Explanation
MaxnoofRLs	Maximum no-number of RLs for one UE.
MaxnoofDCHs	Maximum no-number of set DCH per UE.
MaxnoofDSCHs	Maximum number of DSCH for one UE

9.1.37.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
CRNC Communication Context ID	M			
Transaction ID	M			
Unsuccessful RL Information Response		1		
RL ID	M			
Cause	M			
Criticality diagnostics	O			

9.1.38 RADIO LINK ADDITION REQUEST

9.1.38.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Node B Communication Context ID	M			
Transaction ID	M			
RL Information		1..<maxnoofRL-1>		
RL ID	M			
C-Id	M			
Frame Offset	M			
Chip Offset	M			
Diversity Control Field	M			
DL Code Information		1..maxnoofDLCodes		
DL Scrambling code	M			
FDD DL channelisation code number	M			
Initial DL transmission power	O		DL Power	
Maximum DL power	O		DL Power	
Minimum DL power	O		DL Power	
SSDT Cell Identity	O			

Range bound	Explanation
MaxnoofRL	Maximum number of RLs for one UE
MaxnoofDLCodes	Maximum number of DL code information

9.1.38.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Node B Communication Context ID	M			
Transaction ID	M			
UL CTrCH Information		0 to <maxno CTrCH>		
CTrCH ID	M			
UL DPCH Information		0 to <maxnoOfDPCH>		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
DL CTrCH Information		0 to <maxno CTrCH>		
CTrCH ID	M			
DL DPCH information		0 to <maxnoOfDPCH>		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
RL Information		1		
RL ID	M			
C-Id	M			
Frame Offset	M			
Diversity Control Field	M			
Initial DL Power	O		DL Power	
Maximum DL power	O		DL Power	
Minimum DL power	O		DL Power	

Range bound	Explanation
MaxnoOfDPCH	Maximum number of DPCH in one CTrCH
MaxnoCTrCH	no-Number of CTrCH for one UE.

9.1.39 RADIO LINK ADDITION RESPONSE

9.1.39.1 FDD message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
CRNC Communication Context ID	M			
Transaction ID	M			
RL Information Response		1..<maxnoofRL-1>		
RL ID	M			
UL interference level	M			
Diversity Indication	M			
CHOICE <i>diversity indication</i>				
<i>Combining</i>				
RL ID	M			Reference RL
<i>Non combining</i>				
DCH Information Response		1..<maxnoofDCHs>		
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
SSDT support indicator	M			
Criticality diagnostics	O			

Range bound	Explanation
<i>MaxnoofDCHs</i>	Maximum number of DCHs per UE
<i>MaxnoofRL</i>	Maximum number of RLs for one UE

9.1.39.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
CRNC Communication Context ID	M			
Transaction ID	M			
RL Information response		1		
RL ID	M			
UL interference level	M			
Diversity Indication	M			
CHOICE <i>diversity indication</i>				
<i>Combining</i>				In TDD it indicates whether the old Transport Bearer shall be reused or not
RL ID	M			Reference RL
<i>Non combining</i>				
DCH Information Response		0..<maxnoofDCHs>		
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
DSCH Information Response		0 .. <MaxnoofDSCHs>		
DSCH ID	M			
Binding ID	M			
Transport Layer Address	M			
USCH Information Response		0 .. <MaxnoofUSCHs>		
USCH ID	M			
Binding ID	M			
Transport Layer Address	M			
Criticality diagnostics	O			

Range bound	Explanation
<i>MaxnoofDCHs</i>	Maximum number of DCHs per UE
<i>MaxnoofDSCHs</i>	Maximum number of DSCHs for one UE
<i>MaxnoofUSCHs</i>	Maximum number of USCHs for one UE

9.1.40 RADIO LINK ADDITION FAILURE

9.1.40.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
CRNC Communication Context ID	M			
Transaction ID	M			
Unsuccessful RL Information Response		1..<maxnoofRL-1>		
RL ID	M			
Cause	M			
Successful RL Information Response		1..<maxnoofRL-2>		
RL ID	M			
UL interference level	M			
Diversity Indication	M			
CHOICE <i>diversity indication</i>				
<i>Combining</i>				
RL ID	M			Reference RL
<i>Non combining</i>				
DCH Information Response		1..<maxnoofDCHs>		
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
SSDT support indicator	M			
Criticality diagnostics	O			

Range bound	Explanation
<i>MaxnoofDCHs</i>	Maximum number of DCHs per UE
<i>MaxnoofRL</i>	Maximum number of RLs for one UE

9.1.40.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
CRNC Communication Context ID	M			
Transaction ID	M			
Unsuccessful RL Information Response		1		
RL ID	M			
Cause	M			
Criticality diagnostics	O			

9.1.41 RADIO LINK RECONFIGURATION PREPARE

9.1.41.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description
Message Discriminator	M			
Message Type	M			
Node B Communication Context ID	M			
Transaction ID	M			
UL DPCH Information		0..1		
UL Scrambling code	O			
Min UL Channelisation Code Length	O			
Max Number of UL DPCHs	C – CodeLen			
Puncture Limit	O			For UL
TFCS	O			
UL DPCH Slot Format	O			
SSDT Cell Identity Length	O			
S-Field Length	O			
DL DPCH Information		0..1		
TFCS	O			
DL DPCH Slot Format	O			
TFCI Signalling Mode	O			
TFCI presence	C-Slot Format			
DTX Insertion Point	O			
DCHs to Modify		0..<maxnoof DCHs>		
DCH ID	M			
Transport Format Set	O			For the UL.
Transport Format Set	O			For the DL.
Frame Handling Priority	O			
UL FP Mode	O			
ToAWS	O			
ToAWE	O			
DCHs to Add		0..<maxnoof DCHs>		
DCH ID	M			
DCH Combination Ind	O			
RLC Mode	M			
Transport Format Set	M			For the UL.
Transport Format Set	M			For the DL.
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP Mode	M			
ToAWS	M			
ToAWE	M			
DCHs to Delete		0..<maxnoof DCHs>		
DCH ID	M			
DSCH to modify		0..1		
Transport Format Set	O			For the DL.
RL ID	O			

Frame Handling Priority	O			
ToAWS	O			
ToAWE	O			
DSCH to add		0..1		
Transport Format Set	M			For the DL.
RL ID	M			
Frame Handling Priority	M			
ToAWS	M			
ToAWE	M			
DSCH to Delete		0..1		
RL ID	M			
RL Information		0..<maxnoof RLs>		
RL ID	M			
DL Code Information		0..<maxnoof DLCodes<		
DL Scrambling Code	O			
FDD DL Channelisation Code Number	O			
Maximum DL Power	O		DL Power	
Minimum DL Power	O		DL Power	
SSDT Indication	O			
SSDT Cell Identity	C - SSDTIndON			

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.

Range Bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.
MaxnoofRLs	Maximum number of RLs for a UE.
MaxnoofDLCodes	Maximum number of Downlink Channelisation Codes.

9.1.41.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description
Message Discriminator	M			
Message Type	M			
Node B Communication Context ID	M			
Transaction ID	M			
UL CCTrCH Information		0..<maxnoof CCTrCHs>		
CCTrCH ID	M			
TFCS	O			
TFCI Coding	O			
Puncture Limit	O			
UL DPCH Information		0..<maxnoof DPCHs>		
DPCH ID	M			
TDD Channelisation Code	O			
Burst Type	O			
Midamble Shift	O			
Time Slot	O			
TDD Physilca channel Offset	O			
Repetition Period	O			
Repetition Length	O			
TFCI Presence	O			
DL CCTrCH Information		0..<maxnoof CCTrCHs>		
CCTrCH ID	M			
TFCS	O			
TFCI Coding	O			
PunctureLimit				
DL DPCH Information		0..<maxnoof DPCHs>		
DPCH ID	M			
TDD Channelisation Code	O			
Burst Type	O			
Midamble Shift	O			
Time Slot	O			
TDD Physical Channel Offset	O			
Repetition Period	O			
Repetition Length	O			
TFCI Presence	O			
DCHs to Modify		0..<maxnoof DCHs>		
DCH ID	M			
CCTrCH ID	O			UL CCTrCH in which the DCH is mapped.
CCTrCH ID	O			DL CCTrCH in which the DCH is mapped
Transport Format Set	O			For the UL.
Transport Format Set	O			For the DL.
Frame Handling Priority	O			

~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". 3G TS 25.433 version 3.0.0 Release 1999~~
3G TS 25.433 v3.0.0 (2000-01)

UL FP Mode	O			
ToAWS	O			
ToAWE	O			
DCHs to Add		0..<maxnoof DCHs>		
DCH ID	M			
RLC Mode	M			
CCTrCH ID	M			UL CCTrCH in which the DCH is mapped.
CCTrCH ID	M			DL CCTrCH in which the DCH is mapped
DCH Combination Ind	O			
Transport Format Set	M			For the UL.
Transport Format Set	M			For the DL.
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP Mode	M			
ToAWS	M			
ToAWE	M			
DCHs to Delete		0..<maxnoof DCHs>		
DCH ID	M			
DSCH Information to modify		0 .. <Maxnoof DSCHs>		
DSCH ID	M			
CCTrCH ID	O			DL CCTrCH in which the DSCH is mapped
Transport Format Set	O			
Frame handling Priority	O			
ToAWS	O			
ToAWE	O			
DSCH Information to add		0 .. <Maxnoof DSCHs>		
DSCH ID	M			
CCTrCH ID	M			DL CCTrCH in which the DSCH is mapped
Transport Format Set	M			
Frame handling Priority	O			
ToAWS	M			
ToAWE	M			
DSCH Information to delete		0 .. <Maxnoof DSCHs>		
DSCH ID	M			
USCH Information to modify		0 .. <Maxnoof USCHs>		
USCH ID	M			
Transport Format Set	O			
CCTrCH ID	O			UL CCTrCH in which the USCH is mapped
USCH Information to add		0 .. <Maxnoof USCHs>		
USCH ID	M			
CCTrCH ID	M			UL CCTrCH in which the USCH is mapped

X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". ~~3G TS 25.433 version 3.0.0 Release 1999~~ ~~3G TS 25.433 v3.0.0 (2000-01)~~

Transport Format Set	M			
USCH Information to delete		0 .. <Maxnoof USCHs>		
USCH ID	M			
RL Information		0..1		
RL ID	M			
Maximum Downlink Power	O		DL Power	
Minimum Downlink Power	O		DL Power	

Range Bound	Explanation
<i>MaxnoofDCHs</i>	Maximum number of DCHs for a UE.
<i>MaxnoofCCTrCHs</i>	Maximum number of CCTrCHs for a UE.
<i>Maxnoof DPCHs</i>	Maximum number of DPCHs in one CCTrCH.
<i>MaxnoofDSCHs</i>	Maximum number of DSCHs for one UE
<i>MaxnoofUSCHs</i>	Maximum number of USCHs for one UE

9.1.42 RADIO LINK RECONFIGURATION READY

IE/Group name	Presence	Range	IE Type and Reference	Semantic Description
Message Discriminator	M			
Message Type	M			
CRNC Communication Context ID	M			
Transaction ID	M			
RL Information Response		0..<maxnoof RLS>		Only one RL information response group for one group of combined RLs shall be present
RL ID	M			
DCH to be Added		0..<maxnoof DCHs>		Only one DCH per set of coordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
DCH to be Modified		0..<maxnoof DCHs>		Only one DCH per set of coordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
DSCH to be Setup		0..<Maxnoof DSCHs>		
DSCH ID	M			
Binding ID	M			
Transport Layer Address	M			
DSCH to be Modified		0..<Maxnoof DSCHs>		
DSCH ID	M			
Binding ID	M			
Transport Layer Address	M			
USCH to be setup		0 .. <Maxnoof USCHs>		
USCH ID	M			
Binding ID	M			
Transport Layer Address	M			
USCH to be modified		0 .. <Maxnoof USCHs>		
USCH ID	M			
Binding ID	M			
Transport Layer Address	M			
Criticality diagnostics	O			

Range Bound	Explanation
<i>MaxnoofDCHs</i>	Maximum number of DCHs for a UE.
<i>MaxnoofRLs</i>	Maximum number of RLs for a UE.
<i>MaxnoofDSCHs</i>	Maximum number of DSCHs for one UE
<i>MaxnoofUSCHs</i>	Maximum number of USCHs for one UE

9.1.43 RADIO LINK RECONFIGURATION FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description
Message Discriminator	M			
Message Type	M			
CRNC Communication Context ID	M			
Transaction ID	M			
Cause	M			
RLs Causing Reconfiguration Failure		<i>0..<maxnoof RLs></i>		
RL ID	M			
Cause	M			
Criticality diagnostics	O			

Range Bound	Explanation
<i>MaxnoofRLs</i>	Maximum number of RLs for a UE.

9.1.44 RADIO LINK RECONFIGURATION COMMIT

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description
Message Discriminator	M			
Message type	M			
Node B Communication Context ID	M			
Transaction ID	M			
CFN	M			

9.1.45 RADIO LINK RECONFIGURATION CANCEL

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description
Message Discriminator	M			
Message type	M			
Node B Communication Context ID	M			
Transaction ID	M			

9.1.46 RADIO LINK RECONFIGURATION REQUEST

9.1.46.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description
Message Discriminator	M			
Message Type	M			
Node B Communication Context ID	M			
Transaction ID	M			
UL DPCH Information		0..1		
TFCS	O			For the UL.
DL DPCH Information		0..1		
TFCS	O			For the DL.
TFCI Signalling Mode	O			
DCHs to Modify		0..<maxnoof DCHs>		
DCH ID	M			
Transport Format Set	O			For the UL.
Transport Format Set	O			For the DL.
Frame Handling Priority	O			
UL FP Mode	O			
ToAWS	O			
ToAWE	O			
DCHs to Add		0..<maxnoof DCHs>		
DCH ID	M			
DCH Combination Ind	O			
RLC Mode	M			
Transport Format Set	M			For the UL.
Transport Format Set	M			For the DL.
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP mode	M			
ToAWS	M			
ToAWE	M			
DCHs to Delete		0..<maxnoof DCHs>		
DCH ID	M			
DSCH to Modify		0..1		
Transport Format Set	O			For the DL.
RL ID	O			
Frame Handling Priority	O			
ToAWS	O			
ToAWE	O			
DSCH to Add		0..1		
Transport Format Set	M			For the DL.
RL ID	M			
Frame Handling Priority	M			
ToAWS	M			
ToAWE	M			
DSCH to Delete		0..1		
RL ID	M			
Radio Link Information		0..<maxnoof		

X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". 3G TS 25.433 version 3.0.0 Release 1999

		<i>RLs></i>		
RL ID	M			
Maximum DL Power	O		DL Power	
Minimum DL Power	O		DL Power	

Range Bound	Explanation
<i>MaxnoofDCHs</i>	Maximum number of DCHs for a UE.
<i>MaxnoofRLs</i>	Maximum number of RLs for a UE.

9.1.46.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description
Message Discriminator	M			
Message Type	M			
Node B Communication Context ID	M			
Transaction ID	M			
UL CCTrCH Information		0..<maxnoof CCTrCHs>		
CCTrCH ID	M			
TFCS	O			
Puncture Limit	O			
DL CCTrCH Information		0..<maxnoof CCTrCHs>		
CCTrCH ID	M			
TFCS	O			
Puncture Limit	O			
DCHs to Modify		0..<maxnoof DCHs>		
DCH ID	M			
CCTrCH ID	O			UL CCTrCH in which the DCH is mapped.
CCTrCH ID	O			DL CCTrCH in which the DCH is mapped
Transport Format Set	O			For the UL.
Transport Format Set	O			For the DL.
Frame Handling Priority	O			
UL FP Mode	O			
ToAWS	O			
ToAWE	O			
DCHs to Add		0..<maxnoof DCHs>		
DCH ID	M			
RLC Mode	M			
CCTrCH ID	M			UL CCTrCH in which the DCH is mapped.
CCTrCH ID	M			DL CCTrCH in which the DCH is mapped
DCH Combination Ind	O			
Transport Format Set	M			For the UL.
Transport Format Set	M			For the DL.
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP Mode	M			
ToAWS	M			
ToAWE	M			
DCHs to Delete		0..<maxnoof DCHs>		
DCH ID	M			
DSCH Information to modify		0 .. <Maxnoof DSCHs>		
DSCH ID	M			
CCTrCH ID	O			DL CCTrCH in which the DSCH is mapped
Transport Format Set	O			

Frame handling Priority	O			
ToAWS	O			
ToAWE	O			
DSCH Information to add		0 .. <Maxnoof DSCHs>		
DSCH ID	M			
CCTrCH ID	M			DL CCTrCH in which the DSCH is mapped
Transport Format Set	M			
Frame handling Priority	O			
ToAWS	M			
ToAWE	M			
DSCH Information to delete		0 .. <Maxnoof DSCHs>		
DSCH ID	M			
USCH Information to modify		0 .. <Maxnoof USCHs>		
USCH ID	M			
CCTrCH ID	O			UL CCTrCH in which the USCH is mapped
Transport Format Set	O			
USCH Information to add		0 .. <Maxnoof USCHs>		
USCH ID	M			
CCTrCH ID	M			UL CCTrCH in which the USCH is mapped
Transport Format Set	M			
USCH Information to delete		0 .. <Maxnoof USCHs>		
USCH ID	M			
RL Information		0..1		
RL ID	M			
Maximum Downlink Power	O			DL Power
Minimum Downlink Power	O			DL Power

Range bound	Explanation
<i>MaxnoofDCHs</i>	Maximum number of DCHs for a UE.
<i>MaxnoofCCTrCHs</i>	Maximum number of CCTrCHs for a UE.
<i>MaxnoofDSCHs</i>	Maximum number of DSCHs for one UE
<i>MaxnoofUSCHs</i>	Maximum number of USCHs for one UE

9.1.4847 RADIO LINK RECONFIGURATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description
Message Discriminator	M			
Message Type	M			
CRNC Communication Context ID	M			
Transaction ID	M			
RL Information Response		0..<maxnoof RLs>		Only one RL information response group for one group of combined RLs shall be present
RL ID	M			
DCH to be Added		0..<maxnoof DCHs>		Only one DCH per set of coordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
DCH to be Modified		0..<maxnoof DCHs>		Only one DCH per set of coordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
DSCH to be Setup		0..<Maxnoof DSCHs>		
DSCH ID	M			
Binding ID	M			
Transport Layer Address	M			
DSCH to be Modified		0..<Maxnoof DSCHs>		
DSCH ID	M			
Binding ID	M			
Transport Layer Address	M			
USCH to be setup		0 .. <Maxnoof USCHs>		
USCH ID	M			
Binding ID	M			
Transport Layer Address	M			
USCH to be modified		0 .. <Maxnoof USCHs>		
USCH ID	M			
Binding ID	M			
Transport Layer Address	M			
Criticality diagnostics	O			

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.
MaxnoofRLs	Maximum number of RLs for a UE.
MaxnoofDSCHs	Maximum number of DSCHs for one UE
MaxnoofUSCHs	Maximum number of USCHs for one UE

9.1.48 RADIO LINK DELETION REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Node B Communication Context ID	M			
Transaction ID	M			
RL Information		1..<maxnoofRLs>		
RL ID	M			

Range bound	Explanation
MaxnoofRLs	Maximum number of radio links for one UE

9.1.49 RADIO LINK DELETION RESPONSE

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
CRNC Communication Context ID	M			
Transaction ID	M			
Criticality diagnostics	O			

9.1.50 DL POWER CONTROL REQUEST ([FDD-only])

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Node B Communication Context ID	M			
Transaction ID	M			
CHOICE <i>procedure scope</i>				
"ALL RL's"				
DL Reference Power	M		DL power	
"Individual RL's"				
DL Reference Power Information		1..<maxnoofRLs>		
RL ID	M			
DL Reference Power	M		DL power	

Range Bound	Explanation
MaxnoofRLs	Maximum number of Radio Links for a UE

9.1.51 DEDICATED MEASUREMENT INITIATION REQUEST

Information Element/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Discriminator	M			
Message Type	M			
Node B Communication Context Id	M			
Transaction Id	M			
Measurement Id	M			
Dedicated Measurement Object Type	M			
CHOICE <i>Dedicated Measurement Object Type</i>				
"RL"				
RL Information		1..<maxno ofRLs>		
RL-id	M			
DPCH ID	O			
Dedicated Measurement Type	M			
Measurement Characteristics	M			
Report Characteristics	M			

Range	Explanation
<i>Maxno ofRLs</i>	Maximum number of individual RL's a measurement can be started on.

9.1.52 DEDICATED MEASUREMENT INITIATION RESPONSE

Information Element/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Discriminator	M			
Message Type	M			
CRNC Communication Context Id	M			
Transaction Id	M			
Measurement Id	M			
CHOICE <i>Dedicated Measurement Object Type</i>				Dedicated Measurement Object Type the measurement was initiated with
"RL"				
RL Information		1..<maxno ofRLs>		
RL-id	M			
DPCH ID	O			
Dedicated Measurement Value	M			
"ALLRL"				
Dedicated Measurement Value	M			
CFN	O			Dedicated Measurement Time Reference
Criticality diagnostics	O			

X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". 3G TS 25.433 version 3.0.0 Release 1999

Range	Explanation
MaxnoofRLs	Maximum number of individual RL's the measurement can be started on.

9.1.53 DEDICATED MEASUREMENT INITIATION FAILURE

Information Element/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Discriminator	M			
Message Type	M			
CRNC Communication Context Id	M			
Transaction Id	M			
Measurement Id	M			
Cause	M			
Criticality diagnostics	O			

9.1.54 DEDICATED MEASUREMENT REPORT

Information Element/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Discriminator	M			
Message Type	M			
CRNC Communication Context Id	M			
Transaction Id	M			
Measurement Id	M			
CHOICE <i>Dedicated Measurement Object Type</i>				Dedicated Measurement Object Type the measurement was initiated with
"RL"				
RL Information		1..<maxnoofRLs>		
RL-id	M			
DPCH ID	O			
Dedicated Measurement Value	M			
"ALLRL"				
Dedicated Measurement Value	M			
CFN	O			Dedicated Measurement Time Reference

Range	Explanation
MaxnoofRLs	Maximum number of individual RL's the measurement can be started on.

9.1.55 DEDICATED MEASUREMENT TERMINATION REQUEST

Information Element/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Discriminator	M			
Message Type	M			
Node B Communication Context Id	M			
Transaction Id	M			
Measurement Id	M			

9.1.56 DEDICATED MEASUREMENT FAILURE INDICATION

Information Element/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Discriminator	M			
Message Type	M			
CRNC Communication Context Id	M			
Transaction Id	M			
Measurement Id	M			
Cause	M			

9.1.57 RADIO LINK FAILURE INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Transaction ID	M			
CRNC Communication Context ID	M			
Radio Link Information		1 to <MaxnoofRLs>		
RL ID	M			
Cause	M			

Range bound	Explanation
MaxnoofRLs	Maximum no number of RLs for one UE.

9.1.58 RADIO LINK RESTORE INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Transaction ID	M			
CRNC Communication Context ID	M			
Radio Link Information		1 to <MaxnoofRLs>		
RL ID	M			

X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". 3G TS 25.433 version 3.0.0 Release 1999

Range bound	Explanation
MaxnoofRLs	Maximum no number of RLs for one UE.

9.1.59 COMPRESSED MODE PREPARE ([FDD-only])

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Node B communication context ID	M			
Transaction ID	M			
TGP1	M		Gap Period	Refer to 25.215
TGP2	O		Gap Period	Refer to 25.215
TGL	M			
TGD	M			
PD	M			
UL/DL compressed mode selection	M			
Compressed mode method	M			
Gap Position Mode	M			
SN	C-Flex		TimeSlot	
Downlink Frame Type	M			
Scrambling Code Change	C-SF/2			
Power Control Mode	M			
Power Resume Mode	M			
UL delta Eb/No	M			
UL delta Eb/No after	M			

Condition	Explanation
Flex	This IE is present only if "Gap position Mode" equals to 'flexible'.
SF/2	This IE is present only if Compressed Mode Method equals to SF/2

9.1.60 COMPRESSED MODE READY ([FDD-only])

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
CRNC communication context ID	M			
Transaction ID	M			
Criticality diagnostics	O			

9.1.61 COMPRESSED MODE COMMIT ([FDD-only])

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Node B communication context ID	M			
Transaction ID	M			
CFN	M			

9.1.62 COMPRESSED MODE FAILURE ([FDD-only])

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
CRNC communication context ID	M			
Transaction ID	M			
Cause	M			
Criticality diagnostics	O			

9.1.63 COMPRESSED MODE CANCEL ([FDD-only])

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Node B NodeB communication context ID	M			
Transaction ID	M			

9.1.64 ERROR INDICATION

Information Element IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Message Discriminator	M			
CRNC Communication Context Id	C-ifUL			
Node B Communication Context Id	C-ifDL			
Transaction Id	M			
Cause	C-ifalone			
CRNC Communication Context Id	C-ifUL			
Node B Communication Context Id	C-ifDL			
Criticality diagnostics	C-ifalone			

Condition	Explanation
C-ifDL	This IE is only present when message is transmitted by RNC
C-ifUL	This IE is only present when message is transmitted by node B
C-ifalone	At least either of Cause IE or Criticality Diagnostics IE shall be present.

9.2 Information Element Functional Definition and Contents

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.

Information Element IE/Group Name	Presence	Range	IE type and reference	Semantics description
Add/Delete Indicator			ENUMERATED(Add, Delete)	

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 [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 [6] are present.

Information Element/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, 2, 4, ...,4095)	All even SFN values are allowed The tabular description is a direct copy from TS 25.331 CR 078

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. The length of this parameter is variable.

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.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Blocking Priority Indicator			ENUMERATED (High, Normal, Low)	High priority: Block resource immediately. Normal priority: Block resource when idle or upon timer expiry. Low priority: Block resource when idle.

9.2.1.6 Cause

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Cause group	M		Enumerated (Radio Network Layer, Transport Layer, Protocol, Misc)	
<i>CHOICE Cause group</i>				
<i>Radio Network Layer Cause</i>	M		Enumerated (unknown C-ID, Cell not available, Power level not supported, UL scrambling code already in use, DL radio resources not available, UL radio resources not available, RL Already Activated/allocated Node B Resources Unavailable Insufficient physical channel resources Measurement not supported for the object, Macrodiversity combining not possible, Reconfiguration not allowed, Requested configuration not supported <u>Synchronization Synchronisation failure, SIB Origination in Node B not Supported.</u> Unspecified)	
<i>Transport Layer Cause</i>	M		Enumerated (Transport link failure, Transmission port not available, Transport resource unavailable Unspecified)	
<i>Protocol Cause</i>			Enumerated (Transaction not allowed, Transfer syntax error, Abstract syntax error (reject), Abstract syntax error (ignore and notify), Message not compatible with receiver state Semantic error Unspecified)	
<i>Misc Cause</i>	M		Enumerated (Control processing overload Hardware failure, O&M intervention, Not enough user plane processing resources, Unspecified)	

9.2.1.7 CFN

Connection Frame Number for the radio connection, see ref. [25.402].

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
CFN			Integer (0..255)	

9.2.1.8 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)	

9.2.1.9 Common Measurement Object Type

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

Information Element/IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dedicated Measurement Object Type			ENUMERATED (CELL, RACH,...)	

9.2.1.10 Common Measurement Type

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

Information Element/IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Common Measurement Type			ENUMERATED (RSSI, Transmitted Carrier Power, Acknowledged RA tries, Timeslot ISCP,...)	

9.2.1.11 Common Measurement Value

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

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Information Element / IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Transmitted Carrier Power Value	O		Enumerated(-35 .. 15), step 0.1 dB	
RSSI Value	O		Enumerated(-30..-100) step 0.1	
Acknowledged RA tries Value	O		TBD	The number of L1 acknowledged random access tries per transmission time interval on the PCCPCH.
Timeslot ISCP (TDD only)	O		TBD	

<Editors Note: Some adjustment of the ranges for these measurements might be needed as they await a decision on range for this measurement in TSG RAN WG1>

9.2.1.12 Common Physical Channel Id

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

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

9.2.1.13 Common Transport Channel Id

Common Transport Channel Id is the unique identifier for one common transport channel within a cell.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Common Transport Channel ID			Integer(0..255)	

9.2.1.14 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)	

9.2.1.15 Configuration Generation ID

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

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X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"
X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"
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Information Element/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.

9.2.1.16 Criticality diagnostics

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Criticality Diagnostics				
_Procedure Code	O		INTEGER (0..255)	Procedure code is to be used if Criticality diagnostics is part of Error Indication procedure, and not within the response message of the same operation that caused the error
_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 except when the procedure code is not understood.
_Criticality Response	O		ENUMERATED (reject, ignore, notify)	This Criticality response IE is used for reporting the Criticality of the Triggering message
_Transaction Id	O		INTEGER (0..255)	
Information Element Criticality Diagnostics		1 to <maxnoof errors>		
_Criticality Response	M		ENUMERATED (reject, ignore, notify)	The Criticality response IE 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 IE

Range bound	Explanation
<i>maxnooferrors</i>	Maximum <i>no-number</i> of IE errors allowed to be reported with a single message. The value for maxnooferrors is 256.

9.2.1.17 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)	

9.2.1.18 DCH Combination Indicator

The DCH Combination Indicator is used to indicate the multiplexing of more than one DCH on transport bearer. The value should be unique for each group of coordinated DCH's per request message.

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IE/Group Name	Presence	Range	IE type and reference	Semantics description
DCH Combination Ind			INTEGER (0..255)	

9.2.1.19 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)	

9.2.1.20 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.

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

9.2.1.21 Dedicated Measurement Object Type

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

Information Element IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dedicated Measurement Object Type			ENUMERATED (RL,ALLRL, ...)	

9.2.1.22 Dedicated Measurement Type

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

Information Element IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dedicated Measurement Type			ENUMERATED (SIR, SIR Error, Transmitted Code Power, RSCP,...)	RSCP is used by TDD only.

Note. For definitions of the measurement types refer to 25.215 and 25.225.

9.2.1.23 Dedicated Measurement Value

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

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Information Element / IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dedicated measurement Value				
SIR value	O		Enumerated(-10 .. 20), step 0.1 dB	
SIR error Value	O		Enumerated (-10 .. 10), step 0.1 dB	If SIRerror<=-10, SIR error Value shall be set to -10 If SIRerror=>10, SIR error Value shall be set to 10
Transmitted Code Power Value	O		Enumerated (-35 .. 15), step 0.1 dB	Relative to CPICH
RSCP	O		TBD	TDD only.

<Editors Note: Some adjustment of the ranges for these measurements might be needed as they await a decision on range for this measurement in TSG RAN WG1>

9.2.1.24 DSCH ID

The DSCH ID uniquely identifies a DSCH within a Node B Communication Context.

Information Element/IE/Group Name	Presence	Range	IE type and reference	Semantics description
DSCH ID			INTEGER (0..255)	

9.2.1.25 DSCH Transport Format Set

This parameter defines the transport format set for DSCH.

Note: the parameter need to be defined. It may correspond to the DL TFS defined for DCH

9.2.1.26 DSCH Transport Format Combination Set

This parameter defines the transport format combination set for DSCH.

Note: to be defined. Each DSCH TFCI also indicates the code to be used

Note: the parameter need to be defined. It may correspond to the DL TFS defined for DCH

9.2.1.27 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

9.2.1.28 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 lub/lur and least significant 8 bits of SFN (System Frame Number) on Uu. The Frame Offset is UE and cell specific.

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IE/Group Name	Presence	Range	IE type and reference	Semantics description
Frame Offset			INTEGER (0..255)	Frames

9.2.1.29 IB_SG

Segment which is part of an Information Block.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
IB SG			Bit String	Contents defined in ref:25.331.

9.2.1.30 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..2 ¹² -1)	

9.2.1.31 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			INTEGER (16, 32, 64, 128, 256, 512, 1024, 2048)	Repetition period for the IB segment in frames

9.2.1.32 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, SIB1, SIB2, ... SIB12, ...)	Complete R99 SIB range still TBD.

9.2.1.33 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.

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Information Element / IE/Group Name	Presence	Range	IE type and reference	Semantics description
Indication Type			ENUMERATED (No Failure, Service Impacting, Cell Control,...)	Service Impacting – The failure has impacted on the logical resources supported at Node B. Cell Control – The failure has impacted on the ability for the cell parameters to be administered or O&M functions performed.

9.2.1.34 Local Cell ID

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

Information Element / IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Local Cell ID			INTEGER(0 ..268435455)	

9.2.1.35 Maximum DL Power Capability

This parameter indicates the maximum DL power capability for a local cell within Node B.

Information Element / IE/Group Name	Presence	Range	IE type and reference	Semantics description
Maximum DL Power Capability			ENUMERATED(0..50)	dBm, granularity 1 dBm

9.2.1.36 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.

Information Element / IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Maximum transmission Power			ENUMERATED(0, 1,2 ..50)	Unit dBm Granularity 1 dB

9.2.1.37 Measurement ID

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

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

9.2.1.38 Measurement Characteristics

The Measurement Characteristics indicates how the measurement shall be performed.

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Information Element / IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Measurement Characteristics				
Measurement Frequency	M		TBD	
Averaging Duration	M		TBD	

Editors Note: The exact definition and structure is this information element awaits decisions in TSG RAN WG2.

9.2.1.39 Report Characteristics

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

Information Element / IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Report characteristics				
Report characteristics type			ENUMERATED (On Demand, Periodic, Event A, Event B, Event C, Event D, Event E, Event F)	
Periodic Report Information	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. First working assumption!
Event A	C – Event A			
Measurement Threshold	M		TBD	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		TBD	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 Threshold	M		TBD	
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 Decrease Threshold	M		TBD	
Measurement Change Time	M		ENUMERATED (10ms...1min) step 10ms,...	The time the measurement entity shall fall (in ms), in order to trigger a measurement report.
Event E	C – Event E			
Measurement Threshold 1	M		TBD	
Measurement Threshold	O		TBD	

2				
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		TBD	
Measurement Threshold 2	O		TBD	
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.

Editors note: Encoding of threshold TBD.

Condition	Explanation
C-Periodic	Valid if <i>Report Characteristics Type</i> IE indicates "periodic"
C-Event A	Valid if <i>Report Characteristics Type</i> IE indicates "Event A"
C-Event B	Valid if <i>Report Characteristics Type</i> IE indicates "Event B"
C-Event C	Valid if <i>Report Characteristics Type</i> IE indicates "Event C"
C-Event D	Valid if <i>Report Characteristics Type</i> IE indicates "Event D"
C-Event E	Valid if <i>Report Characteristics Type</i> IE indicates "Event E"
C-Event F	Valid if <i>Report Characteristics Type</i> IE indicates "Event F"

9.2.1.40 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)	

9.2.1.41 Message Type

The Message Type uniquely identifies the message being sent.

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IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type			ENUMERATED (COMMON TRANSPORT CHANNEL SETUP REQUEST, COMMON TRANSPORT CHANNEL SETUP RESPONSE, COMMON TRANSPORT CHANNEL SETUP FAILURE, COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST, COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE, COMMON TRANSPORT CHANNEL RECONFIGURATION FAILURE, COMMON TRANSPORT CHANNEL CHANNEL DELETION REQUEST, COMMON TRANSPORT CHANNEL DELETION RESPONSE, BLOCK RESOURCE REQUEST, BLOCK RESOURCE RESPONSE, BLOCK RESOURCE FAILURE, UNBLOCK RESOURCE INDICATION, AUDIT REQUIRED INDICATOR INDICATION AUDIT REQUEST AUDIT RESPONSE COMMON MEASUREMENT INITIATION REQUEST, COMMON MEASUREMENT INITIATION RESPONSE, COMMON MEASUREMENT INITIATION FAILURE, COMMON MEASUREMENT REPORT, COMMON MEASUREMENT TERMINATION REQUEST, COMMON MEASUREMENT TERMINATION FAILURE INDICATION, CELL SETUP REQUEST, CELL SETUP RESPONSE, CELL SETUP FAILURE, CELL RECONFIGURATION REQUEST, CELL RECONFIGURATION RESPONSE, CELL RECONFIGURATION FAILURE, CELL DELETION REQUEST, CELL DELETION RESPONSE, RESOURCE STATUS INDICATION, SYSTEM INFORMATION UPDATE REQUEST, SYSTEM INFORMATION UPDATE RESPONSE, SYSTEM INFORMATION UPDATE FAILURE, RL SETUP REQUEST, RL SETUP RESPONSE, RL SETUP FAILURE, RL ADDITION REQUEST, RL ADDITION RESPONSE, RL ADDITION FAILURE, RL RECONFIGURATION PREPARE, RL RECONFIGURATION READY, RL RECONFIGURATION FAILURE, RL RECONFIGURATION COMMIT, RL RECONFIGURATION CANCEL, RL RECONFIGURATION REQUEST, RL RECONFIGURATION RESPONSE, RL DELETION REQUEST, RL DELETION RESPONSE, DL POWER CONTROL REQUEST, DEDICATED MEASUREMENT INITIATION REQUEST, DEDICATED MEASUREMENT INITIATION RESPONSE, DEDICATED MEASUREMENT INITIATION FAILURE, DEDICATED MEASUREMENT REPORT, DEDICATED MEASUREMENT TERMINATION REQUEST, DEDICATED MEASUREMENT TERMINATION FAILURE INDICATION,	Future extensions shall be possible

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			RL FAILURE INDICATION, RL RESTORE INDICATION, COMPRESSED MODE PREPARE, COMPRESSED MODE READY, COMPRESSED MODE COMMIT, COMPRESSED MODE FAILURE, COMPRESSED MODE CANCEL ERROR INDICATION, ...)	
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9.2.1.42 Minimum Spreading Factor

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

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

9.2.1.43 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).

9.2.1.44 Payload CRC presence

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)	

9.2.1.45 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
UL puncture limit			INTEGER (0..100)	%

9.2.1.46 Resource Operational State

The resource operational state is used to indicate the current operational state of the associated resource following a Node B failure.

Information Element Name	IE/Group	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].

9.2.1.47 RLC Mode

This parameter defines the RLC mode of the logical channels multiplexed on the transport channel.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
RLC mode			ENUMERATED(Acknowledged Mode, Unacknowledged Mode, Transparent Mode)	

9.2.1.48 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)	

9.2.1.49 Segment Type

Indicates the type of segment of the SIB.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Segment Type			Enumerated (First, Subsequent, Last, Complete)	

9.2.1.50 SIB Deletion Indicator

Indicates if the SIB shall be deleted or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SIB Deletion Indicator			Enumerated(NoDeletion, Deletion)	

9.2.1.51 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(NodeB Node B, CRNC)	

9.2.1.52 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.

Information Element IE/Group Name	Presence	Range	IE type and reference	Semantics description
Shutdown Timer			INTEGER(1. .3600)	Value in seconds

9.2.1.53 TFCI Presence

The TFCI Presence parameter indicates whether the TFCI shall be included.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TFCI presence			ENUMERATED (Present, not present)	

9.2.1.54 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.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
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- 1)	Integer number calculated according to TS 25.331

Range bound	Explanation
MaxnoofTFCS	The maximum number of Transport Format Combinations (1024).
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 TS 25.331

9.2.1.55 ~~TFS~~ (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
DL Transport Format Set				
Dynamic Transport Format Information		1 to <maxTFcount>		
Number of Transport blocks	M		INTEGER (0..4095)	
Transport Block Size	C – Blocks		INTEGER (1..5000)	Bits
CHOICE mode				
TDD				
Transmission time interval	C- TTIdynamic	1 to <maxTTIcount>	Enumerated(10, 20, 40, 80)	
Semi-static Transport Format Information				
Transmission time interval	C- TTIsemistatic		ENUMERATED (10, 20, 40, 80)	msec
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				
TDD				
2 nd 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"
<i>TTIdynamic</i>	This IE is mandatory if not defined as semistatic parameter. Otherwise it is absent.
<i>TTIsemistatic</i>	This IE is mandatory if not defined as dynamic parameter. 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 is 32.
MaxRM	Maximum number that could be set as rate matching attribute for a transport channel.
<i>maxTTIcount</i>	The amount of different TTI that are possible for that transport format is 4.

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9.2.1.56 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)	msec.

9.2.1.57 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)	msec.

9.2.1.58 Transaction ID

The Transaction ID is used to associate all the messages belonging to the same pending procedure of the same NBAP procedure type (e.g. Radio Link Addition), i.e. the Request-, Response-, Confirm-type of messages have the same Transaction ID. The messages belonging to different pending procedures have different Transaction IDs.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transaction ID			INTEGER (0..255)	Since the scope is not clear, the range of this parameter is to be considered a working assumption

9.2.1.59 Transport Layer Address

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transport Layer Address			Bit string(1..160, ...)	

9.2.1.60 UARFCN

Designate the central frequency of the channel number.

Information Element / IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
UARFCN			INTEGER(0..698,...)	corresponds to 1885.2MHz..2024.8MHz (25.101, section 5.4 and 25.105)

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[Editor's Note: in RRC they have additional attributes such as the "raster" included in the IE]

9.2.1.61 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)	

9.2.1.62 UL interference level

The UL interference level indicates the UL interference at a certain cell under CRNC.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL interference level			ENUMERATED(-128.0dBm..-60.0dBm)	Resolution is 0.1 dBm.

9.2.2 FDD specific parameters

9.2.2.1 AICH Transmission Timing

Information Element IE/Group Name	Presence	Range	IE type and reference	Semantics description
AICH Transmission Timing			ENUMERATED(0, 1)	According to 25.331 chapter 10.2.6.17.

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

9.2.2.3 Compressed mode method

Defines the method for generating the downlink compressed mode gap, as described in 25.212.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Compressed Mode Method			ENUMERATED (None, Puncturing, SF/2, <u>Higher Layer Scheduling</u>)	None = restore the normal mode

9.2.2.4 D-Field Length

Defines the D Field size of the UL DPCCH slot.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
D Field Length			ENUMERATED (1, 2)	

9.2.2.5 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)	

9.2.2.6 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			ENUMERATED (Combined, not combined)	

9.2.2.7 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)	

9.2.2.8 DL DPCH Slot Format

Indicates the slot format used in DPCH in DL, accordingly to 25.211.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL DPCH slot format			INTEGER (0..16)	

9.2.2.9 DL frame type

This parameter defines if frame structure type 'A' or 'B' shall be used in downlink compressed mode. This is defined in TS 25.212

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Downlink Frame Type			ENUMERATED (TypeA, TypeB)	

9.2.2.10 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

9.2.2.11 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)	

9.2.2.12 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 ChannalisationCode Number			INTEGER(0.. 255)	The maximum value is equal to the DL spreading factor -1

9.2.2.13 FDD S-CCPCH 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.

Information Element Name	IE/Group Name	Presence	Range	IE type and reference	Semantics description
FDD S-CCPCH Offset				INTEGER(0.. 149)	0: 0 chip 1: 256 chip 2: 512 chip .. 149: 38144 chip [TS 25.211]

9.2.2.14 Gap Period

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Gap Period			INTEGER(0..255)	Frames

9.2.2.15 Gap Position Mode

The gap position can be fixed or adjustable, as defined in TS 25.212.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Gap Position Mode			ENUMERATED (Fixed, Flexible)	

9.2.2.16 Maximum Number of UL DPDCHs

This parameter is an UE Radio Access Capability parameter which is needed in rate matching algorithm.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Max Number of UL DPDCHs			INTEGER (1..6)	

9.2.2.17 Minimum UL Channelisation Code Length

Minimum UL channelisation code length (spreading factor) of a DPDCH which is supported by UE. 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)	

9.2.2.18 Pattern Duration (PD)

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PD			INTEGER(0..2047, ...)	Frames

9.2.2.19 PICH Mode

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

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

9.2.2.20 Pilot Bits Used Indicator

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Pilot Bits Used Indicator			ENUMERATED (Pilot Bits Used, Pilot Bits not Used)	

9.2.2.21 Power Control Mode

Power Control Mode specifies the uplink power mode applied during recovery period after each transmission gap in compressed mode. PCM can take 2 values (0 or 1). The different power control modes are described in TS 25.214.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Power Control Mode			ENUMERATED (0, 1,..)	

9.2.2.22 Power Offset

This IE defines a power offset respect the Downlink transmission power of a DPCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Power Offset			INTEGER (0...24)	Step 0.25 dB, range 0-6 dB

9.2.2.23 Power Resume Mode

Power Resume Mode selects the uplink power control method to calculate the initial transmit power after the gap. PRM can take two values (0 or 1) and is described in TS 25.214.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Power Resume Mode			ENUMERATED (0, 1,..)	Described in TS 25.214

9.2.2.24 Preamble Signature

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Preamble Signatures			BIT STRING (16)	Bit 0=P0 Bit 1=P1 .. Bit 15=P15 [25.213]

9.2.2.25 Primary Scrambling code

The Primary scrambling code to be used in the cell.

X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". 3G TS 25.433 version 3.0.0 Release 1999

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

9.2.2.26 Primary CPICH Power

Primary CPICH power is the power that shall be used for transmitting the P-CPICH in a cell.

Information Element Name	IE/Group	Presence	Range	IE type and reference	Semantics description
Primary CPICH power				Enumerated (-15, ..., 40)	Unit dBm Granularity 0.1 dB

9.2.2.27 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, ...

9.2.2.28 RACH Slot Format

Information Element Name	IE/Group	Presence	Range	IE type and reference	Semantics description
RACH Slot Format				ENUMERATED (0..3)	See 25.211.

9.2.2.29 RACH sub Channel numbers

Information Element Name	IE/Group	Presence	Range	IE type and reference	Semantics description
RACH Sub Channel Numbers				BIT STRING (15)	Bit 0=Sub Channel Number 0 Bit 1=Sub Channel Number 1 ... Bit 14=Sub Channel Number 14

9.2.2.30 Scrambling code change

This parameter indicates whether the alternative scrambling code is used for compressed mode method 'SF/2'.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Scrambling Code Change			ENUMERATED (Change, No change)	

9.2.2.31 Scrambling Code Word Number

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Scrambling Code Word Number			INTEGER (0..255)	

9.2.2.32 Secondary CCPCH Slot Format

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Secondary CCPCH Slot Format			INTEGER(0..8)	

9.2.2.33 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)	

9.2.2.34 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)	

9.2.2.35 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)	

9.2.2.36 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).	

9.2.2.37 SSdT Indication

The SSdT Indication indicates whether SSdT is in use by the UE or not.

Information Element/Group name	Presence	Range	IE type and reference	Semantics description
SSdT Indication			ENUMERATED(SSdT Active in the UE, SSdT not Active in the UE)	

9.2.2.38 STTD Indicator

Indicates if STTD shall be active or not.

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

9.2.2.39 T_Cell

Timing delay used for defining start of SCH, CPICH and the DL scrambling code(s) in a cell relative to BFN. Resolution 256 chips.

Information Element/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 [TS 25.402]

9.2.2.40 TFCI signalling mode

This parameter indicates if the normal or split mode is used for the TFCI.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TFCI signalling mode			ENUMERATED (Normal, Split)	

9.2.2.41 TGD

Transmission Gap Distance is the duration of transmission between two consecutive transmission gaps within a transmission gap period, expressed in number of frames. In case there is only one transmission gap in the transmission gap period, this parameter shall be set to zero.

X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". 3G TS 25.433 version 3.0.0 Release 1999

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TGD			INTEGER(0..255)	Frames

9.2.2.42 TGL

Transmission Gap Length is the duration of no transmission, expressed in number of slots.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TGL			INTEGER (3,4,7,10,14)	Slot

9.2.2.43 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
TPC Downlink step size			ENUMERATED (0.5, 1)	

9.2.2.44 Transmit Diversity Indicator

Indicates if transmit diversity shall be active or not for primary and secondary CPICH.

Information Element IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transmit Diversity Indicator			ENUMERATED (active, inactive)	

9.2.2.45 TSTD Indicator

Indicates if TSTD shall be active or not.

Information Element IE/Group Name	Presence	Range	IE type and reference	Semantics description
TSTD Indicator			ENUMERATED (active, inactive)	

9.2.2.46 UL/DL compressed mode selection:

This parameter specifies whether compressed mode is used in UL only, DL only or both UL and DL

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL/DL compressed mode selection			ENUMERATED (in UL only, DL only or both UL and DL)	

9.2.2.47 UL delta Eb/No

The delta in uplink Eb/No that shall be added to the Eb/No target used during compressed mode frames.

Information Element Name	IE/Group	Presence	Range	IE type and reference	Semantics description
Uplink Delta Eb/No				Enumerated (-6..+10dB)	Step 0.1 dB.

9.2.2.48 UL delta Eb/No after

The delta in uplink Eb/No target that shall be added to the Eb/No target used one frame after the compressed mode frames.

Information Element Name	IE/Group	Presence	Range	IE type and reference	Semantics description
Uplink Delta Eb/No after				Enumerated (-6..+10dB)	Step 0.1 dB.

9.2.2.49 UL DPCCH Slot Format

Indicates the slot format used in DPCCH in UL, accordingly to 25.211

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL DPCCH slot format			INTEGER (0..5)	

9.2.2.50 Uplink Eb/No

The Uplink Eb/No indicates a received Uplink Eb/No.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Uplink Eb/No			INTEGER (0..255)	Resolution is 0.1 dB, range 0-25.5 dB.

9.2.2.51 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				
UL scrambling code number	M		INTEGER (0.. $2^{24}-1$)	
UL scrambling code length	M		ENUMERATED(Short, Long)	

9.2.3 TDD specific Parameters

9.2.3.1 Burst Type

The Burst Type as described in TS25.221.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Burst Type			ENUMERATED (Type1, Type2)	

9.2.3.2 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)	

9.2.3.3 Cell Parameter ID

The Cell Parameter ID identifies unambiguously the Code Groups, Scrambling Codes, Midambles and Toffset (see table 9 of TS25.223)

Information Element IE/Group Name	Presence	Range	IE type and reference	Semantics description
Cell Parameter ID			INTEGER (0..127)	

9.2.3.4 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	M		INTEGER (0..239)	

9.2.3.5 Max PRACH Midamble shift

Information Element IE/Group Name	Presence	Range	IE type and reference	Semantics description
Max PRACH Midamble Shifts			ENUMERATED (4, 8)	

9.2.3.6 Midamble shift

Different bursts transmitted simultaneously, using the same midamble code shall use different Midamble Shifts.

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

The range of this parameter is 0 .. 15 for long midamble and 0 .. 2 for short midamble.

X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". 3G TS 25.433 version 3.0.0 Release 1999

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Midamble Shift			INTEGER (0..15)	

9.2.3.7 Paging Indicator Length

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Paging Indicator Length			INTEGER (2 4 8)	number of symbols in the page indicator / see TS25.221

9.2.3.8 PCCPCH Power

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

9.2.3.9 PRACH Midamble

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
PRACH Midamble			ENUMERATED (Inverted, Direct)	

9.2.3.10 PSCH Time Slot

The PSCH Time Slot is only applicable if the value of Sync Case IE is Case 2 or 3.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PSCH Time Slot			INTEGER(0..6)	

9.2.3.11 PSCH Power

PSCH power is the power that should be used for transmitting the Physical Synch Channel in a cell. Primary sequence (Primary SCH) and secondary sequences (Secondary SCH) are superimposed for transmission.

Relation of TX power between Primary and Secondary is fixed, thus only one value is to be configured.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
PSCH Power			Integer (0..511)	

9.2.3.4211 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.

X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". 3G TS 25.433 version 3.0.0 Release 1999

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Repetition Length			INTEGER(1..63)	

9.2.3.1312 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).

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Repetition Period			ENUMERATED(1,2,4,8,16,32,64)	

9.2.3.1413 Sync case

The PSCH and PCCPCH are mapped on one or two downlink slots per frame. There are three cases of PSCH and PCCPCH allocation as follows:

- Case 1) PSCH and PCCPCH allocated in a single TS#k
- Case 2) PSCH in two TS and PCCPCH in the same two TS: TS#k and TS#k+8
- Case 3) PSCH in two TS, TS#k and TS#k+8, and the PCCPCH in TS#i, pointed by PSCH.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Sync Case			Integer (1..3)	

9.2.3.15 Synchronisation method

This parameter indicates which synchronisation method shall be applied.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Synchronisation Method			ENUMERATED (ExternalReference, LockedToMasterCell, OneTimeSynchronisation)	

9.2.3.1614 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))	

~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~ ~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~ ~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~ ~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~ ~~3G TS 25.433 version 3.0.0 Release 1999~~

9.2.3.17 TDD Chip Offset

The Chip Offset Adjustment represent the timing adjustment to be applied to achieve frame synchronisation.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
TDD Chip Offset			INTEGER (-19200..+19199)	Chip

9.2.3.18 TDD Physical Channel Offset

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TDD Physical Channel Offset			INTEGER (0..63)	

9.2.3.19 TDD S-CCPCH Offset

The Secondary CCPCH offset is defined as the time offset towards the Primary CCPCH in the cell.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
TDD S-CCPCH Offset			INTEGER(0.. 63)	

9.2.3.20 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.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
TFCI Coding			Enumerated (4, 8, 16, 32)	

9.2.3.21 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)	

9.2.3.22 Time Slot Direction

This parameter indicates whether the TS in the cell is used in Uplink or Downlink direction.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Time Slot Direction			Enumerated (UL, DL)	

X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". 3G TS 25.433 version 3.0.0 Release 1999

9.2.3.2319 Time Slot Status

This parameter indicates whether the TS in the cell is active or not.

Information Element Name	Presence	Range	IE type and reference	Semantics description
Time Slot Status			Enumerated (active, notActive)	

9.2.3.2420 Transmission Diversity Applied

Information Element Name	Presence	Range	IE type and reference	Semantics description
Transmission Diversity Applied			Boolean	

9.2.3.2521 USCH ID

The USCH ID uniquely identifies a USCH within a Node B Communication Context.

Information Element Name	Presence	Range	IE type and reference	Semantics description
USCH ID			INTEGER (0..255)	


```

id-commonTransportChannelDeletion,
id-commonTransportChannelReconfiguration,
id-commonTransportChannelSetup,
id-compressedModeControlCancellation,
id-compressedModeControlCommit,
id-compressedModeControlPreparation,
id-dedicatedMeasurementFailure,
id-dedicatedMeasurementInitiation,
id-dedicatedMeasurementReport,
id-dedicatedMeasurementTermination,
id-dlPowerControl,
id-neighbourCellMeasurement,
id-radioLinkAddition,
id-radioLinkDeletion,
id-radioLinkFailure,
id-radioLinkReconfigurationCommit,
id-radioLinkReconfigurationCancel,
id-radioLinkRestoration,
id-radioLinkSetup,
id-resourceStatusIndication,
id-synchronisationAdjustment,
id-synchronisationFailure,
id-synchronisationRestart,
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]
}

```



```

...
}

NBAP-ELEMENTARY-PROCEDURES-CLASS-2 NBAP-ELEMENTARY-PROCEDURE ::= {
    unblockResource                |
    auditRequired                  |
    commonMeasurementTermination   |
    commonMeasurementFailure       |
    commonMeasurementReport        |
    resourceStatusIndication       |
    synchronisationFailureTDD      |
    synchronisationRestartTDD      |
    synchronisedRadioLinkReconfigurationPreparationFDD |
    synchronisedRadioLinkReconfigurationPreparationTDD |
    unsynchronisedRadioLinkReconfigurationFDD          |
    unsynchronisedRadioLinkReconfigurationTDD          |
    dlPowerControlFDD                                  |
    dedicatedMeasurementTermination                   |
    dedicatedMeasurementFailure                       |
    dedicatedMeasurementReport                       |
    radioLinkFailure                                  |
    radioLinkRestoration                              |
    compressedModeControlCommitFDD                   |
    compressedModeControlCancellationFDD             |
    errorIndication                                  ,
    ...
}

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

-- Class 1

-- *** 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           ignore
}

-- *** 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 ignore
}

-- *** CommonTransportChannelReconfiguration (FDD) ***
commonTransportChannelReconfigurationFDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE CommonTransportChannelReconfigurationRequestFDD
  SUCCESSFUL OUTCOME CommonTransportChannelReconfigurationResponse
  UNSUCCESSFUL OUTCOME CommonTransportChannelReconfigurationFailure
  MESSAGE DISCRIMINATOR common
  PROCEDURE ID { procedureCode id-commonTransportChannelReconfiguration, ddMode fdd }
  CRITICALITY ignore
}

-- *** CommonTransportChannelReconfiguration (TDD) ***
commonTransportChannelReconfigurationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE CommonTransportChannelReconfigurationRequestTDD
  SUCCESSFUL OUTCOME CommonTransportChannelReconfigurationResponse
  UNSUCCESSFUL OUTCOME CommonTransportChannelReconfigurationFailure
  MESSAGE DISCRIMINATOR common
  PROCEDURE ID { procedureCode id-commonTransportChannelReconfiguration, ddMode tdd }
  CRITICALITY ignore
}

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

-- *****
-- *** 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 ignore
}

-- *** UnblockResourceIndication ***
unblockResource NBAP-ELEMENTARY-PROCEDURE ::= {
```

```
INITIATING MESSAGE UnblockResourceIndication
MESSAGE DISCRIMINATOR common
PROCEDURE ID { procedureCode id-unblockResource, ddMode common }
CRITICALITY ignore
}

-- *****
-- *** AuditRequired ***
auditRequired NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE AuditRequiredIndication
  MESSAGE DISCRIMINATOR common
  PROCEDURE ID { procedureCode id-auditRequired, ddMode common }
  CRITICALITY ignore
}

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

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

```
}  
  
-- *** CommonMeasurementReport ***  
commonMeasurementReport NBAP-ELEMENTARY-PROCEDURE ::= {  
  INITIATING MESSAGE CommonMeasurementReport  
  MESSAGE DISCRIMINATOR common  
  PROCEDURE ID { procedureCode id-commonMeasurementReport, ddMode common }  
  CRITICALITY ignore  
}  
  
-- *****  
-- *** 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 ignore  
}  
  
-- *** 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 ignore  
}  
  
-- *** 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 ignore  
}  
  
-- *** 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 ignore
```



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

```
}  
  
-- *****  
-- *** NeighbourCellMeasurement (TDD only) ***  
neighbourCellMeasurementTDD NBAP-ELEMENTARY-PROCEDURE ::= {  
    INITIATING MESSAGE NeighbourCellMeasurementRequestTDD  
    SUCCESSFUL OUTCOME NeighbourCellMeasurementResponseTDD  
    UNSUCCESSFUL OUTCOME NeighbourCellMeasurementFailureTDD  
    MESSAGE DISCRIMINATOR common  
    PROCEDURE ID { procedureCode id-neighbourCellMeasurement, ddMode tdd }  
    CRITICALITY ignore  
}  
  
-- *****  
-- *** SynchronisationAdjustment (TDD only) ***  
synchronisationAdjustmentTDD NBAP-ELEMENTARY-PROCEDURE ::= {  
    INITIATING MESSAGE SynchronisationAdjustmentRequestTDD  
    SUCCESSFUL OUTCOME SynchronisationAdjustmentResponseTDD  
    UNSUCCESSFUL OUTCOME SynchronisationAdjustmentFailureTDD  
    MESSAGE DISCRIMINATOR common  
    PROCEDURE ID { procedureCode id-synchronisationAdjustment, ddMode tdd }  
    CRITICALITY ignore  
}  
  
-- *** NodeBOutOfSyncIndication (TDD only) ***  
synchronisationFailureTDD NBAP-ELEMENTARY-PROCEDURE ::= {  
    INITIATING MESSAGE NodeBOutOfSyncIndicationTDD  
    MESSAGE DISCRIMINATOR common  
    PROCEDURE ID { procedureCode id-synchronisationFailure, ddMode tdd }  
    CRITICALITY ignore  
}  
  
-- *** SynchronisationRestart (TDD only) ***  
synchronisationRestartTDD NBAP-ELEMENTARY-PROCEDURE ::= {  
    INITIATING MESSAGE SynchronisationRestartRequestTDD  
    MESSAGE DISCRIMINATOR common  
    PROCEDURE ID { procedureCode id-synchronisationRestart, ddMode tdd }  
    CRITICALITY ignore  
}  
  
-- *****  
-- *** 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 ignore
```

```
}  
  
-- *** 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          ignore  
}  
  
-- *** RadioReconfirurationPrepare (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          ignore  
}  
  
-- *** RadioReconfirurationPrepare (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          ignore  
}  
  
-- *** (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          ignore  
}  
  
-- *** (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          ignore
```

```
}  
  
-- *** RadioLinkReconfigurationCommit ***  
radioLinkReconfigurationCommit NBAP-ELEMENTARY-PROCEDURE ::= {  
    INITIATING MESSAGE RadioLinkReconfigurationCommit  
    MESSAGE DISCRIMINATOR dedicated  
    PROCEDURE ID { procedureCode id-radioLinkReconfigurationCommit, ddMode common }  
    CRITICALITY ignore  
}  
  
-- *** RadioReconfigurationCancellation ***  
radioLinkReconfigurationCancellation NBAP-ELEMENTARY-PROCEDURE ::= {  
    INITIATING MESSAGE RadioLinkReconfigurationCancel  
    MESSAGE DISCRIMINATOR dedicated  
    PROCEDURE ID { procedureCode id-radioLinkReconfirurationCancel, ddMode common }  
    CRITICALITY ignore  
}  
  
-- *** RadioLinkDeletion ***  
radioLinkDeletion NBAP-ELEMENTARY-PROCEDURE ::= {  
    INITIATING MESSAGE RadioLinkDeletionRequest  
    SUCCESSFUL OUTCOME RadioLinkDeletionResponse  
    MESSAGE DISCRIMINATOR dedicated  
    PROCEDURE ID { procedureCode id-radioLinkDeletion, ddMode common }  
    CRITICALITY ignore  
}  
  
-- *****  
-- *** DLPowerControl (FDD only) ***  
dlPowerControlFDD NBAP-ELEMENTARY-PROCEDURE ::= {  
    INITIATING MESSAGE DLPowerControlRequestFDD  
    MESSAGE DISCRIMINATOR dedicated  
    PROCEDURE ID { procedureCode id-dlPowerControl, ddMode fdd }  
    CRITICALITY ignore  
}  
  
-- *****  
-- *** 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 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
}

-- *** DedicatedMeasurementReport ***
dedicatedMeasurementReport NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE DedicatedMeasurementReport
  MESSAGE DISCRIMINATOR dedicated
  PROCEDURE ID { procedureCode id-dedicatedMeasurementReport, ddMode common }
  CRITICALITY ignore
}

-- *****
-- *** RadioLinkFailureIndication ***
radioLinkFailure NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkFailureIndication
  MESSAGE DISCRIMINATOR dedicated
  PROCEDURE ID { procedureCode id-radioLinkFailure, ddMode common }
  CRITICALITY ignore
}

-- *** RadioLinkRestoreIndication ***
radioLinkRestoration NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkRestoreIndication
  MESSAGE DISCRIMINATOR dedicated
  PROCEDURE ID { procedureCode id-radioLinkRestoration, ddMode common }
  CRITICALITY ignore
}

-- *****
-- *** CompressedModePrepare (FDD only) ***
compressedModeControlPreparationFDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE CompressedModePrepareFDD
  SUCCESSFUL OUTCOME CompressedModeReadyFDD
  UNSUCCESSFUL OUTCOME CompressedModeFailureFDD
  MESSAGE DISCRIMINATOR dedicated
  PROCEDURE ID { procedureCode id-compressedModeControlPreparation, ddMode fdd }
  CRITICALITY ignore
}
```

```

}

-- *** CompressedModeCommit (FDD only) ***
compressedModeControlCommitFDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE   CompressedModeCommitFDD
  MESSAGE DISCRIMINATOR   dedicated
  PROCEDURE ID           { procedureCode id-compressedModeControlCommit, ddMode fdd }
  CRITICALITY            ignore
}

-- *** CompressedModeCommit (FDD only) ***
compressedModeControlCancellationFDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE   CompressedModeCancelFDD
  MESSAGE DISCRIMINATOR   dedicated
  PROCEDURE ID           { procedureCode id-compressedModeControlCancellation, ddMode fdd }
  CRITICALITY            ignore
}

-- *** ErrorIndication ***
errorIndication NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE   errorIndication
  MESSAGE DISCRIMINATOR   dedicated
  PROCEDURE ID           { procedureCode id-errorIndication Cancellation, ddMode common }
  CRITICALITY            ignore
}

END

```

9.3.3 NBAP PDU Content Definitions

```

-- *****
--
-- PDU definitions for NBAP.
--
-- *****

NBAP-PDU-Contents -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS

```

AICH-InformationList,
AICH-Parameters,
AICH-Power,
AICH-TransmissionTiming,
AddOrDeleteIndicator,
AvailabilityStatus,
BindingID,
BlockingPriorityIndicator,
BurstType,
CCTrCH-ID,
CFN,
CN-CSDomainIdentifier,
CN-PSDomainIdentifier,
CRNC-CommunicationContextID,
Cause,
CellParameter,
Cell-Parameter,
ChipOffset,
CommonMeasurementType,
CommonPhysicalChannelID,
CommonPhysicalChannelType,
CommonTransportChannelID,
CommonTransportChannelType,
CommunicationControlPortID,
CommunicationControlPortInformationList,
CompressesModeMethod,
ConfigurationGenerationID,
DCH-CombinationIndication,
DCH-Delete-RL-ReconfReqTDDItem,
DCH-ID,
DCH-InformationResponse-RL-setupResFDD,
DCH-Modify-RL-ReconfPrepTDDItem,
DL-CCTrCH-ID,
DL-CodeInformation,
DL-DPCH-InformationItem-RL-ReconfReqFDD,
DL-DPCH-SlotFormat,
DL-FrameType,
DL-Power,
DL-ReferencePower,
DL-ReferencePowerInformationItem,
DL-ScramblingCode,
DPCH-ID,
DPCH-Offset,
DSCH-ID,
DSCH-InformationResponse-RL-setupResFDD,
DSCH-ModifyList-RL-ReconfResp,
DSCH-SetupList-RL-ReconfResp,
DSCH-TransportFormatSet,
DTX-InsertionPoint,

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DTX-InsertionPosition,
D-FieldLength,
DedicatedMeasurementType,
DedicatedMeasurementValue,
DeltaTPC,
DiversityControlField,
DiversityMode,
~~FACH-Power,~~
FDD-DL-ChannelisationCodeNumber,
FDD-SCCPCH-Offset,
FrameHandlingPriority,
FrameOffset,
GapStartingSlotNumber,
LocalCellID,
LocalCellInformationList,
LocalCell-ID,
Local-CellID,
MIB-SG-POS,
MIB-SG-REP,
MaxFACH-Power,
MaxNrOfUL-DPDCHs,
MaxNumberOfUL-DPDCHs,
MaximumDL-PowerCapability,
MaximumDL-PowerCapability,
MaximumTransmissionPower,
MaximumUL-EbN0,
Maximum-DL-PowerCapability,
MeasuredCellInfo,
MeasurementCharacteristics,
MeasurementID,
MeasurementType,
MessagePartScramblingCode,
MidambleShift,
Midambleshift,
MinUL-ChannelisationCodeLength,
MinimumSpreadingFactor,
MinimumUL-EbN0,
NodeB-CommunicationContextID,
NumberOfChannelElements,
Offset,
PCCPCH-Power,
PCCPCH-TimeSlotI,
PCH-Power,
PICH-Information,
PICH-Power,
~~PSCH-Power,~~
PSCHandPCCPCH-Allocation,
PSCHandPCCPCH-TimeSlotK,
PUSCH,

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```
SynchronisationMethod,  
TDDChipOffset,  
TDD-ChannelisationCode,  
TFCI-Presence,  
TFCI-SignallingMode,  
TFCS,  
TSTD-Indicator,  
T-Cell,  
TimeSlot,  
TimeSlotDirection,  
TimeSlotStatus,  
ToAWE,  
ToAWS,  
TransmissionGapDistance,  
TransmissionGapPeriod,  
TransmitGapLength,  
TransmitGapPositionMode,  
TransportFormatCombinationSet,  
TransportFormatSet,  
TransportLayerAddress,  
UARFCN,  
C-ID,  
UL-CCTrCHInformation,  
UL-CCTrCH-ID,  
UL-DPCCH-SlotFormat,  
UL-FP-Mode,  
UL-InterferenceLevel,  
UL-PunctureLimit,  
UL-ScramblingCode,  
UplinkEbNo  
FROM NBAP-IEs  
  
ProtocolExtensionContainer{},  
PrivateExtensionContainer{},  
ProtocolIE-Container{},  
ProtocolIE-ContainerList{},  
NBAP-PROTOCOL-IES,  
NBAP-PROTOCOL-EXTENSION,  
NBAP-PRIVATE-EXTENSION  
FROM NBAP-Containers  
  
id-AICH-Information-ResourceStatIndItem,  
id-AICH-ParametersList,  
id-AICH-ParametersListItem,  
id-AllowedSlotFormatInformationListItem-CTChreconf-Req-FDD,  
id-AllowedSlotFormatInformationListItem-CTChsetup-Req-FDD,  
id-BlockingPriorityIndicator,  
id-CCTrCH-ParametersList,  
id-CCTrCH-ParametersListItem,
```


id-RL-InformationItem-RL-SetupReqTDD,
id-RL-InformationList,
id-RL-InformationList-RL-ReconfReqFDD,
id-RL-InformationList-RL-SetupReqFDD,
id-RL-InformationResponse-RL-setupResFDDItem,
id-RL-InformationResponseItem-RL-ReconfResp,
id-RL-InformationResponseList-RL-ReconfReady,
id-RL-InformationResponseList-RL-ReconfReadyItem,
id-RL-InformationResponseList-RL-ReconfResp,
id-RL-InformationResponseList-RL-setupResFDD,
id-RL-InformationResponseList-RL-setupResTDD,
id-RL-ReconfigurationFailure-RL-ReconfFailItem,
id-RL-ReconfigurationFailureList-RL-ReconfFail,
id-RL-ResponseInformation,
id-RL-ResponseInformationItem,
id-RL-ResponseInformationList,
id-RL-informationItem,
id-RL-informationList,
id-RadioLinkInformation-RL-ReconfPrepFDDItem,
id-RadioLinkInformation-RL-ReconfPrepTDD,
id-RadioLinkInformation-RL-ReconfReqTDD,
id-RadioLinkInformationList-RL-ReconfPrepFDD,
id-ReportCharacteristics,
id-SFN,
id-SIB-SegmentInformationItem,
id-SIB-SegmentInformationList,
id-ScramblingCodeChange,
id-Secondary-CCPCHListItem,
id-SecondaryCPICH-Information,
id-SecondarySCH-Information,
id-ShutdownTimer,
id-Successful-RL-InformationResponse-RL-SetupFailFDDItem,
id-Successful-RL-InformationResponseItem,
id-Successful-RL-InformationResponseList,
id-Successful-RL-InformationResponseList-RL-SetupFailFDD,
id-SynchronisationMethod,
id-T-Cell,
~~id-TDDChipOffset,~~
id-TimeSlotConfigurationItem,
id-TimeSlotConfigurationList,
id-TransmissionGapDistance,
id-TransmissionGapPeriod,
id-TransmitGapLength,
id-TransmitGapPositionMode,
id-UARFCN,
id-C-ID,
id-UL-CCTrCH-Information-RL-ReconfPrepTDDItem,
id-UL-CCTrCH-Information-RL-ReconfReqTDDItem,
id-UL-CCTrCH-Information-RL-SetupReqTDDItem,


```
maxnoofRLs,
maxnoofSCCPCHs,
maxnoofTDDNeighbours,
maxnoofUSCHs
FROM NBAP-Constants;

-- *****
--
-- COMMON TRANSPORT CHANNEL SETUP REQUEST FDD
--
-- *****

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

CommonTransportChannelSetupRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-C-ID                CRITICALITY ignore TYPE C-ID                PRESENCE mandatory }|
    { ID id-ConfigurationGenerationID CRITICALITY ignore TYPE ConfigurationGenerationID PRESENCE mandatory }|
    { ID id-CommonPhysicalChannelType-CTCHsetup-Req-FDD CRITICALITY ignore TYPE CommonPhysicalChannelType-CTCHsetup-Req-FDD PRESENCE mandatory }
},
...
}

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

CommonPhysicalChannelType-CTCHsetup-Req-FDD ::= ENUMERATED {
    secondary-CCPCH-parameters-CTCHsetup-Req-FDD,
    pRACH-parameters-CTCHsetup-Req-FDD,
    Secondary-CCPCH-parameters-CTCHsetup-Req-FDD,
    PRACH-parameters-CTCHsetup-Req-FDD
}

Secondary-CCPCH-parameters-CTCHsetup-Req-FDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    fdd-SCCPCH-Offset            FDD-SCCPCH-Offset,
    dl-ScramblingCode            DL-ScramblingCode,
    fdd-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    tFCS                          TFCS,
    secondaryCCPCH-SlotFormat     SecondaryCCPCH-SlotFormat,
    pilotBitsUsedIndicator        PilotBitsUsedIndicator,
    multiPlexingPosition          MultiPlexngPosition,
    sTTD-Indicator                STTD-Indicator,
    commonTransportChannelType    CommonTransportChannelType-CTCHsetup-Req-FDD
}
}
```



```

CommonTransportChannelType-CTCHsetup-Req-FDD ::= ENUMERATED {
    fACH-ParametersList      FACH-ParametersList-CTCHsetup-Req-FDD,
    pCH-Parameters           PCH-Parameters-CTCHsetup-Req-FDD,
    bothCH-Parameters        BothCH-Parameters-CTCHsetup-Req-FDD
}

BothCH-Parameters-CTCHsetup-Req-FDD ::= SEQUENCE {
    fACH-ParametersList      FACH-ParametersList-CTCHsetup-Req-FDD,
    pCH-Parameters           PCH-Parameters-CTCHsetup-Req-FDD
}

FACH-ParametersList-CTCHsetup-Req-FDD ::= SEQUENCE (SIZE (1..maxnoofFACHs)) OF
    ProtocolIE-Container {{ FACH-ParametersListItemIE-CTCHsetup-Req-FDD }}

FACH-ParametersListItemIE-CTCHsetup-Req-FDD NBAP-PROTOCOL-IES ::= {
    { ID id-FACH-ParametersListItem-CTCHsetup-Req-FDD   CRITICALITY ignore   TYPE FACH-ParametersListItem-CTCHsetup-Req-FDD   PRESENCE mandatory },
    ...
}

FACH-ParametersListItem-CTCHsetup-Req-FDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    transportFormatSet            TransportFormatSet,
    toAWS                         ToAWS,
    toAWE                         ToAWE,
    maxFACH-Power                 DL-Power
}

PCH-Parameters-CTCHsetup-Req-FDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    transportFormatSet            TransportFormatSet,
    toAWS                         ToAWS,
    toAWE                         ToAWE,
    pCH-Power                     DL-Power,
    pICH-Parameters               PICH-Parameters-CTCHsetup-Req-FDD
}

PICH-Parameters-CTCHsetup-Req-FDD ::= SEQUENCE {
    cmmonPhysicalChannelID        CommonPhysicalChannelID,
    dl-ScramblingCode             DL-ScramblingCode,
    fdd-dl-ChannelisationCodeNumber      FDD-DL-ChannelisationCodeNumber,
    pICH-Power                    DL-Power,
    pICH-Mode                     PICH-Mode,
    sTTD-Indicator                STTD-Indicator
}

PRACH-parameters-CTCHsetup-Req-FDD ::= SEQUENCE {
    commonPhysicalChannelID        CommonPhysicalChannelID,
    tFCS                           TFCS,

```

```

preambleSignatures      PreambleSignatures,
scramblingCodeWord      ScramblingCodeWord
allowedSlotFormatInformationList
  rACH-SubChannelNumbers      RACH-SubChannelNumbers,
  ul-punctureLimit           PunctureLimit,
  rACH-Parameters             RACH-Parameters-CTCHsetup-Req-FDD,
  aICH-Parameters             AICH-Parameters-CTCHsetup-Req-FDD
}

AllowedSlotFormatInformationList-CTCHsetup-Req-FDD ::= SEQUENCE (SIZE (1..maxSF)) OF ProtocolIE-Container {{AllowedSlotFormatInformationItemIE-CTCHsetup-Req-FDD}}

AllowedSlotFormatInformationItemIE-CTCHsetup-Req-FDD NBAP-PROTOCOL-IES ::= {
  { ID id-AllowedSlotFormatInformationItem-CTCHsetup-Req-FDD
    CRITICALITY ignore          TYPE AllowedSlotFormatInformationItem-CTCHsetup-Req-FDD PRESENCE mandatory },
  ...
}

AllowedSlotFormatInformationItem-CTCHsetup-Req-FDD ::= SEQUENCE {
  rACHSlotFormat      RACH-SlotFormat
}

RACH-Parameters ::= SEQUENCE {
  commonTransportChannelID      CommonTransportChannelID,
  transportFormatSet           TransportFormatSet
}

AICH-Parameters ::= SEQUENCE {
  commonPhysicalChannelID      CommonPhysicalChannelID,
  dl-ScramblingCode           DL-ScramblingCode,
  aICH-TransmissionTiming      AICH-TransmissionTiming,
  fDD-DL-ChannelisationCodeNumber      FDD-DL-ChannelisationCodeNumber,
  aICH-Power                   DL-Power,
  sTTD-Indicator               STTD-Indicator
}

-- *****
--
-- 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 ignore TYPE C-ID PRESENCE mandatory }|
  { ID id-ConfigurationGenerationID CRITICALITY ignore TYPE ConfigurationGenerationID PRESENCE mandatory }|
  { ID id-CommonPhysicalChannelType-CTCHsetupReqTDD CRITICALITY ignore TYPE CommonPhysicalChannelType-CTCHsetupReqTDD PRESENCE
  mandatory
}
}
{ ID id-CommontransportChannelType-CTCHsetupReqTDD CRITICALITY ignore TYPE CommontransportChannelType-CTCHsetupReqTDD PRESENCE
  mandatory
},
...
}

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

CommonPhysicalChannelType-CTCHsetupReqTDD ::= ENUMERATED {
  secondary-CCPCH-parameters-CTCHsetupReqTDD Secondary-CCPCH-parameters-CTCHsetupReqTDD,
  pRACH-parameters-CTCHsetupReqTDD PRACH-parameters-CTCHsetupReqTDD
}

Secondary-CCPCH-parameters-CTCHsetupReqTDD ::= SEQUENCE {
  cCtrCH-ID CCtrCH-ID,
  tFCS TFCS,
  secondaryCCPCH SecondaryCCPCHList-CTCHsetupReqTDD,
}

SecondaryCCPCHList-CTCHsetupReqTDD ::= SEQUENCE (SIZE (1..maxnoofSCCPCHs)) OF
  ProtocolIE-Container {{ SecondaryCCPCHList-CTCHsetupReqTDDItemIE }}

SecondaryCCPCHList-CTCHsetupReqTDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-SecondaryCCPCHList-CTCHsetupReqTDDItem CRITICALITY ignore TYPE SecondaryCCPCHList-CTCHsetupReqTDDItem PRESENCE mandatory
  },
  ...
}

SecondaryCCPCHList-CTCHsetupReqTDDItem ::= SEQUENCE {
  commonPhysicalChannelID CommonPhysicalChannelID,
  tdd-ChannelisationCode TDD-ChannelisationCode,
  timeslot TimeSlot,
  burstType BurstType,
  midambleShift MidambleShift,
  tdd-PhysicalChannelOffset TDD-PhysicalChannelOffset,
  repetitionPeriod RepetitionPeriod,
  repetitionLength RepetitionLength,
  s-CCPCH-Power DL-Power,
  tSTD-Indicator TSTD-Indicator
}

```

```

PRACH-parameters-CTCHsetupReqTDD ::= SEQUENCE {
    commonPhysicalChannelID    CommonPhysicalChannelID,
    timeslot                    TimeSlot,
    tdd-ChannelisationCode      TDD-ChannelisationCode,
    burstType                    BurstType,
    maxPRACH-MidambleShift      MaxPRACH-MidambleShift OPTIONAL,
    pRACH-Midamble               PRACH-Midamble,
    commonTransportChannelType      CommonTransportChannelType-CTCHsetupReqTDD,
    rACH                          RACH-CTCHsetupReqTDD
}

CommonTransportChannelType-CTCHsetupReqTDD ::= ENUMERATED {
    fACH-ParametersList          FACH-ParametersList-CTCHsetupReqTDD,
    pCH-Parameters               PCH-Parameters-CTCHsetupReqTDD,
    bothCH-Parameters            BothCH-Parameters-CTCHsetupReqTDD
}

BothCH-Parameters-CTCHsetupReqTDD ::= SEQUENCE {
    fACH-ParametersList          FACH-ParametersList-CTCHsetupReqFDD,
    pCH-Parameters               PCH-Parameters-CTCHsetupReqFDD
}

FACH-ParametersList-CTCHsetupReqFDD ::= SEQUENCE (SIZE (1..maxnoofFACHs)) OF
    ProtocolIE-Container {{FACH-ParametersList-CTCHsetupReqFDD ItemIE }}

FACH-ParametersList-CTCHsetupReqFDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-FACH-ParametersList-CTCHsetupReqFDDItem CRITICALITY ignore TYPE FACH-ParametersList-CTCHsetupReqFDDItem PRESENCE mandatory },
    ...
}

FACH-ParametersList-CTCHsetupReqFDDItem ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    dl-TransportFormatSet          DL-TransportFormatSet,
    toAWS                          ToAWS,
    toAWE                          ToAWE
}

PCH-ParametersList-CTCHsetupReqFDD ::= SEQUENCE (SIZE (1..maxnoofPCHs)) OF
    ProtocolIE-Container {{PCH-ParametersList-CTCHsetupReqFDD ItemIE }}

PCH-ParametersList-CTCHsetupReqFDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-PCH-ParametersList-CTCHsetupReqFDDItem CRITICALITY ignore TYPE PCH-ParametersList-CTCHsetupReqFDDItem PRESENCE mandatory },
    ...
}

PCH-ParametersList-CTCHsetupReqFDDItem ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    dl-TransportFormatSet          DL-TransportFormatSet,
    toAWS                          ToAWS,
}

```

```
toAWE                ToAWE,
pICH-Parameters      PICH-Parameters-CTCHsetupReqTDD
}

PICH-Parameters-CTCHsetup-Req-TDD ::= SEQUENCE {
    CommonPhysicalChannelID    CommonPhysicalChannelID,
    tdd-ChannelisationCode     TDD-ChannelisationCode,
    timeSlot                   TimeSlot,
    pICH-Power                  PICH-Power,
    burstType                   BurstType OPTIONAL,
    midambleshift              Midambleshift,
    tdd-PhysicalChannelOffset   TDD-PhysicalChannelOffset,
    repetitionPeriod           RepetitionPeriod,
    repetitionLength           RepetitionLength,
    pagingIndicatorLength       PagingIndicatorLength,
    pICH-Power                  DL-Power
    ...
}

RACH-CTCHsetupReqTDD ::= SEQUENCE {
    commontransportChannelID    CommontransportChannelID
}

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

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

CommonTransportChannelSetupResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-CommonPhysicalChannelType-CTCHsetup-Resp CRITICALITY ignore TYPE CommonPhysicalChannelType-CTCHsetup-Resp PRESENCE
    mandatory
} |
{ ID id-CriticalityDiagnostic CRITICALITY ignore TYPE CriticalityDiagnostic PRESENCE optional },
-- At least either or Cause IE or Criticality Diagnostic IE shall be present--

    ...
}

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

```

CommonTransportChannelType-CTCHsetup-Resp ::= ENUMERATED {
    fACH-ParametersList      FACH-ParametersList-CTCHsetup-Resp,
    pCH-Parameters          PCH-Parameters-CTCHsetup-Resp,
    bothCH-Parameters       BothCH-Parameters-CTCHsetup-Resp
}

BothCH-Parameters-CTCHsetup-Resp ::= SEQUENCE {
    fACH-ParametersList      FACH-ParametersList-CTCHsetup-Resp,
    pCH-Parameters          PCH-Parameters-CTCHsetupResp
}

FACH-ParametersList-CTCHsetup-Resp ::= SEQUENCE (SIZE (1..maxnoofFACHs)) OF
    ProtocolIE-Container {{FACH-ParametersList-CTCHsetup-RespItemIE}}

FACH-ParametersList-CTCHsetup-RespItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-FACH-ParametersList-CTCHsetup-RespItem CRITICALITY ignore TYPE FACH-ParametersList-CTCHsetup-RespItem PRESENCE mandatory },
    ...
}

FACH-ParametersList-CTCHsetup-RespItem ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    transportLayerAddress          TransportLayerAddress,
    bindingID                      BindingID
}

PCH-Parameters-CTCHsetup-Resp ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    transportLayerAddress          TransportLayerAddress,
    bindingID                      BindingID
}

PRACH-Parameters-CTCHsetup-Resp ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    transportLayerAddress          TransportLayerAddress,
    bindingID                      BindingID
}

-- *****
--
-- 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-CriticalityDiagnostic CRITICALITY ignore TYPE CriticalityDiagnostic PRESENCE optional
  }|
  { ID id-CriticalityDiagnostic CRITICALITY ignore TYPE CriticalityDiagnostic 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-ConfigurationGenerationID CRITICALITY ignore TYPE ConfigurationGenerationID PRESENCE mandatory }|
  { ID id-FACH-ParametersList-CTCHreconf-Req-FDD CRITICALITY ignore TYPE FACH-ParametersList-CTCHreconf-Req-FDD PRESENCE optional }|
  { ID id-PCH-Parameters-CTCHreconf-Req-FDD CRITICALITY ignore TYPE PCH-Parameters-CTCHreconf-Req-FDD PRESENCE optional }|
  { ID id-PICH-Parameters-CTCHreconf-Req-FDD CRITICALITY ignore TYPE PICH-Parameters-CTCHreconf-Req-FDD PRESENCE optional }|
  { ID id-PRACH-ParametersList-CTCHreconf-Req-FDD CRITICALITY ignore TYPE PRACH-ParametersList-CTCHreconf-Req-FDD PRESENCE optional
  }|
  { ID id-AllowedSlotFormatInformationList-CTCHreconf-Req-FDD
CRITICALITY ignor          TYPE AllowedSlotFormatInformationList-CTCHreconf-Req-FDD PRESENCE optional
  }|
  { ID id-AICH-ParametersList-CTCHreconf-Req-FDD CRITICALITY ignore TYPE AICH-ParametersList-CTCHreconf-Req-FDD PRESENCE optional },
  ...
}

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

FACH-ParametersList-CTCHreconf-Req-FDD ::= SEQUENCE (SIZE (1..maxFACHCell)) OF
  ProtocolIE-Container {{FACH-ParametersListItemIE-CTCHreconf-Req-FDD}}

```

```

FACH-ParametersListItemIE-CTCHreconf-Req-FDD NBAP-PROTOCOL-IES ::= {
  { ID id-FACH-ParametersListItem-CTCHreconf-Req-FDD          CRITICALITY ignore          TYPE FACH-ParametersListItem-CTCHreconf-Req-FDD
    PRESENCE mandatory },
  ...
}

FACH-ParametersListItem-CTCHreconf-Req-FDD ::= SEQUENCE {
  commonTransportChannelID CommonTransportChannelID,
  maxFACH-Power             DL-Power             OPTIONAL,
  toAWS                     ToAWS                OPTIONAL,
  toAWE                     ToAWE                OPTIONAL
}

PCH-Parameters-CTCHreconf-Req-FDD ::= SEQUENCE {
  commonTransportChannelID CommonTransportChannelID,
  pCH-Power                DL-Power              OPTIONAL,
  toAWS                    ToAWS                 OPTIONAL,
  toAWE                    ToAWE                 OPTIONAL
}

PICH-Parameters-CTCHreconf-Req-FDD ::= SEQUENCE {
  commonTransportChannelID CommonTransportChannelID,
  pICH-Power               DL-Power
}

PRACH-ParametersList-CTCHreconf-Req-FDD ::= SEQUENCE (SIZE (1..maxnoofPRACHs)) OF
  ProtocolIE-Container {{PRACH-ParametersListItemIE-CTCHreconf-Req-FDD}}

PRACH-ParametersListItemIE-CTCHreconf-Req-FDD NBAP-PROTOCOL-IES ::= {
  { ID id-PRACH-ParametersListItem-CTCHreconf-Req-FDD        CRITICALITY ignore          TYPE PRACH-ParametersListItem-CTCHreconf-Req-FDD
    PRESENCE optional },
  ...
}

PRACH-ParametersListItem-CTCHreconf-Req-FDD ::= SEQUENCE {
  commonTransportChannelID CommonTransportChannelID,
  preambleSignatures       PreambleSignatures,
}

AllowedSlotFormatInformationList-CTCHreconf-Req-FDD ::= SEQUENCE (SIZE (1..maxSF)) OF ProtocolIE-Container {{ AllowedSlotFormatInformationListItemIE-
CTCHreconf-Req-FDD }}

AllowedSlotFormatInformationListItemIE-CTCHreconf-Req-FDD NBAP-PROTOCOL-IES ::= {
  { ID id-AllowedSlotFormatInformationListItem-CTCHreconf-Req-FDD
    CRITICALITY ignore          TYPE AllowedSlotFormatInformationListItem-CTCHreconf-Req-FDD PRESENCE mandatory },
  ...
}

```



```

AllowedSlotFormatInformationListItem-CTCHreconf-Req-FDD ::= SEQUENCE {
    slotFormat          SlotFormat
    rACH-SubChannelNumbers  RACH-SubChannelNumbers    OPTIONAL
}

AICH-ParametersList-CTCHreconf-Req-FDD ::= SEQUENCE (SIZE (1..maxnoofPRACHs)) OF
    ProtocolIE-Container {{ AICH-ParametersListItemIE-CTCHreconf-Req-FDD }}

AICH-ParametersListItemIE-CTCHreconf-Req-FDD NBAP-PROTOCOL-IES ::= {
    { ID id-AICH-ParametersListItem-CTCHreconf-Req-FDD          CRITICALITY ignore          TYPE AICH-ParametersListItem-CTCHreconf-Req-FDD
      PRESENCE          mandatory },
    ...
}

AICH-ParametersListItem-CTCHreconf-Req-FDD ::= SEQUENCE {
    commonTransportChannelID  CommonTransportChannelID,
    aICH-Power                DL-Power
}

-- *****
--
-- 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 ignore  TYPE C-ID          PRESENCE mandatory }|
    { ID id-ConfigurationGenerationID  CRITICALITY ignore  TYPE ConfigurationGenerationID  PRESENCE mandatory }|
    { ID id-CommonPhysicalChannelType-CTCHreconfReqTDD  CRITICALITY ignore  TYPE CommonPhysicalChannelType-CTCHreconfReqTDD  PRESENCE
      mandatory
    }|
    { ID id-FACH-ParametersList-CTCHreconfReqTTD  CRITICALITY ignore  TYPE FACH-ParametersList-CTCHreconfReqTTD  PRESENCE optional }|
    { ID id-PCH-ParametersList-CTCHreconfReqTTD  CRITICALITY ignore  TYPE PCH-ParametersList-CTCHreconfReqTTD  PRESENCE optional },
    ...
}

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

CommonPhysicalChannelType-CTCHreconfReqTDD ::= ENUMERATED {

```

~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)".~~
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```
secondaryCCPCH      SecondaryCCPCH-CTCHreconfReqTDD
}

SecondaryCCPCH-CTCHreconfReqTDD ::= SEQUENCE {
    cTrCH-ID          CTrCH-ID,
    secondaryCCPCHList SecondaryCCPCHList-CTCHreconfReqTDD
}

SecondaryCCPCHList-CTCHreconfReqTDD ::= SEQUENCE (SIZE (1..maxnoofSCCPCHs)) OF
    ProtocolIE-Container {{ SecondaryCCPCHList-CTCHreconfReqTDDItemIE}}

SecondaryCCPCHList-CTCHreconfReqTDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-SecondaryCCPCHList-CTCHreconfReqTDDItem CRITICALITY ignore TYPE SecondaryCCPCHList-CTCHreconfReqTDDItem PRESENCE mandatory },
    ...
}

SecondaryCCPCHList-CTCHreconfReqTDDItem ::= SEQUENCE {
    commonPhysicalChannelID CommonPhysicalChannelID,
    pICH-Power              PICH-Power
}

FACH-ParametersList-CTCHreconfReqTTD ::= SEQUENCE (SIZE (1..maxFACHCell)) OF
    ProtocolIE-Container {{ FACH-ParametersListItemIE-CTCHreconfReqTTD }}

FACH-ParametersListItemIE-CTCHreconfReqTTD NBAP-PROTOCOL-IES ::= {
    { ID id-FACH-ParametersListItem-CTCHreconfReqTTD CRITICALITY ignore TYPE FACH-ParametersListItem-CTCHreconfReqTTD PRESENCE mandatory },
    ...
}

FACH-ParametersListItem-CTCHreconf-Req-TTD ::= SEQUENCE {
    commonTransportChannelID CommonTransportChannelID,
    toAWS                    ToAWS OPTIONAL,
    toAWE                    ToAWE OPTIONAL
}

PCH-ParametersList-CTCHreconfReqTTD ::= SEQUENCE (SIZE (1..maxnoofPCHs)) OF
    ProtocolIE-Container {{ PCH-ParametersListItemIE-CTCHreconfReqTTD }}

PCH-ParametersListItemIE-CTCHreconfReqTTD NBAP-PROTOCOL-IES ::= {
    { ID id-PCH-ParametersListItem-CTCHreconfReqTTD CRITICALITY ignore TYPE PCH-ParametersListItem-CTCHreconfReqTTD PRESENCE optional },
    ...
}

PCH-ParametersListItem-CTCHreconfReqTTD ::= SEQUENCE {
    commonTransportChannelID CommonTransportChannelID,
    toAWS                    ToAWS OPTIONAL,
    toAWE                    ToAWE OPTIONAL
}
```

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

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

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

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

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

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

CommonTransportChannelReconfigurationFailure-IEs NBAP-PROTOCOL-IES ::= {
{ ID id-Cause                    CRITICALITY ignore TYPE Cause PRESENCE mandatory }|
{ ID id-CriticalityDiagnostic     CRITICALITY ignore TYPE CriticalityDiagnostic PRESENCE optional
}|
{ ID id-CriticalityDiagnostic     CRITICALITY ignore TYPE CriticalityDiagnostic 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 ignore TYPE C-ID          PRESENCE mandatory }|
    { ID id-CommonPhysicalChannelID          CRITICALITY ignore TYPE CommonPhysicalChannelID          PRESENCE mandatory }|
    { ID id-ConfigurationGenerationID          CRITICALITY ignore 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-CriticalityDiagnostic          CRITICALITY ignore          TYPE CriticalityDiagnostic          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 ignore TYPE C-ID          PRESENCE mandatory }|
    { ID id-BlockingPriorityIndicator CRITICALITY ignore TYPE BlockingPriorityIndicator PRESENCE mandatory }|
    { ID id-ShutdownTimer CRITICALITY ignore TYPE ShutdownTimer PRESENCE conditional
    },
    -- The information element is present when the Blocking Priority Indicator IE indicates 'Normal Priority'--
    ...
}

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

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

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

BlockResourceResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-CriticalityDiagnostic CRITICALITY ignore TYPE CriticalityDiagnostic 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-CriticalityDiagnostic CRITICALITY ignore     TYPE CriticalityDiagnostic 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-Cell-ParametersList-Audit-Req  CRITICALITY ignore TYPE Cell-ParametersList-Audit-Req PRESENCE optional },
  ...
}

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

Cell-ParametersList-Audit-Req ::= SEQUENCE (SIZE (1..maxCellinNodeB)) OF
  ProtocolIE-Container {{Cell-ParametersItemIE-Audit-Req}}

Cell-ParametersItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-Cell-ParametersItem-Audit-Req  CRITICALITY ignore TYPE Cell-ParametersItem-Audit-Req PRESENCE mandatory },
  ...
}

Cell-ParametersItem-Audit-Req ::= SEQUENCE {
  c-ID          C-ID,
  configurationGenerationID ConfigurationGenerationID
}

```

```

}

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

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

AuditResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-Cell-InformationList-Audit-Res    CRITICALITY ignore    TYPE Cell-InformationList-Audit-Res    PRESENCE optional }|
    { ID id-CommunicationControlPort-InformationList-Audit-Res    CRITICALITY ignore    TYPE CommunicationControlPort-InformationList-Audit-Res    PRESENCE optional }
}|
{ ID id-Cell-InformationList-Audit-Res    CRITICALITY ignore    TYPE Cell-InformationList-Audit-Res    PRESENCE optional }|
{ ID id-CriticalityDiagnostic    CRITICALITY ignore    TYPE CriticalityDiagnostic    PRESENCE optional
},
...
}

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

Cell-InformationList-Audit-Res ::= SEQUENCE (SIZE (1.. maxCellInNodeBmaxUCIDinNodeB)) OF
    ProtocolIE-Container {{Cell-InformationItemIE-Audit-Res }}

Cell-InformationItemIE-Audit-Res NBAP-PROTOCOL-IES ::= {
    { ID id-Cell-InformationItem-Audit-Res    CRITICALITY ignore    TYPE Cell-InformationItem-Audit-Res    PRESENCE optional },
    ...
}

Cell-InformationItem-Audit-Res ::= SEQUENCE {
    c-ID          C-ID,
    resourceOperationState    ResourceOperationState,
    availabilityStatus    AvailabilityStatus,
    maximumDLPowerCapability    MaximumDLPowerCapability,
    -- to do
    minimumSpreadingFactor    MinimumSpreadingFactor,
    -- to do
    primary-SCH-Information    P-SCH-Information-Audit-Res    OPTIONAL,
    secondary-SCH-Information    S-SCH-Information-Audit-Res    OPTIONAL,
}

```


X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". **3G**
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primary-CPICH-Information  P-CPICH-Information-Audit-Res  OPTIONAL,
secondary-CPICH-Information S-CPICH-Information-Audit-Res OPTIONAL,
primary-CCPCH-Information P-CCPCH-Information-Audit-Res  OPTIONAL,
bCH-Information          BCH-Information-Audit-Res  OPTIONAL,
secondary-CCPCH-Information S-CCPCH-Information-Audit-Res OPTIONAL,
pCH-InformationList      PCH-InformationList-Audit-Res  OPTIONAL,
pICH-Information         PICH-Information-Audit-Res  OPTIONAL,
fACH-InformationList     FACH-InformationList-Audit-Res  OPTIONAL,
pRACH-InformationList    PRACH-InformationList-Audit-Res  OPTIONAL,
rACH-InformationList     RACH-InformationList-Audit-Res  OPTIONAL,
aICH-InformationList     AICH-InformationList-Audit-Res  OPTIONAL,
sCH-InformationList      SCH-InformationList-Audit-Res  OPTIONAL,
pSCH-InformationList     PSCH-InformationList-Audit-Res  OPTIONAL,
communicationControlPortInformation CommunicationControlPortInformation-Audit-Res  OPTIONAL,
local-CellInformation     Local-CellInformation-Audit-Res  OPTIONAL
}

P-SCH-Information-Audit-Res ::= SEQUENCE {
    commonTransportChannelID  CommonTransportChannelID,
    resourceOperationState    ResourceOperationState,
    availabilityStatus        AvailabilityStatus
}

S-SCH-Information-Audit-Res ::= SEQUENCE {
    commonPhysicalChannelID   CommonPhysicalChannelID,
    resourceOperationState    ResourceOperationState,
    availabilityStatus        AvailabilityStatus
}

P-CPICH-Information-Audit-Res ::= SEQUENCE {
    commonPhysicalChannelID   CommonPhysicalChannelID,
    resourceOperationState    ResourceOperationState,
    availabilityStatus        AvailabilityStatus
}

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

S-CPICH-InformationItemIE-Audit-Res NBAP-PROTOCOL-IES ::= {
    { ID id-S-CPICH-InformationItem-Audit-Res    CRITICALITY ignore  TYPE S-CPICH-InformationItem-Audit-Res  PRESENCE mandatory
},
    ...
}

S-CPICH-InformationItem-Audit-Res ::= SEQUENCE {
    commonTransportChannelID   CommonTransportChannelID,
    resourceOperationState    ResourceOperationState,
    availabilityStatus        AvailabilityStatus
}

```

```
P-CCPCH-Information-Audit-Res ::= SEQUENCE {
    commonPhysicalChannelID    CommonPhysicalChannelID,
    resourceOperationState     ResourceOperationState,
    availabilityStatus         AvailabilityStatus
}

BCH-Information-Audit-Res ::= SEQUENCE {
    commonTransportChannelID   CommonTransportChannelID,
    resourceOperationState     ResourceOperationState,
    availabilityStatus         AvailabilityStatus
}

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

S-CCPCH-InformationItemIE-Audit-Res NBAP-PROTOCOL-IES ::= {
    { ID id-S-CCPCH-InformationItem-Audit-Res    CRITICALITY ignore  TYPE S-CCPCH-InformationItem-Audit-Res  PRESENCE mandatory
    },
    ...
}

S-CCPCH-InformationItem-Audit-Res ::= SEQUENCE {
    commonPhysicalChannelID    CommonPhysicalChannelID,
    resourceOperationState     ResourceOperationState,
    availabilityStatus         AvailabilityStatus
}

PCH-InformationList-Audit-Res ::= SEQUENCE (SIZE (1..maxPCHCell)) OF
    ProtocolIE-Container {{PCH-InformationItemIE-Audit-Res }}

PCH-InformationItemIE-Audit-Res NBAP-PROTOCOL-IES ::= {
    { ID id-PCH-InformationItem-Audit-Res    CRITICALITY ignore  TYPE PCH-InformationItem-Audit-Res  PRESENCE mandatory
    },
    ...
}

PCH-InformationItem-Audit-Res ::= SEQUENCE {
    commonTransportChannelID   CommonTransportChannelID,
    resourceOperationState     ResourceOperationState,
    availabilityStatus         AvailabilityStatus
}

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

FACH-InformationItemIE-Audit-Res NBAP-PROTOCOL-IES ::= {
    { ID id-FACH-InformationItem-Audit-Res    CRITICALITY ignore  TYPE FACH-InformationItem-Audit-Res  PRESENCE mandatory
    },
    ...
}
```

```
}  
  
FACH-InformationItem-Audit-Res ::= SEQUENCE {  
    commonPhysicalChannelID     CommonPhysicalChannelID,  
    resourceOperationState      ResourceOperationState,  
    availabilityStatus          AvailabilityStatus  
}  
  
PRACH-InformationList-Audit-Res ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF  
    ProtocolIE-Container {{PRACH-InformationItemIE-Audit-Res}}  
  
PRACH-InformationItemIE-Audit-Res NBAP-PROTOCOL-IES ::= {  
    { ID id-PRACH-InformationItem-Audit-Res     CRITICALITY ignore TYPE PRACH-InformationItem-Audit-Res PRESENCE mandatory },  
    ...  
}  
  
PRACH-InformationItem-Audit-Res ::= SEQUENCE {  
    commonPhysicalChannelID     CommonPhysicalChannelID,  
    resourceOperationState      ResourceOperationState,  
    availabilityStatus          AvailabilityStatus  
}  
  
RACH-InformationList-Audit-Res ::= SEQUENCE (SIZE (1..maxRACHCell)) OF  
    ProtocolIE-Container {{RACH-InformationItemIE-Audit-Res}}  
  
RACH-InformationItemIE-Audit-Res NBAP-PROTOCOL-IES ::= {  
    { ID id-RACH-InformationItem-Audit-Res     CRITICALITY ignore TYPE RACH-InformationItem-Audit-Res PRESENCE mandatory },  
    ...  
}  
  
RACH-InformationItem-Audit-Res ::= SEQUENCE {  
    commonTransportChannelID    CommonTransportChannelID,  
    resourceOperationState      ResourceOperationState,  
    availabilityStatus          AvailabilityStatus  
}  
  
AICH-InformationList-Audit-Res ::= SEQUENCE (SIZE (1..maxRACHCell)) OF  
    ProtocolIE-Container {{RACH-InformationItemIE-Audit-Res}}  
  
AICH-InformationItemIE-Audit-Res NBAP-PROTOCOL-IES ::= {  
    { ID id-RACH-InformationItem-Audit-Res     CRITICALITY ignore TYPE RACH-InformationItem-Audit-Res PRESENCE mandatory },  
    ...  
}  
  
AICH-InformationItem-Audit-Res ::= SEQUENCE {  
    CommonPhysicalChannelID     CommonPhysicalChannelID,  
    resourceOperationState      ResourceOperationState,  
    availabilityStatus          AvailabilityStatus  
}
```



```

protocolIEs          ProtocolIE-Container    {{CommonMeasurementInitiationRequest-IEs}},
protocolExtensions   ProtocolExtensionContainer {{CommonMeasurementInitiationRequest-Extensions}}          OPTIONAL,
...
}

CommonMeasurementInitiationRequest-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-MeasurementID          CRITICALITY ignore  TYPE MeasurementID          PRESENCE mandatory }|
  { ID id-CommonMeasurementObjectType-CMeasureInitReq CRITICALITY ignore  TYPE CommonMeasurementObjectType-CMeasureInitReq PRESENCE mandatory }|
  { ID id-CommonMeasurementType  CRITICALITY ignore  TYPE CommonMeasurementType  PRESENCE mandatory }|
  { ID id-MeasurementCharacteristics CRITICALITY ignore  TYPE MeasurementCharacteristics PRESENCE mandatory }|
  { ID id-ReportCharacteristics    CRITICALITY ignore  TYPE ReportCharacteristics    PRESENCE mandatory },
  ...
}

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

CommonMeasurementObjectType-CMeasureInitReq ::= ENUMERATED {
  cell          Cell-CMeasureInitReq,
  rACH          RACH-CMeasureInitReq
}

Cell-CMeasureInitReq ::= SEQUENCE {
  c-ID          C-ID,
  timeSlot     TimeSlot
}

RACH-CMeasureInitReq ::= SEQUENCE {
  c-ID          C-ID,
  commonTransportChannelID CommonTransportChannelID
}

-- *****
--
-- 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-CommonMeasurementType-Res CRITICALITY ignore TYPE CommonMeasurementType-Res PRESENCE mandatory }|
  { ID id-SFN                    CRITICALITY ignore TYPE SFN                    PRESENCE optional }|
  { ID id-CriticalityDiagnostic   CRITICALITY ignore TYPE CriticalityDiagnostic   PRESENCE optional
  },
  ...
}

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

CommonMeasurementObjectType-Res ::= CHOICE {
  cell          Cell-CommonMeasurement-Res,
  rACH          RACH-CommonMeasurement-Res
}

Cels-CommonMeasurement-Req ::= SEQUENCE {
  commonMeasurementValue CommonMeasurementValue
}

RACH-CommonMeasurement-Req ::= SEQUENCE {
  commonMeasurementValue CommonMeasurementValue
}

-- *****
--
-- 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-CriticalityDiagnostic   CRITICALITY ignore TYPE CriticalityDiagnostic   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-Rep CRITICALITY ignore TYPE CommonMeasurementObjectType-Rep PRESENCE mandatory }|
    { ID id-SFN                    CRITICALITY ignore TYPE SFN                    PRESENCE optional },
    ...
}

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

CommonMeasurementObjectType-Rep ::= ENUMERATED {
    cell          Cell-CommonMeasurement-Rep,
    rACH          RACH-CommonMeasurement-Rep
}

Cell-CommonMeasurement-Rep ::= SEQUENCE {
    commonMeasurementValue CommonMeasurementValue
}

RACH-CommonMeasurement-Rep ::= SEQUENCE {
    commonMeasurementValue CommonMeasurementValue
}

-- *****
--
-- COMMON MEASUREMENT TERMINATION REQUEST
--
-- *****

CommonMeasurementTerminationRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container          {{CommonMeasurementTerminationRequest-IEs}},
```

```

    protocolExtensions          ProtocolExtensionContainer {{CommonMeasurementTerminationRequest-Extensions}}
    ...
}

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}}
    ...
}

CommonMeasurementFailureIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory }|
    { ID id-Cause                  CRITICALITY ignore TYPE Cause                  PRESENCE mandatory }|
    { ID id-CriticalityDiagnostic   CRITICALITY ignore TYPE CriticalityDiagnostic   PRESENCE optional
    },
    ...
}

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

-- *****
--
-- CELL SETUP REQUEST FDD
--
-- *****

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

```



```

}

CellSetupRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-LocalCell-ID          CRITICALITY ignore  TYPE LocalCell-ID          PRESENCE mandatory }|
  { ID id-C-ID                  CRITICALITY ignore  TYPE C-ID                  PRESENCE mandatory }|
  { ID id-ConfigurationGenerationID  CRITICALITY ignore  TYPE ConfigurationGenerationID  PRESENCE mandatory }|
  { ID id-T-Cell                CRITICALITY ignore  TYPE T-Cell                PRESENCE mandatory }|
  { ID id-UARFCN                CRITICALITY ignore  TYPE UARFCN                PRESENCE mandatory }|
  { ID id-MaximumTransmissionPower  CRITICALITY ignore  TYPE MaximumTransmissionPower  PRESENCE mandatory }|
  { ID id-PrimaryScramblingCode     CRITICALITY ignore  TYPE PrimaryScramblingCode     PRESENCE mandatory }|
  { ID id-PrimarySCH-Information-Cellsetup-Req  CRITICALITY ignore  TYPE PrimarySCH-Information-Cellsetup-Req  PRESENCE mandatory }|
  { ID id-SecondarySCH-Information-Cellsetup-Req  CRITICALITY ignore  TYPE SecondarySCH-Information-Cellsetup-Req  PRESENCE mandatory }|
  { ID id-PrimaryCPICH-Information-Cellsetup-Req  CRITICALITY ignore  TYPE PrimaryCPICH-Information-Cellsetup-Req  PRESENCE mandatory }|
  { ID id-SecondaryCPICH-Information-Cellsetup-Req  CRITICALITY ignore  TYPE SecondaryCPICH-Information-Cellsetup-Req  PRESENCE optional }
}|
  { ID id-PrimaryCCPCH-Information-Cellsetup-Req  CRITICALITY ignore  TYPE PrimaryCCPCH-Information-Cellsetup-Req  PRESENCE mandatory },
  ...
}

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

PrimarySCH-Information-Cellsetup-Req ::= SEQUENCE {
  commonPhysicalChannelID  CommonPhysicalChannelID,
  primarySCH-Power         DL-Power,
  tSTD-Indicator           TSTD-Indicator
}

SecondarySCH-Information-Cellsetup-Req ::= SEQUENCE {
  commonPhysicalChannelID  CommonPhysicalChannelID,
  secondarySCH-Power       DL-Power,
  transmitDiversityIndication  TransmitDiversityIndication
}

PrimaryCPICH-Information-Cellsetup-Req ::= SEQUENCE {
  commonPhysicalChannelID  CommonPhysicalChannelID,
  primaryCPICH-Power       DL-Power,
  sTTD-Indicator           STTD-Indicator
}

SecondaryCPICH-Information-Cellsetup-Req ::= SEQUENCE {
  commonPhysicalChannelID  CommonPhysicalChannelID,
  dl-ScramblingCode        DL-ScramblingCode,
  secondaryCPICH-Power     DL-Power,
  transmitDiversityIndication  TransmitDiversityIndication
}

```

```
PrimaryCCPCH-Information-Cellsetup-Req ::= SEQUENCE {
    commonPhysicalChannelID    CommonPhysicalChannelID,
    bCH-information-Cellsetup-Req    BCH-Information-PrimCCPCH-Cellsetup-Req,
    sTTD-Indicator              STTD-Indicator
}

BCH-Information-PrimCCPCH-Cellsetup-Req ::= SEQUENCE {
    commonTransportChannelID    CommonTransportChannelID,
    bCH-Power                    DL-Power
}

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

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

CellSetupRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-LocalCell-ID          CRITICALITY ignore TYPE LocalCell-ID          PRESENCE mandatory }|
    { ID id-C-ID                  CRITICALITY ignore TYPE C-ID                  PRESENCE mandatory }|
    { ID id-ConfigurationGenerationID CRITICALITY ignore TYPE ConfigurationGenerationID PRESENCE mandatory }|
    { ID id-UARFCN                CRITICALITY ignore TYPE UARFCN                PRESENCE mandatory }|
    { ID id-Cell-Parameter-ID     CRITICALITY ignore TYPE Cell-Parameter-ID     PRESENCE mandatory }|
    { ID id-MaximumTransmissionPower CRITICALITY ignore TYPE MaximumTransmissionPower PRESENCE mandatoryoptional }|
    { ID id-TransmissionDiversityApplied CRITICALITY ignore TYPE TransmissionDiversityApplied PRESENCE mandatory }|
    { ID id-SyncCase              CRITICALITY ignore TYPE TransmissionDiversityApplied PRESENCE mandatory }|
    { ID id-PSCH-Information-CellsetupReqTDD CRITICALITY ignore TYPE PSCH-Information-CellsetupReqTDD PRESENCE mandatory }|
    { ID id-PCCPCH-Information-CellsetupReqTDD CRITICALITY ignore TYPE PCCPCH-Information-CellsetupReqTDD PRESENCE mandatory }|
    { ID id-TimeSlotConfigurationList-CellsetupReqTDD CRITICALITY ignore TYPE TimeSlotConfigurationList-CellsetupReqTDD
    PRESENCE mandatory
    },
    ...
}

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

PSCH-Information-CellsetupReqTDD ::= SEQUENCE {
    commonPhysicalChannelID    CommonPhysicalChannelID,
    syncCaseIndicator          SyncCaseIndicator-CellsetupReqTDD,
}
```

```

    pSCH-Power          DL-Power,
    tSTD-Indicator      TSTD-Indicator
}

SyncCaseIndicator-CellsetupReqTDD ::= ENUMERATED {
    case1              Case1-CellsetupReqTDD,
    case2andCcase3    Case2andCase3-CellsetupReqTDD
}

Case1-CellsetupReqTDD ::= SEQUENCE {
    timeSlot          TimeSlot
}

Case2andCase3-CellsetupReqTDD ::= SEQUENCE {
    PSCH-TimeSlot    PSCH-TimeSlot
}

PCCPCH-Information-CellsetupReqTDD ::= SEQUENCE {
    syncCaseIndicator SyncCaseIndicator-CellsetupReqTDD2,
    repetitionPeriod  RepetitionPeriod,
    repetitionLength  RepetitionLength,
    pCCPCH-Power      DL-Power,
    tSTD-Indicator    TSTD-Indicator
}

SyncCaseIndicator-CellsetupReqTDD2 ::= ENUMERATED {
    case3              Case3-CellsetupReqTDD
}

Case3-CellsetupReqTDD ::= SEQUENCE {
    timeSlot          TimeSlot
}

TimeSlotConfigurationList-CellsetupReqTDD ::= SEQUENCE (SIZE (1..15)) OF
    ProtocolIE-Container{{TimeSlotConfigurationList-CellsetupReqTDD ItemIE }}

TimeSlotConfigurationList-CellsetupReqTDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-TimeSlotConfigurationList-CellsetupReqTDDItem          CRITICALITY ignore
    CellsetupReqTDDItem      PRESENCE      mandatory                TYPE      TimeSlotConfigurationList-
    },
    ...
}

TimeSlotConfigurationList-CellsetupReqTDDItem ::= SEQUENCE {
    timeSlot          TimeSlot,
    timeSlotStatus    TimeSlotStatus,
    timeSlotDirection TimeSlotDirection
}

```

```

-- *****
--
-- CELL SETUP RESPONSE
--
-- *****

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

CellSetupResponse-IEs NBAP-PROTOCOL-IES ::= {
{ ID id-CriticalityDiagnostic          CRITICALITY ignore          TYPE CriticalityDiagnostic          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-CriticalityDiagnostic          CRITICALITY ignore          TYPE CriticalityDiagnostic          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 ignore  TYPE C-ID          PRESENCE mandatory }|
    { ID id-ConfigurationGenerationID  CRITICALITY ignore  TYPE ConfigurationGenerationID  PRESENCE mandatory }|
    { ID id-MaximumTransmissionPower    CRITICALITY ignore  TYPE MaximumTransmissionPower    PRESENCE optional }|
    { ID id-PrimarySCH-Information-Cellreconf-Req  CRITICALITY ignore  TYPE PrimarySCH-Information-Cellreconf-Req  PRESENCE optional }|
    { ID id-SecondarySCH-Information-Cellreconf-Req  CRITICALITY ignore  TYPE SecondarySCH-Information-Cellreconf-Req  PRESENCE optional }|
    { ID id-PrimaryCPICH-Information-Cellreconf-Req  CRITICALITY ignore  TYPE PrimaryCPICH-Information-Cellreconf-Req  PRESENCE optional }|
    { ID id-SecondaryCPICH-Information-Cellreconf-Req  CRITICALITY ignore  TYPE SecondaryCPICH-Information-Cellreconf-Req  PRESENCE optional }
}|
{ ID id-PrimaryCCPCH-Information-Cellreconf-Req  CRITICALITY ignore  TYPE PrimaryCCPCH-Information-Cellreconf-Req  PRESENCE optional },
    ...
}

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

PrimarySCH-Information-Cellreconf-Req ::= SEQUENCE {
    commonPhysicalChannelID    CommonPhysicalChannelID,
    primarySCH-Power           DL-Power
}

SecondarySCH-Information-Cellreconf-Req ::= SEQUENCE {
    commonPhysicalChannelID    CommonPhysicalChannelID,
    secondarySCH-Power         DL-Power
}

PrimaryCPICH-Information-Cellreconf-Req ::= SEQUENCE {
    commonPhysicalChannelID    CommonPhysicalChannelID,
    primaryCPICH-Power         DL-Power PrimaryCPICH-Power
}

SecondaryCPICH-Information-Cellreconf-Req ::= SEQUENCE {
    commonPhysicalChannelID    CommonPhysicalChannelID,
    secondaryCPICH-Power       DL-Power
}

PrimaryCCPCH-Information-Cellreconf-Req ::= SEQUENCE {

```

```

    BCH-information          BCH-information-Cellreconf-Req
  }

BCH-Information-Cellreconf-Req ::= SEQUENCE {
    commonTransportChannelID    CommonTransportChannelID,
    bCH-Power                   DL-Power
}

-- *****
--
-- CELL RECONFIGURATION REQUEST TDD
--
-- *****

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

CellReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-LocalCell-ID          CRITICALITY ignore TYPE LocalCell-ID          PRESENCE mandatory }|
    { ID id-C-ID                  CRITICALITY ignore TYPE C-ID                  PRESENCE mandatory }|
    { ID id-ConfigurationGeneration-ID CRITICALITY ignore TYPE ConfigurationGeneration-ID PRESENCE optional }|
    { ID id-MaximumTransmissionPower CRITICALITY ignore TYPE MaximumTransmissionPower PRESENCE optional }|
    { ID id-PSCH-Information-CellReconfReq CRITICALITY ignore TYPE PSCH-Information-CellReconfReq PRESENCE optional }|
    { ID id-PCCPCH-Information-CellReconfReq CRITICALITY ignore TYPE PCCPCH-Information-CellReconfReq PRESENCE optional }|
    { ID id-TimeSlotConfigurationList-CellReconfReq CRITICALITY ignore TYPE TimeSlotConfigurationList-CellReconfReq PRESENCE mandatory },
    ...
}

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

PSCH-Information-CellReconfReq ::= SEQUENCE {
    commonPhysicalChannelID    CommonPhysicalChannelID,
    pSCH-Power                 PSCHDL-Power
}

PCCPCH-Information-CellReconfReq ::= SEQUENCE {
    commonPhysicalChannelID    CommonPhysicalChannelID,
    pCCPCH-Power              PCCPCH-Power
}

TimeSlotConfigurationList-CellReconfReq ::= SEQUENCE (SIZE (1..15)) OF
    ProtocolIE-Container {{TimeSlotConfiguration-CellReconfReqItemIE }}

```

```
TimeSlotConfiguration-CellReconfReqItemIE NBAP-PROTOCOL-IES ::= {
  { I D id-TimeSlotConfiguration-CellReconfReqItem  CRITICALITY ignore TYPE TimeSlotConfiguration-CellReconfReqItem PRESENCE
    mandatory
  },
  ...
}

TimeSlotConfiguration-CellReconfReqItem ::= SEQUENCE {
  timeSlot           TimeSlot,
  timeSlotStatus     TimeSlotStatus,
  timeSlotDirection  TimeSlotDirection
}

-- *****
--
-- CELL RECONFIGURATION RESPONSE
--
-- *****

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

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

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

-- *****
--
-- CELL RECONFIGURATION FAILURE
--
-- *****

CellReconfigurationFailure ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container  {{CellReconfigurationFailure-IEs}},
  protocolExtensions  ProtocolExtensionContainer  {{CellReconfigurationFailure-Extensions}} OPTIONAL,
  privateExtensions  PrivateExtensionContainer  {{CellReconfigurationFailure-PrivateExtensions}} OPTIONAL,
  ...
}
```

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

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

-- *****
--
-- CELL DELETION REQUEST
--
-- *****

CellDeletionRequest ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{CellDeletionRequest-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{CellDeletionRequest-Extensions}}
  privateExtensions   PrivateExtensionContainer  {{CellDeletionRequest-PrivateExtensions}}
  ...
}

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

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

-- *****
--
-- CELL DELETION RESPONSE
--
-- *****

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

CellDeletionResponse-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-CriticalityDiagnostic CRITICALITY ignore  TYPE CriticalityDiagnostic 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          CRITICALITY ignore TYPE IndicationType          PRESENCE mandatory }|
    { ID id-Cause                    CRITICALITY ignore TYPE Cause                    PRESENCE mandatory },
    ...
}

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

IndicationType ::= ENUMERATED {
    no-Failure          No-Failure,
    serviceImpacting    ServiceImpacting
}

No-Failure ::= SEQUENCE {
    local-CellInformationList-ResourceStatInd          Local-CellInformationList-ResourceStatInd
}

Local-CellInformationList-ResourceStatInd ::= SEQUENCE(SIZE (1..maxLocalCellInNodeB)) OF
    ProtocolIE-Container {{Local-CellInformation-ResourceStatIndItemIE}}

Local-CellInformation-ResourceStatIndItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-Local-CellInformation-ResourceStatIndItem          CRITICALITY ignore TYPE Local-CellInformation-ResourceStatIndItem          PRESENCE mandatory },
    ...
}
```



```
CRITICALITY ignore           TYPE CommunicationControlPortInformation-ResourceStatIndItem
PRESENCE mandatory },
...
}

CommunicationControlPortInformation-ResourceStatIndItem ::= SEQUENCE {
communicationControlPortID    CommunicationControlPortID,
resourceOperationalState      ResourceOperationalState,
availabilityStatus            AvailabilityStatus
}

Cell-InformationList-ResourceStatInd ::= SEQUENCE (SIZE (1..maxCellInNodeB)) OF
ProtocolIE-Container {{Cell-Information-ResourceStatIndItemIE }}

Cell-Information-ResourceStatIndItemIE NBAP-PROTOCOL-IES ::= {
{ ID id-Cell-Information-ResourceStatIndItem    CRITICALITY ignore    TYPE Cell-Information-ResourceStatIndItem    PRESENCE mandatory},
...
}

Cell-Information-ResourceStatIndItem ::= SEQUENCE {
c-ID                C-ID,
resourceOperationalState    ResourceOperationalState,
availabilityStatus    AvailabilityStatus,
maximumDL-PowerCapability    MaximumDL-PowerCapability,
minimumSpreadingFactor    MinimumSpreadingFactor
}

P-SCH-Information-ResourceStatInd ::= SEQUENCE {
commonTransportChannelID    CommonTransportChannelID,
resourceOperationState    ResourceOperationState,
availabilityStatus    AvailabilityStatus
}

S-SCH-Information-ResourceStatInd ::= SEQUENCE {
commonPhysicalChannelID    CommonPhysicalChannelID,
resourceOperationState    ResourceOperationState,
availabilityStatus    AvailabilityStatus
}

P-CPICH-Information-ResourceStatInd ::= SEQUENCE {
commonPhysicalChannelID    CommonPhysicalChannelID,
resourceOperationState    ResourceOperationState,
availabilityStatus    AvailabilityStatus
}

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

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

```
{ ID id-S-CPICH-InformationItem-ResourceStatInd    CRITICALITY ignore    TYPE S-CPICH-InformationItem-ResourceStatInd    PRESENCE mandatory
},
...
}

S-CPICH-InformationItem-ResourceStatInd ::= SEQUENCE {
    commonTransportChannelID    CommonTransportChannelID,
    resourceOperationState    ResourceOperationState,
    availabilityStatus    AvailabilityStatus
}

P-CCPCH-Information-ResourceStatInd ::= SEQUENCE {
    commonPhysicalChannelID    CommonPhysicalChannelID,
    resourceOperationState    ResourceOperationState,
    availabilityStatus    AvailabilityStatus
}

BCH-InformationItem-ResourceStatInd ::= SEQUENCE {
    commonTransportChannelID    CommonTransportChannelID,
    resourceOperationalState    ResourceOperationalState,
    availabilityStatus    AvailabilityStatus
}

PCH-InformationList-ResourceStatInd ::= SEQUENCE (SIZE (1..maxPCHinNodeB)) OF
    ProtocolIE-Container {{PCH-Information-ResourceStatIndItemIE }}

PCH-Information-ResourceStatIndItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-PCH-Information-ResourceStatIndItem    CRITICALITY ignore    TYPE PCH-Information-ResourceStatIndItem    PRESENCE mandatory},
    ...
}

PCH-Information-ResourceStatIndItem ::= SEQUENCE {
    commonTransportChannelID    CommonTransportChannelID,
    resourceOperationalState    ResourceOperationalState,
    availabilityStatus    AvailabilityStatus
}

PICH-InformationItem-ResourceStatInd ::= SEQUENCE {
    commonPhysicalChannelID    CommonPhysicalChannelID,
    resourceOperationalState    ResourceOperationalState,
    availabilityStatus    AvailabilityStatus
}

FACH-InformationList-ResourceStatInd ::= SEQUENCE (SIZE (1..maxFACHCell)) OF
    ProtocolIE-Container {{FACH-Information-ResourceStatIndItemIE }}

FACH-Information-ResourceStatIndItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-FACH-Information-ResourceStatIndItem    CRITICALITY ignore    TYPE FACH-Information-ResourceStatIndItem    PRESENCE mandatory},
    ...
}
```

```
}

FACH-Information-ResourceStatIndItem ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    resourceOperationalState      ResourceOperationalState,
    availabilityStatus             AvailabilityStatus
}

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

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

PRACH-InformationItem-ResourceStatInd ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    resourceOperationState       ResourceOperationState,
    availabilityStatus            AvailabilityStatus
}

RACH-InformationList-ResourceStatInd ::= SEQUENCE (SIZE (1..maxRACHCell)) OF
    ProtocolIE-Container {{RACH-Information-ResourceStatIndItemIE }}

RACH-Information-ResourceStatIndItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-RACH-Information-ResourceStatIndItem      CRITICALITY ignore TYPE RACH-Information-ResourceStatIndItem PRESENCE mandatory},
    ...
}

RACH-Information-ResourceStatIndItem ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    resourceOperationalState      ResourceOperationalState,
    availabilityStatus             AvailabilityStatus
}

AICH-InformationList-ResourceStatInd ::= SEQUENCE (SIZE (1..maxAICHCell)) OF
    ProtocolIE-Container {{AICH-Information-ResourceStatIndItemIE }}

AICH-Information-ResourceStatIndItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-AICH-Information-ResourceStatIndItem      CRITICALITY ignore TYPE AICH-Information-ResourceStatIndItem PRESENCE mandatory},
    ...
}

AICH-Information-ResourceStatIndItem ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    resourceOperationalState      ResourceOperationalState,
    availabilityStatus            AvailabilityStatus
}
```

```

SCH-Information-ResourceStatInd ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    resourceOperationalState      ResourceOperationalState,
    availabilityStatus             AvailabilityStatus
}

PSCH-Information-ResourceStatInd ::= SEQUENCE {
    commonPhysicalChannelID       CommonPhysicalChannelID,
    resourceOperationalState      ResourceOperationalState,
    availabilityStatus             AvailabilityStatus
}

-- *****
--
-- 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 ignore       TYPE C-ID                       PRESENCE mandatory }|
    { ID id-BCCH-ModificationTime   CRITICALITY ignore       TYPE BCCH-ModificationTime   PRESENCE mandatory }|
    { ID id-MIB-SIB-InformationList-SystemInfoUpdate CRITICALITY ignore       TYPE MIB-SIB-InformationList-SystemInfoUpdate
    PRESENCE optional
    },
    ...
}

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

MIB-SIB-InformationList-SystemInfoUpdate ::= SEQUENCE (SIZE (1..maxIB)) OF
    ProtocolIE-Container{{ MIB-SIB-InformationList-SystemInfoUpdateItemIE }}

MIB-SIB-InformationList-SystemInfoUpdateItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-MIB-SIB-InformationList-SystemInfoUpdateItem CRITICALITY ignore       TYPE MIB-SIB-InformationList-SystemInfoUpdateItem
    PRESENCE optional
    },
    ...
}

```

```

MIB-SIB-InformationList-SystemInfoUpdateItem ::= SEQUENCE {
    iB-Type          IB-Type,
    sIB-DeletionIndicator      SIB-DeletionIndicator-SystemInfoUpdate
}

SIB-DeletionIndicator-SystemInfoUpdate ::= ENUMERATED {
    no-Delition      No-Delitionist-SystemInfoUpdate
}

No-DelitionList-SystemInfoUpdate ::= SEQUENCE (SIZE (1..maxIBSEG)) OF
    ProtocolIE-Container{{ No-DelitionList-SystemInfoUpdateItemIE }}

No-DelitionList-SystemInfoUpdateItemIE NBAP-PROTOCOL-IES ::= {
    { ID id- No-DelitionList-SystemInfoUpdate      CRITICALITY ignore      TYPE No-DelitionList-SystemInfoUpdate      PRESENCE optional },
    ...
}

No-DelitionList-SystemInfoUpdate ::= SEQUENCE {
    sIB-Originator      sIB-Originator      OPTIONAL,
    segmentInformation      SegmentInformation-SystemInfoUpdate
}

SegmentInformation-SystemInfoUpdate ::= SEQUENCE (SIZE (1..maxIBSEG)) OF
    ProtocolIE-Container{{ SegmentInformation-SystemInfoUpdateItemIE }}

SegmentInformation-SystemInfoUpdateItemIE NBAP-PROTOCOL-IES ::= {
    { ID id- SegmentInformation-SystemInfoUpdateItem      CRITICALITY ignore      TYPE      SegmentInformation-SystemInfoUpdateItem      PRESENCE
    optional
    },
    ...
}

SegmentInformation-SystemInfoUpdateItem ::= SEQUENCE {
    segmentType          SegmentType,
    iB-SG-REP            IB-SG-REP,
    iB-SG-POS            IB-SG-POS,
    iB-SG                IB-SG      OPTIONAL
}

-- *****
--
-- SYSTEM INFORMATION UPDATE RESPONSE
--
-- *****

SystemInformationUpdateResponse ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container      {{SystemInformationUpdateResponse-IEs}},

```

~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)".~~ TS-25.433 V3.0.0 (2009-01)
~~TS 25.433 version 3.0.0 Release 1999~~ **3G**

```
protocolExtensions      ProtocolExtensionContainer {{SystemInformationUpdateResponse-Extensions}}      OPTIONAL,
...
}

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

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

-- *****
--
-- RADIO LINK SETUP REQUEST FDD
--
-- *****

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



```
p03          PowerOffset
}

DCH-InformationList-RL-SetupReq-FDD ::= SEQUENCE (SIZE (1..maxnoofDCHs)) OF
  ProtocolIE-Container{{DCH-Information-RL-SetupReq-FDDItemIE }}

DCH-Information-RL-SetupReq-FDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-DCH-Information-RL-SetupReq-FDDItem CRITICALITY ignore TYPE DCH-Information-RL-SetupReq-FDDItem PRESENCE mandatory },
  ...
}

DCH-Information-RL-SetupReq-FDDItem ::= SEQUENCE {
  dCH-ID          DCH-ID,
  dCH-CombinationIndication DCH-CombinationIndication OPTIONAL,
  rLC-Mode        RLC-Mode,
  ul-TransportFormatSet TransportFormatSet,
  dl-TransportFormatSet TransportFormatSet,
  frameHandlingPriority FrameHandlingPriority,
  payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
  ul-FP-Mode      UL-FP-Mode,
  toAWS           ToAWS,
  toAWE           ToAWE
}

DSCH-InformationList-RL-SetupReq-FDD ::= SEQUENCE (SIZE (1..maxnoofDSCHs)) OF
  ProtocolIE-Container{{DSCH-Information-RL-SetupReq-FDDItemIE }}

DSCH-Information-RL-SetupReq-FDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-DSCH-Information-RL-SetupReq-FDDItem CRITICALITY ignore TYPE DSCH-Information-RL-SetupReq-FDDItem PRESENCE mandatory },
  ...
}

DSCH-Information-RL-SetupReq-FDDItem ::= SEQUENCE {
  dSCH-ID          DSCH-ID,
  dSCH-TransportFormatSet DSCH-TransportFormatSet,
  frameHandlingPriority FrameHandlingPriority,
  toAWS           ToAWS,
  toAWE           ToAWE
}

RL-InformationList-RL-SetupReq-FDD ::= SEQUENCE (SIZE (1..maxnoofRLs)) OF
  ProtocolIE-Container{{RL-Information-RL-SetupReq-FDDItemIE }}

RL-Information-RL-SetupReq-FDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-SetupReq-FDDItem CRITICALITY ignore TYPE RL-Information-RL-SetupReq-FDDItem PRESENCE optional },
  ...
}

RL-Information-RL-SetupReq-FDDItem ::= SEQUENCE {
```

```

rL-ID          RL-ID,
c-ID           C-ID,
frameOffset    FrameOffset,
chipOffset     ChipOffset,
propagationDelay PropagationDelay,
diversityControlField DiversityControlField OPTIONAL,
-- This IE is present only if the RL is not the first one in the RL Information
dl-CodeInformationList-RL-SetupReqFDD          DL-CodeInformationList-RL-SetupReqFDD,
initialDL-transmissionPower DL-Power,
maximumDL-power          DL-Power,
minimumDL-power          DL-Power,
SSDT-CellIdentity        SSDT-CellIdentity OPTIONAL
}

DL-CodeInformationList-RL-SetupReqFDD ::= SEQUENCE (SIZE (1..maxnoofRLs)) OF
  ProtocolIE-Container{{DL-CodeInformation-RL-SetupReqFDDItem IE }}

DL-CodeInformation-RL-SetupReqFDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-DL-CodeInformation-RL-SetupReqFDDItem CRITICALITY ignore TYPE DL-CodeInformation-RL-SetupReqFDDItem PRESENCE optional },
  ...
}

DL-CodeInformation-RL-SetupReqFDDItem ::= SEQUENCE {
  dl-ScramblingCode          DL-ScramblingCode,
  fdd-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber
}

-- *****
--
-- 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 ignore TYPE CRNC-CommunicationContextID PRESENCE mandatory }|
  { ID id-UL-CCTrCH-InformationList-RL-SetupReqTDD CRITICALITY ignore TYPE UL-CCTrCH-InformationList-RL-SetupReqTDD PRESENCE optional }|
  { ID id-DL-CCTrCH-InformationList-RL-SetupReqTDD CRITICALITY ignore TYPE DL-CCTrCH-InformationList-RL-SetupReqTDD PRESENCE optional }|
  { ID id-DCH-InformationList-RL-SetupReqTDD CRITICALITY ignore TYPE DCH-InformationList-RL-SetupReqTDD PRESENCE optional }|
  { ID id-DSCH-InformationList-RL-SetupReqTDD CRITICALITY ignore TYPE DSCH-InformationList-RL-SetupReqTDD PRESENCE optional }|
  { ID id-USCH-InformationList-RL-SetupReqTDD CRITICALITY ignore TYPE USCH-InformationList-RL-SetupReqTDD PRESENCE optional }|
  { ID id-RL-InformationItem-RL-SetupReqTDD CRITICALITY ignore TYPE RL-InformationItem-RL-SetupReqTDD PRESENCE mandatory },
  ...
}

```

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

UL-CCTrCH-InformationList-RL-SetupReqTDD ::= SEQUENCE (SIZE(1..maxnoofCCTrCHs)) OF
    ProtocolIE-Container{{UL-CCTrCH-Information-RL-SetupReqTDDItemIE }}

UL-CCTrCH-Information-RL-SetupReqTDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-Information-RL-SetupReqTDDItem CRITICALITY ignore TYPE UL-CCTrCH-Information-RL-SetupReqTDDItem PRESENCE mandatory },
    ...
}

UL-CCTrCH-Information-RL-SetupReqTDDItem ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    transportFormatCombinationSetTFCIS TransportFormatCombinationSetTFCIS,
    tFCI-Coding              TFCI-Coding,
    puncturing-Limit         Puncturing-Limit,
    ul-DPCH-InformationList-RL-SetupReqTDD    UL-DPCH-InformationList-RL-SetupReqTDD    OPTIONAL
}

UL-DPCH-InformationList-RL-SetupReqTDD ::= SEQUENCE (SIZE (1..maxnoofDPCHs)) OF
    ProtocolIE-Container{{UL-DPCH-Information-RL-SetupReqTDDItemIE }}

UL-DPCH-Information-RL-SetupReqTDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-Information-RL-SetupReqTDDItem CRITICALITY ignore TYPE UL-DPCH-Information-RL-SetupReqTDDItem PRESENCE mandatory },
    ...
}

UL-DPCH-Information-RL-SetupReqTDDItem ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tdd-ChannelisationCode    TDD-ChannelisationCode,
    burstType                BurstType,
    midambleShift            MidambleShift,
    timeSlot                 TimeSlot,
    tdd-PhysicalChannelOffset    TDD-PhysicalChannelOffset,
    repetitionPeriod          RepetitionPeriod,
    repetitionLength          RepetitionLength,
    tFCI-Presence              TFCI-Presence
}

DL-CCTrCH-InformationList-RL-SetupReqTDD ::= SEQUENCE (SIZE (1..maxnoCCTrCHs)) OF
    ProtocolIE-Container{{DL-CCTrCH-Information-RL-SetupReqTDDItemIE }}

DL-CCTrCH-Information-RL-SetupReqTDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-Information-RL-SetupReqTDDItem CRITICALITY ignore TYPE DL-CCTrCH-Information-RL-SetupReqTDDItem PRESENCE mandatory },

```

```

...
}

DL-CCTrCH-Information-RL-SetupReqTDDItem ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    transportFormatCombinationSet TFC          TransportFormatCombinationSetTFC,
    tFCI-Coding        TFCI-Coding,
    puncturing-Limit   Puncturing-Limit,
    dl-DPCH-InformationList-RL-SetupReqTDD          DL-DPCH-InformationList-RL-SetupReqTDD    OPTIONAL
}

DL-DPCH-InformationList-RL-SetupReqTDD ::= SEQUENCE (SIZE (1..maxnoofDPCHs)) OF
    ProtocolIE-Container{{DL-DPCH-Information-RL-SetupReqTDDItemIE }}

DL-DPCH-Information-RL-SetupReqTDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-Information-RL-SetupReqTDDItem CRITICALITY ignore TYPE DL-DPCH-Information-RL-SetupReqTDDItem PRESENCE mandatory},
    ...
}

DL-DPCH-Information-RL-SetupReqTDDItem ::= SEQUENCE {
    dpch-ID          DPCH-ID,
    tdd-ChannelisationCode    TDD-ChannelisationCode,
    burstType          BurstType,
    midambleShift      MidambleShift,
    timeSlot           TimeSlot,
    tdd-PhysicalChannelOffset    TDD-PhysicalChannelOffset,
    repetitionPeriod    RepetitionPeriod,
    repetitionLength    RepetitionLength,
    tFCI-Presence        TFCI-Presence
}

DCH-InformationList-RL-SetupReqTDD ::= SEQUENCE (SIZE (0+..maxnoofDPCHs)) OF
    ProtocolIE-Container{{DCH-Information-RL-SetupReqTDDItemIE }}

DCH-Information-RL-SetupReqTDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DCH-Information-RL-SetupReqTDDItem CRITICALITY ignore TYPE DCH-Information-RL-SetupReqTDDItem PRESENCE mandatory},
    ...
}

DCH-Information-RL-SetupReqTDDItem ::= SEQUENCE {
    ul-CCTrCH-ID          UL-CCTrCH-ID,
    dl-CCTrCH-ID          DL-CCTrCH-ID,
    dCH-CombinationIndication    DCH-CombinationIndication    OPTIONAL,
    ul-TransportFormatSet    TransportFormatSet,
    dl-TransportFormatSet    TransportFormatSet,
    frameHandlingPriority    FrameHandlingPriority,
    payloadCRC-PresenceIndicator    PayloadCRC-PresenceIndicator,
    ul-FP-Mode              UL-FP-Mode,
    toAWE                    ToAWE,
}

```

```
toAWS          ToAWS
}

DSCH-InformationList-RL-SetupReqTDD ::= SEQUENCE (SIZE (1..maxnoofDSCHs)) OF
  ProtocolIE-Container{{DSCH-Information-RL-SetupReqTDDItemIE}}

DSCH-Information-RL-SetupReqTDDItemIE NBAP-PROTOCOL-IES ::= {
  {ID id-DCH-Information-RL-SetupReqTDDItem   CRITICALITY ignore   TYPE      DSCH-Information-RL-SetupReqTDDItem   PRESENCE mandatory}
  ...
}

DSCH-Information-RL-SetupReqTDDItem ::= SEQUENCE {
  dSCH-ID          DSCH-ID,
  cTrCH-ID         CTrCH-ID,
  transportFormatSet      TransportFormatSet,
  frameHandlingPriority   FrameHandlingPriority,
  toAWE            ToAWE,
  toAWS           ToAWS
}

USCH-InformationList-RL-SetupReqTDD ::= SEQUENCE (SIZE (1..maxnoofUSCHs)) OF
  ProtocolIE-Container{{USCH-Information-RL-SetupReqTDDItemIE}}

USCH-Information-RL-SetupReqTDDItemIE NBAP-PROTOCOL-IES ::= {
  {ID id-USCH-Information-RL-SetupReqTDDItem   CRITICALITY ignore   TYPE      USCH-Information-RL-SetupReqTDDItem   PRESENCE mandatory}
  ...
}

USCH-Information-RL-SetupReqTDDItem ::= SEQUENCE {
  uSCH-ID          USCH-ID,
  cTrCH-ID         CTrCH-ID,
  transportFormatSet      TransportFormatSet
}

RL-Information-RL-SetupReqTDD ::= SEQUENCE {
  rL-ID          RL-ID,
  c-ID           C-ID,
  tdd-PhysicalChannelOffset      TDD-PhysicalChannelOffset,
  initialDL-transmissionPower     DL-Power,
  maximumDL-power                 DL-Power,
  minimumDL-power                 DL-Power
}

-- *****
--
-- 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-setupResFDD    CRITICALITY ignore  TYPE RL-InformationResponseList-RL-setupResFDD    PRESENCE mandatory  }|
}
{ ID id-CriticalityDiagnostic            CRITICALITY ignore  TYPE CriticalityDiagnostic            PRESENCE optional
},
...
}

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

RL-InformationResponseList-RL-setupResFDD ::= SEQUENCE (SIZE (1..maxnoofRLs)) OF
    ProtocolIE-Container{{RL-InformationResponse-RL-setupResFDDItemIE }}

RL-InformationResponse-RL-setupResFDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponse-RL-setupResFDDItem    CRITICALITY ignore  TYPE RL-InformationResponse-RL-setupResFDDItem    PRESENCE mandatory  },
    ...
}

RL-InformationResponse-RL-setupResFDDItem ::= SEQUENCE {
    rL-ID                RL-ID,
    ul-InterferenceLevel    UL-InterferenceLevel,
    diversityIndication    DiversityIndication OPTIONAL,
-- This IE is present only if the RL is not the first one in the RL Information
    dSCH-InformationResponse-RL-setupResFDD    DSCH-InformationResponse-RL-setupResFDD    OPTIONAL,
    sSDT-SupportIndicator    SSDT-SupportIndicator
}

DiversityIndication ::= ENUMERATED {
    combining            CombiningItem,
    non-Combining            Non-CombiningItem
}

CombiningItem ::= SEQUENCE {
    dCH-ID                DCH-ID
}

Non-CombiningItem ::= SEQUENCE {

```

```

dCH-InformationResponse-RL-setupResFDD                DCH-InformationResponse-RL-setupResFDD                OPTIONAL
}

DCH-InformationResponseList-RL-setupResFDD ::= SEQUENCE (SIZE (1..maxnoofDCHs)) OF
  ProtocolIE-Container{{DCH-InformationResponse-RL-setupResFDDItemIE }}

DCH-InformationResponse-RL-setupResFDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-DSCH-InformationResponse-RL-setupResFDDItem CRITICALITY ignore TYPE DCH-InformationResponse-RL-setupResFDDItem PRESENCE mandatory
  },
  ...
}

DCH-InformationResponse-RL-setupResFDDItem ::= SEQUENCE {
  dCH-ID                DCH-ID,
  bindingID             BindingID,
  transportLayerAddress TransportLayerAddress
}

DSCH-InformationResponseList-RL-setupResFDD ::= SEQUENCE (SIZE (1..numofDSCH)) OF
  ProtocolIE-Container{{DSCH-InformationResponse-RL-setupResFDDItemIE }}

-- ** TODO **
numofDSCH INTEGER ::= 10

DSCH-InformationResponse-RL-setupResFDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-DSCH-InformationResponse-RL-setupResFDDItem CRITICALITY ignore TYPE DSCH-InformationResponse-RL-setupResFDDItem
  PRESENCE mandatory
  },
  ...
}

DSCH-InformationResponse-RL-setupResFDDItem ::= SEQUENCE {
  dSCH-ID                DSCH-ID,
  bindingID             BindingID,
  transportLayerAddress TransportLayerAddress
}

-- *****
--
-- RADIO LINK SETUP RESPONSE TDD
--
-- *****

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

```



```

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-Information-RL-setupResTDD   CRITICALITY ignore  TYPE RL-Information-RL-setupResTDD   PRESENCE mandatory  }|
  {ID id-DSCH-InformationResponseList-RL-setupResTDD CRITICALITY ignore  TYPE DSCH-InformationResponseList-RL-setupResTDD PRESENCE optional
  }|
  {ID id-USCH-InformationResponseList-RL-setupResTDD CRITICALITY ignore  TYPE USCH-InformationResponseList-RL-setupResTDD PRESENCE optional
  }|
  { ID id-CriticalityDiagnostic            CRITICALITY ignore  TYPE CriticalityDiagnostic            PRESENCE optional
  },
  ...
}

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

RL-InformationResponseList-RL-setupResTDD ::= SEQUENCE {
  rL-ID                RL-ID,
  ul-InterferenceLevel UL-InterferenceLevel,
  dCH-InformationResponseList-RL-setupResTDD DCH-InformationResponseList-RL-setupResTDD
}

DCH-InformationResponseList-RL-setupResTDD ::= SEQUENCE (SIZE (1..maxnumofDCHs)) OF ProtocolIE-Container{{DCH-InformationResponse-RL-setupResTDDItemIE}}

DCH-InformationResponse-RL-setupResFDDItemIE NBAP-PROTOCOL-IES ::= {
  { I D id-DCH-InformationResponse-RL-setupResTDDItem CRITICALITY ignore  TYPE DCH-InformationResponse-RL-setupResTDDItem PRESENCE
  mandatory
  },
  ...
}

DCH-InformationResponse-RL-setupResTDDItem ::= SEQUENCE {
  dCH-ID                DCH-ID,
  bindingID             BindingID,
  transportLayerAddress TransportLayerAddress
}

DSCH-InformationResponseList-RL-SetupResTDD ::= SEQUENCE (SIZE (1..maxnoofDSCHs)) OF ProtocolIE-Container{{DSCH-InformationResponse-RL-SetupResTDDItemIE}}

DSCH-Informationresponse-RL-SetupResTDDItemIE NBAP-PROTOCOL-IES ::= {
  {ID id-DCH-InformationResponse-RL-SetupResTDDItem CRITICALITY ignore  TYPE DSCH-Informationresponse-RL-SetupReqTDDItem PRESENCE mandatory
  },
  ...
}

```

```

DSCH-Information-RL-SetupReqTDDItem ::= SEQUENCE {
    dSCH-ID          DSCH-ID,
    binding-ID       Binding-ID,
    transport-Layer-Address Transport-Layer-Address
}

USCH-InformationResponseList-RL-SetupResTDD ::= SEQUENCE (SIZE (1..maxnoofUSCHs)) OF ProtocolIE-Container{{USCH-InformationResponse-RL-SetupResTDDItemIE}}

USCH-Informationresponse-RL-SetupReqTDDItemIE NBAP-PROTOCOL-IES ::= {
    {ID id-USCH-InformationResponse-RL-SetupReqTDDItem CRITICALITY ignore TYPE USCH-InformationResponse-RL-SetupReqTDDItem PRESENCE mandatory}
}
...
}

USCH-InformationResponse-RL-SetupReqTDDItem ::= SEQUENCE {
    uSCH-ID          USCH-ID,
    binding-ID       Binding-ID,
    transport-Layer-Address Transport-Layer-Address
}

-- *****
--
-- 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 mandatory }|
    { ID id-CommunicationControlPortID CRITICALITY ignore TYPE CommunicationControlPortID PRESENCE mandatory }|
    { ID id-Unsuccessful-RL-InformationResponseList-RL-SetupFailFDD CRITICALITY ignore TYPE Unsuccessful-RL-InformationResponseList-RL-SetupFailFDD PRESENCE mandatory }|
    { ID id-Successful-RL-InformationResponseList-RL-SetupFailFDD CRITICALITY ignore TYPE Successful-RL-InformationResponseList-RL-SetupFailFDD PRESENCE optional }|
    { ID id-CriticalityDiagnostic CRITICALITY ignore TYPE CriticalityDiagnostic PRESENCE optional }|
    ...
}

```

```
}  
  
RadioLinkSetupFailureFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {  
    ...  
}  
  
Unsuccessful-RL-InformationResponseList-RL-SetupFailFDD ::= SEQUENCE (SIZE (1..maxnoofRLs)) OF  
ProtocolIE-Container {{Unsuccessful-RL-InformationResponse-RL-SetupFailFDDItemIE }}  
  
Unsuccessful-RL-InformationResponse-RL-SetupFailFDDItemIE NBAP-PROTOCOL-IES ::= {  
    { ID id-Unsuccessful-RL-InformationResponse-RL-SetupFailFDDItem  
      CRITICALITY ignore TYPE Unsuccessful-RL-InformationResponse-RL-SetupFailFDDItem  
      PRESENCE optional },  
    ...  
}  
  
Unsuccessful-RL-InformationResponse-RL-SetupFailFDDItem ::= SEQUENCE {  
    rL-ID RL-ID,  
    cause Cause  
}  
  
Successful-RL-InformationResponseList-RL-SetupFailFDD ::= SEQUENCE (SIZE (1.. maxnoofRLs-1)) OF  
ProtocolIE-Container {{Successful-RL-InformationResponse-RL-SetupFailFDDItemIE }}  
  
Successful-RL-InformationResponse-RL-SetupFailFDDItemIE NBAP-PROTOCOL-IES ::= {  
    { ID id-Successful-RL-InformationResponse-RL-SetupFailFDDItem  
      CRITICALITY ignore TYPE Successful-RL-InformationResponse-RL-SetupFailFDDItem  
      PRESENCE optional },  
    ...  
}  
  
Successful-RL-InformationResponse-RL-SetupFailFDDItem ::= SEQUENCE {  
    rL-ID RL-ID,  
    ul-InterferenceLevel UL-InterferenceLevel,  
    diversityIndication DiversityIndication,  
    dSCH-InformationResponseList-RL-SetupFailFDD DSCH-InformationResponseList-RL-SetupFailFDD OPTIONAL,  
    sSDT-SupportIndicator SSdT-SupportIndicator  
}  
  
DiversityIndicationRL-SetupFailFDD ::= ENUMERATED {  
    combining Combining-RL-SetupFailFDD,  
    non-combining Non-CombiningRL-SetupFailFDD  
}  
  
Combining-RL-SetupFailFDD ::= SEQUENCE {  
    rL-ID RL-ID  
}
```

```

Non-Combining-RL-SetupFailFDD ::= SEQUENCE {
    dCH-InformationResponseList-RL-SetupFailFDD
    DCH-InformationResponseList-RL-SetupFailFDD OPTIONAL
}

DCH-InformationResponseList-RL-SetupFailFDD ::= SEQUENCE (SIZE (1.. maxnofDCHs)) OF
    ProtocolIE-Container{ {DCH-InformationResponse-RL-SetupFailFDDItemIE } }

DCH-InformationResponse-RL-SetupFailFDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationResponse-RL-SetupFailFDDItem CRITICALITY          ignore TYPE DCH-InformationResponse-RL-SetupFailFDDItem PRESENCE
      mandatory
    },
    ...
}

DCH-InformationResponse-RL-SetupFailFDDItem ::= SEQUENCE {
    dCH-ID          DCH-ID,
    bindingID       BindingID,
    transportLayerAddress TransportLayerAddress
}

DSCH-InformationResponseList-RL-SetupFailFDD ::= SEQUENCE (SIZE (1..numofDSCH)) OF
    ProtocolIE-Container{ {DSCH-InformationResponse-RL-SetupFailFDDItemIE } }

DSCH-InformationResponse-RL-SetupFailFDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DSCH-InformationResponse-RL-SetupFailFDDItem CRITICALITY          ignore TYPE DSCH-InformationResponse-RL-SetupFailFDDItem
      PRESENCE mandatory
    },
    ...
}

DSCH-InformationResponse-RL-SetupFailFDDItem ::= SEQUENCE {
    dSCH-ID          DSCH-ID,
    bindingID       BindingID,
    transportLayerAddress TransportLayerAddress
}

-- *****
--
-- RADIO LINK SETUP FAILURE TDD
--
-- *****

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

RadioLinkSetupFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-CRNC-CommunicationContextID CRITICALITY ignore TYPE CRNC-CommunicationContextID PRESENCE mandatory } |

```

```

    { ID id-Unsuccessful-RL-InformationResponseItem-RL-SetupFailTDD CRITICALITY ignore
TYPE      Unsuccessful-RL-InformationResponseItem-RL-SetupFailTDD
PRESENCE  mandatory
    }|
    { ID id-CriticalityDiagnostic          CRITICALITY ignore          TYPE CriticalityDiagnostic          PRESENCE optional
      },
      ...
    }

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

Unsuccessful-RL-InformationResponseItem-RL-SetupFailTDD ::= SEQUENCE {
    rL-ID          RL-ID,
    cause          Cause
}

-- *****
--
-- 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 ignore          TYPE NodeB-CommunicationContextID          PRESENCE mandatory } |
    { ID id-RL-InformationList-RL-Add-ReqFDD          CRITICALITY ignore          TYPE RL-InformationList-RL-Add-ReqFDD          PRESENCE optional },
    ...
}

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

RadioLinkAdditionRequestFDD-PrivateExtensions NBAP-PRIVATE-EXTENSION ::= {
    ...
}

RL-InformationList-RL-Add-ReqFDD ::= SEQUENCE (SIZE (1..maxnoofRL-1)) OF
    ProtocolIE-Container {{RL-informationList-RL-Add-ReqFDDItemIE }}

RL-InformationList-RL-Add-ReqFDDItemIE NBAP-PROTOCOL-IES ::= {

```

```

    { ID id-RL-InformationList-RL-Add-ReqFDDItem    CRITICALITY ignore      TYPE RL-InformationList-RL-Add-ReqFDDItem PRESENCE mandatory },
    ...
}

RL-InformationList-RL-Add-ReqFDDItem ::= SEQUENCE {
    rL-ID          RL-ID,
    c-ID          C-ID,
    frameOffset   FrameOffset,
    chipOffset    ChipOffset,
    diversityControlField DiversityControlField,
    dl-CodeInformationList-RL-Add-ReqFDD          DL-CodeInformationList-RL-Add-ReqFDD
    initialDL-TransmissionPower DL-Power,
    maximumDL-Power          DL-Power          OPTIONAL,
    minimumDL-Power         DL-Power          OPTIONAL,
    sSDT-CellIdentity       SSdT-CellIdentity OPTIONAL
}

DL-CodeInformationList-RL-Add-ReqFDD ::= SEQUENCE (SIZE (1..maxnoofDLCodes)) OF
    ProtocolIE-Container {{ DL-CodeInformationList-RL-Add-ReqFDDItemIE }}

DL-CodeInformationList-RL-Add-ReqFDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DL-CodeInformationList-RL-Add-ReqFDD    CRITICALITY ignore      TYPE DL-CodeInformationList-RL-Add-ReqFDD PRESENCE mandatory },
    ...
}

DL-CodeInformationList-RL-Add-ReqFDD ::= SEQUENCE {
    scramblingCode          ScramblingCode,
    fdd-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber
}

-- *****
--
-- 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 ignore      TYPE NodeB-CommunicationContextID          PRESENCE mandatory }|
    { ID id-UL-CCTrCHInformationList-RL-Add-ReqTDD CRITICALITY ignore      TYPE UL-CCTrCHInformationList-RL-Add-ReqTDD PRESENCE optional }|
    { ID id-DL-CCTrCHInformationList-RL-Add-ReqTDD CRITICALITY ignore      TYPE DL-CCTrCHInformationList-RL-Add-ReqTDD PRESENCE optional }|
    { ID id-RL-Information-RL-Add-ReqTDD          CRITICALITY ignore      TYPE RL-Information-RL-Add-ReqTDD          PRESENCE mandatory },
    ...
}

```


~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)" X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)" X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)" X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~
~~3G TS 25.433 V3.0.0 (2000-01)~~
~~TS 25.433 version 3.0.0 Release 1999~~

```
}  
  
DL-CCTrCHInformationList-RL-Add-ReqTDDItem ::= SEQUENCE {  
    cCTrCH-ID          CCTrCH-ID,  
    dl-DPCH-InformationList-RL-Add-ReqTDD    DL-DPCH-InformationList-RL-Add-ReqTDD    OPTIONAL  
}  
  
DL-DPCH-InformationList-RL-Add-ReqTDD ::= SEQUENCE (SIZE (1..maxnoofDPCHs)) OF  
    ProtocolIE-Container {{ DL-DPCH-InformationList-RL-Add-ReqTDDItemIE }}  
  
DL-DPCH-InformationList-RL-Add-ReqTDDItemIE NBAP-PROTOCOL-IES ::= {  
    { ID id-DL-DPCH-InformationList-RL-Add-ReqTDDItem    CRITICALITY    ignore    TYPE    DL-DPCH-InformationList-RL-Add-ReqTDDItem    PRESENCE  
      mandatory  
    },  
    ...  
}  
  
DL-DPCH-InformationList-RL-Add-ReqTDDItem ::= SEQUENCE {  
    dPCH-ID          DPCH-ID,  
    tdd-ChannelisationCode    TDD-ChannelisationCode,  
    burstType        BurstType,  
    midambleShift    MidambleShift,  
    timeSlot         TimeSlot,  
    tdd-PhysicalChannelOffset    TDD-PhysicalChannelOffset,  
    repetitionPeriod    RepetitionPeriod,  
    repetitionLength    RepetitionLength,  
    tFCI-Presence      TFCI-Presence  
}  
  
RL-informationItem-RL-Add-ReqTDD ::= SEQUENCE {  
    rL-ID          RL-ID,  
    c-ID          C-ID,  
    cFN          CFN    OPTIONAL,  
    frameOffset    FrameOffset,  
    diversityControlField    DiversityControlField,  
    initial-DL-Transmission-Power    DL-Power    OPTIONAL,  
    maximumDL-Power    DL-Power    OPTIONAL,  
    minimumDL-Power    DL-Power    OPTIONAL  
}  
  
-- *****  
--  
-- 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-ResponseInformationList-RL-Add-ResFDD           CRITICALITY ignore      TYPE      RL-ResponseInformationList-RL-Add-ResFDD
    PRESENCE mandatory                                     } |
  { ID id-CriticalityDiagnostic CRITICALITY ignore           TYPE CriticalityDiagnostic PRESENCE optional
  },
  ...
}

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

RL-ResponseInformationList-RL-Add-ResFDD ::= SEQUENCE (SIZE (1..maxnoofRL-1)) OF
  ProtocolIE-Container { {RL-ResponseInformationList-RL-Add-ResFDDItemIE }

RL-ResponseInformation-RL-Add-ResFDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-RL-ResponseInformation-RL-Add-ResFDDItem           CRITICALITY ignore      TYPE RL-ResponseInformation-RL-Add-ResFDDItem
    PRESENCE mandatory                                     } |
  ...
}

RL-ResponseInformation-RL-Add-ResFDDItem ::= SEQUENCE {
  rL-ID              RL-ID,
  ul-InterferenceLevel  UL-InterferenceLevel,
  diversityIndication  DiversityIndication-RL-Add-ResFDD,
  sSDT-SupportIndicator  SSdT-SupportIndicator
}

DiversityIndication-RL-Add-ResFDD ::= ENUMERATED {
  combining          Combining-RL-Add-ResFDD,
  non-combining      Non-Combining-RL-Add-ResFDD
}

Combining-RL-Add-ResFDD ::= SEQUENCE {
  rL-ID              RL-ID
}

Non-Combining-RL-Add-ResFDD ::= SEQUENCE {
  dCH-InformationResponseList-RL-Add-ResFDD
  DCH-InformationResponseList-RL-Add-ResFDD
}

DCH-InformationResponseList-RL-Add-ResFDD ::= SEQUENCE (SIZE (1..maxnoofRL-1)) OF
```

```
ProtocolIE-Container{{DCH-InformationResponseList-RL-Add-ResFDD ItemIE }}

DCH-InformationResponseList-RL-Add-ResFDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-DCH-InformationResponseList-RL-Add-ResFDDItem          CRITICALITY ignore          TYPE DCH-InformationResponseList-RL-Add-ResFDDItem          PRESENCE mandatory
  },
  ...
}

DCH-InformationResponseList-RL-Add-ResFDDItem ::= SEQUENCE {
  dCH-ID          DCH-ID,
  bindingID       BindingID,
  transportLayerAddress      TransportLayerAddress
}

-- *****
--
-- 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-Communication-Context-ID      CRITICALITY ignore          TYPE CRNC-Communication-Context-ID PRESENCE mandatory }|
  { ID id-RL-Information-RL-Add-RespTDD      CRITICALITY ignore          TYPE RL-Information-RL-Add-RespTDD PRESENCE mandatory }|
  { ID id-CriticalityDiagnostic              CRITICALITY ignore          TYPE CriticalityDiagnostic          PRESENCE optional
  },
  ...
}

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

RL-Information-RL-Add-Resp ::= SEQUENCE {
  rL-ID          RL-ID,
  ul-InterferenceLevel      UL-InterferenceLevel,
  diversityIndication      DiversityIndication-RL-Add-RespTDD,
}

DiversityIndication-RL-Add-RespTDD ::= ENUMERATED {
  combining          Combining-RL-Add-RespTDD,
  non-Combining      Non-Combining-RL-Add-RespTDD
}
```

```

}

Combining-RL-Add-RespTDD ::= SEQUENCE {
    rL-ID          RL-ID
}

Non-Combining-RL-Add-RespTDD ::= SEQUENCE {
    dCH-InformationResponseList DCH-InformationResponseList-RL-Add-RespTDD OPTIONAL,
    dSCH-InformationResponseList DSCH-InformationResponseList-RL-Add-RespTD OPTIONAL,
    uSCH-InformationResponseList USCH-InformationResponseList-RL-Add-RespTDD OPTIONAL
}

DCH-InformationResponseList-RL-Add-RespTDD ::= SEQUENCE (SIZE (1..maxnoofDCHs)) OF
    ProtocolIE-Container {{DCH-InformationResponseList-RL-Add-RespTDDItemIE}}

DCH-InformationResponseList-RL-Add-RespTDDItemIE NBAP-PROTOCOL-IES ::= {
    {ID id-DCH-InformationResponseList-RL-Add-RespTDDItem CRITICALITY ignore TYPE DCH-InformationResponseList-RL-Add-RespTDDItem PRESENCE mandatory
},
    ...
}

DCH-InformationResponseList-RL-Add-RespTDDItem ::= SEQUENCE {
    dCH-ID          DCH-ID,
    binding-ID      Binding-ID,
    transport-Layer-Address Transport-Layer-Address
}

DSCH-InformationResponseList-RL-Add-RespTDD ::= SEQUENCE (SIZE (1..maxnoofDSCHs)) OF
    ProtocolIE-Container {{DSCH-InformationResponseList-RL-Add-RespTDDItemIE}}

DSCH-InformationResponseList-RL-Add-RespTDDItemIE NBAP-PROTOCOL-IES ::= {
    {ID id-DSCH-InformationResponseList-RL-Add-RespTDDItem CRITICALITY ignore TYPE DSCH-InformationResponseList-RL-Add-RespTDDItem PRESENCE mandatory
},
    ...
}

DSCH-InformationResponseList-RL-Add-RespTDDItem ::= SEQUENCE {
    dSCH-ID          DSCH-ID,
    binding-ID      Binding-ID,
    transport-Layer-Address Transport-Layer-Address
}

USCH-InformationResponseList-RL-Add-RespTDD ::= SEQUENCE (SIZE (1..maxnoofUSCHs)) OF
    ProtocolIE-Container {{USCH-InformationResponseList-RL-Add-RespTDDItemIE}}

USCH-InformationResponseList-RL-Add-RespTDDItemIE NBAP-PROTOCOL-IES ::= {
    {ID id-USCH-InformationResponseList-RL-Add-RespTDDItem CRITICALITY ignore TYPE USCH-InformationResponseList-RL-Add-RespTDDItem PRESENCE mandatory
},
    ...
}

```

```

...
}

USCH-InformationResponseList-RL-Add-RespTDDItem ::= SEQUENCE {
    uSCH-ID          USCH-ID,
    binding-ID       Binding-ID,
    transport-Layer-Address Transport-Laer-Address
}

-- *****
--
-- 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-Unsuccessful-RL-InformationResponseList-RL-Add-FailFDD      CRITICALITY ignore TYPE Unsuccessful-RL-
InformationResponseList-RL-Add-FailFDD      PRESENCE mandatory
} |
    { ID id-Successful-RL-InformationResponseList-RL-Add-FailFDD      CRITICALITY ignore TYPE Successful-RL-
InformationResponseList-RL-Add-FailFDD      PRESENCE mandatory
} |
    { ID id-CriticalityDiagnostic            CRITICALITY ignore TYPE CriticalityDiagnostic      PRESENCE optional
    },
    ...
}

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

Unsuccessful-RL-InformationResponseList-RL-Add-FailFDD ::= SEQUENCE (SIZE (1..maxnoofRL-1)) OF
    ProtocolIE-Container    {{Unsuccessful-RL-InformationResponseList-RL-Add-FailFDDItemIE }}

Unsuccessful-RL-InformationResponseList-RL-Add-FailFDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-Unsuccessful-RL-InformationResponseList-RL-Add-FailFDDItem      CRITICALITY ignore TYPE Unsuccessful-RL-
InformationResponseList-RL-Add-FailFDDItem      PRESENCE mandatory
    },
    ...
}

Unsuccessful-RL-InformationResponseList-RL-Add-FailFDDItem ::= SEQUENCE {

```

```

rL-ID          RL-ID,
cause          Cause
}

Successful-RL-InformationResponseList-RL-Add-FailFDD ::= SEQUENCE (SIZE (1..maxnoofRL-2)) OF
  ProtocolIE-Container {{Successful-RL-InformationResponse-RL-Add-FailFDD ItemIE }}

Successful-RL-InformationResponse-RL-Add-FailFDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-Successful-RL-InformationResponse-RL-Add-FailFDDItem          CRITICALITY ignore          TYPE Successful-RL-InformationResponse-
RL-Add-FailFDDItem          PRESENCE          mandatory          },
  ...
}

Successful-RL-InformationResponse-RL-Add-FailFDDItem ::= SEQUENCE {
  rL-ID          RL-ID,
  ul-InterferenceLevel          UL-InterferenceLevel,
  diversityIndication          DiversityIndication-RL-Add-FailFDD,
  sSDT-SupportIndicator          SSDT-SupportIndicator
}

DiversityIndication-RL-Add-FailFDD ::= ENUMERATED {
  combining          Combining-RL-Add-FailFDD,
  non-combining          Non-Combining-RL-Add-FailFDD
}

Combining-RL-Add-FailFDD ::= SEQUENCE {
  rL-ID          RL-ID
}

Non-Combining-RL-Add-FailFDD ::= SQUENCE {
  dCH-InformationResponseList          DCH-InformationResponseList-RL-Add-FailFDD
}

DCH-InformationResponseList-RL-Add-FailFDD ::= SEQUENCE (SIZE (1..maxnoofDCH)) OF ProtocolIE-Container {{DCH-InformationResponse-RL-Add-FailFDDItemIE
}}

DCH-InformationResponse-RL-Add-FailFDDItemIE NBAP-PROTOCOL-IES ::= {
  { I D id-DCH-InformationResponse-RL-Add-FailFDDItem          CRITICALITY ignore          TYPE DCH-InformationResponse-RL-Add-FailFDDItemPRESENCE          mandatory
},
  ...
}

DCH-InformationResponse-RL-Add-FailFDDItem ::= SEQUENCE {
  dCH-ID          DCH-ID,
  bindingID          BindingID,
  transportLayerAddress          TransportLayerAddress
}

-- *****

```

```
--  
-- RADIO LINK ADDITION FAILURE TDD  
--  
-- *****  
  
RadioLinkAdditionFailureTDD ::= SEQUENCE {  
  protocolIEs           ProtocolIE-Container    {{RadioLinkAdditionFailureTDD-IEs}},  
  protocolExtensions    ProtocolExtensionContainer {{RadioLinkAdditionFailureTDD-Extensions}} OPTIONAL,  
  ...  
}  
  
RadioLinkAdditionFailureTDD-IEs NBAP-PROTOCOL-IES ::= {  
  { ID id-Unsuccessful-RL-InformationResponse CRITICALITY ignore TYPE Unsuccessful-RL-InformationResponse PRESENCE mandatory } |  
  { ID id-CriticalityDiagnostic CRITICALITY ignore TYPE CriticalityDiagnostic PRESENCE optional } |  
  ,  
  ...  
}  
  
RadioLinkAdditionFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {  
  ...  
}  
  
Unsuccessful-RL-InformationResponse ::= SEQUENCE {  
  rL-ID RL-ID,  
  cause Cause  
}  
  
-- *****  
--  
-- RADIO LINK RECONFIGURATION PREPARE FDD  
--  
-- *****  
  
RadioLinkReconfigurationPrepareFDD ::= SEQUENCE {  
  protocolIEs           ProtocolIE-Container    {{RadioLinkReconfigurationPrepareFDD-IEs}},  
  protocolExtensions    ProtocolExtensionContainer {{RadioLinkReconfigurationPrepareFDD-Extensions}} OPTIONAL,  
  ...  
}  
  
RadioLinkReconfigurationPrepareFDD-IEs NBAP-PROTOCOL-IES ::= {  
  { ID id-NodeB-CommunicationContextID CRITICALITY ignore TYPE NodeB-CommunicationContextID PRESENCE mandatory } |  
  { ID id-UL-DPCH-Information-RL-ReconfPrepFDD CRITICALITY ignore TYPE UL-DPCH-Information-RL-ReconfPrepFDD PRESENCE optional } |  
  { ID id-DL-DPCH-Information-RL-ReconfPrepFDD CRITICALITY ignore TYPE DL-DPCH-Information-RL-ReconfPrepFDD PRESENCE optional } |  
  { ID id-DCH-ModifyList-RL-ReconfPrepFDD CRITICALITY ignore TYPE DCH-ModifyList-RL-ReconfPrepFDD PRESENCE optional } |  
  { ID id-DCH-AddList-RL-ReconfPrepFDD CRITICALITY ignore TYPE DCH-AddList-RL-ReconfPrepFDD PRESENCE optional } |  
  { ID id-DCH-DeleteList-RL-ReconfPrepFDD CRITICALITY ignore TYPE DCH-DeleteList-RL-ReconfPrepFDD PRESENCE optional } |  
  { ID id-DSCH-ModifyItem-RL-ReconfPrepFDD CRITICALITY ignore TYPE DSCH-ModifyItem-RL-ReconfPrepFDD PRESENCE optional } |  
}
```

~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)"~~ X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)" X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)" 3G TS 25.433 V3.0.0 (2000-01)
~~TS 25.433 version 3.0.0 Release 1999~~

```
{ ID id-DSCH-AddItem-RL-ReconfPrepFDD      CRITICALITY ignore      TYPE DSCH-AddItem-RL-ReconfPrepFDD  PRESENCE optional } |
{ ID id-DSCH-DeleteItem-RL-ReconfPrepFDD    CRITICALITY ignore      TYPE DSCH-DeleteItem-RL-ReconfPrepFDD  PRESENCE optional } |
{ ID id-RadioLinkInformationList-RL-ReconfPrepFDD  CRITICALITY ignore      TYPE RadioLinkInformationList-RL-ReconfPrepFDD  PRESENCE optional
},
...
}

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

UL-DPCH-Information-RL-ReconfPrepFDD ::= SEQUENCE {
ul-ScramblingCode           UL-ScramblingCode           OPTIONAL,
minUL-ChannelisationCodeLength  MinUL-ChannelisationCodeLength  OPTIONAL,
maxNrOfUL-DPDCHs            MaxNrOfUL-DPDCHs            OPTIONAL
-- This IE is present only if minUL-ChannelisationCodeLength equals to 4
ul-PunctureLimit           UL-PunctureLimit           OPTIONAL,
tFCS                       TFCS                       OPTIONAL,
ul-DPCCH-SlotFormat         UL-DPCCH-SlotFormat         OPTIONAL,
sSDT-CellIdentityLength     SSDT-CellIdentityLength     OPTIONAL,
s-FieldLength              S-FieldLength              OPTIONAL,
-- The following information element is needed if there is a need to add Ies      with specific criticality.
}

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,
dTX-InsertionPoint         DTX-InsertionPoint         OPTIONAL,
...
}

DCH-ModifyList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxnoofdCHs)) OF
ProtocolIE-Container { {DCH-Modify-RL-ReconfPrepFDDItemIE } }

DCH-Modify-RL-ReconfPrepFDDItemIE NBAP-PROTOCOL-IES ::= {
{ ID id-DCH-Modify-RL-ReconfPrepFDDItem  CRITICALITY ignore      TYPE DCH-Modify-RL-ReconfPrepFDDItem  PRESENCE optional  },
...
}

DCH-Modify-RL-ReconfPrepFDDItem ::= SEQUENCE {
dCH-ID                   DCH-ID,
ul-TransportFormatSet    TransportFormatSet  OPTIONAL,
dl-TransportFormatSet    TransportFormatSet  OPTIONAL,
frameHandlingPriority     FrameHandlingPriority  OPTIONAL,
ul-FP-Mode              UL-FP-Mode          OPTIONAL,
toAWS                   ToAWS              OPTIONAL,
}
```

```
toAWE                ToAWE                OPTIONAL
}

DCH-AddList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxnoofDCHs)) OF
  ProtocolIE-Container {{DCH-Add-RL-ReconfPrepFDDItemIE }}

DCH-Add-RL-ReconfPrepFDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-DCH-Add-RL-ReconfPrepFDDItem  CRITICALITY ignore      TYPE DCH-Add-RL-ReconfPrepFDDItem  PRESENCE optional  },
  ...
}

DCH-Add-RL-ReconfPrepFDDItem ::= SEQUENCE {
  dCH-ID                DCH-ID,
  dCH-CombinationIndication  DCH-CombinationIndication  OPTIONAL,
  rLC-Mode              RLC-Mode,
  ul-TransportFormatSet  TransportFormatSet,
  dl-TransportFormatSet  TransportFormatSet,
  frameHandlingPriority  FrameHandlingPriority,
  payloadCRC-PresenceIndicator  PayloadCRC-PresenceIndicator,
  ul-FP-Mode            UL-FP-Mode,
  toAWS                ToAWS,
  toAWE                ToAWE
}

DCH-DeleteList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxnoofDCHs)) OF
  ProtocolIE-Container {{DCH-Delete-RL-ReconfPrepFDDItemIE }}

DCH-Delete-RL-ReconfPrepFDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-DCH-Delete-RL-ReconfPrepFDDItem  CRITICALITY ignore      TYPE DCH-Delete-RL-ReconfPrepFDDItem  PRESENCE optional  },
  ...
}

DCH-Delete-RL-ReconfPrepFDDItem ::= SEQUENCE {
  dCH-ID                DCH-ID
}

DSCH-ModifyItem-RL-ReconfPrepFDD ::= SEQUENCE {
  dl-TransportFormatSet  TransportFormatSet  OPTIONAL,
  rL-ID                 RL-ID  OPTIONAL,
  frameHandlingPriority  FrameHandlingPriority  OPTIONAL,
  toAWS                ToAWS  OPTIONAL,
  toAWE                ToAWE  OPTIONAL
}

DSCH-AddItem-RL-ReconfPrepFDD ::= SEQUENCE {
  dl-TransportFormatSet  TransportFormatSet,
  rL-ID                 RL-ID,
  frameHandlingPriority  FrameHandlingPriority,
  toAWS                ToAWS,
```



```

toAWE                ToAWE
}

DSCH-DeleteItem-RL-ReconfPrepFDD ::= SEQUENCE {
    rL-ID              RL-ID
}

RadioLinkInformationList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxnoofRLs)) OF
    ProtocolIE-Container {{RadioLinkInformation-RL-ReconfPrepFDDItemIE}}

RadioLinkInformation-RL-ReconfPrepFDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-RadioLinkInformation-RL-ReconfPrepFDDItem CRITICALITY ignore TYPE RadioLinkInformation-RL-ReconfPrepFDDItem PRESENCE
    mandatory},
    ...
}

RadioLinkInformation-RL-ReconfPrepFDDItem ::= SEQUENCE {
    rL-ID              RL-ID,
    dl-CodeInformationList-RL-ReconfPrepFDD                    DL-CodeInformationList-RL-ReconfPrepFDD OPTIONAL,
    maxDL-Power        DL-Power OPTIONAL,
    minDL-Power        DL-Power OPTIONAL,
    sSDT-Indication    SSDT-Indication OPTIONAL,
    sSDT-CellIdentity  SSDT-CellIdentity OPTIONAL
-- The IE may be present if the SSDT Indication is set to SSDT Active in the UE
}

DL-CodeInformationList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxnoofDLCodes)) OF
    ProtocolIE-Container {{DL-CodeInformation-RL-ReconfPrepFDDItemIE }}

DL-CodeInformation-RL-ReconfPrepFDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DL-CodeInformation-RL-ReconfPrepFDDItem CRITICALITY ignore TYPE DL-CodeInformation-RL-ReconfPrepFDDItem PRESENCE optional },
    ...
}

DL-CodeInformation-RL-ReconfPrepFDDItem ::= SEQUENCE {
    scramblingCode    ScramblingCode OPTIONAL,
    fdd-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber OPTIONAL
}

-- *****
--
-- 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 ignore TYPE NodeB-CommunicationContextID PRESENCE mandatory } |
    { ID id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD CRITICALITY ignore TYPE UL-CCTrCH-InformationList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD CRITICALITY ignore TYPE DL-CCTrCH-InformationList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-DCH-ModifyList-RL-ReconfPrepTDD CRITICALITY ignore TYPE DCH-ModifyList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-DCH-AddList-RL-ReconfPrepTDD CRITICALITY ignore TYPE DCH-AddList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-DCH-DeleteList-RL-ReconfPrepTDD CRITICALITY ignore TYPE DCH-DeleteList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-DSCH-Information-ModifyList-RL-ReconfPrepTDD CRITICALITY ignore TYPE DSCH-Information-ModifyList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-DSCH-information-AddList-RL-ReconfPrepTDD CRITICALITY ignore TYPE DSCH-Information-AddList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-DSCH-Information-DeleteList-RL-ReconfPrepTDD CRITICALITY ignore TYPE DSCH-Information-DeleteList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-USCH-Information-ModifyList-RL-ReconfPrepTDD CRITICALITY ignore TYPE USCH-Information-ModifyList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-USCH-information-AddList-RL-ReconfPrepTDD CRITICALITY ignore TYPE USCH-Information-AddList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-USCH-Information-DeleteList-RL-ReconfPrepTDD CRITICALITY ignore TYPE USCH-Information-DeleteList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-RadioLinkInformation-RL-ReconfPrepTDD CRITICALITY ignore TYPE RadioLinkInformation-RL-ReconfPrepTDD PRESENCE optional } |
},
...
}

```

```

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

```

```

UL-CCTrCH-InformationList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxnoofCCTrCHs)) OF ProtocolIE-Container {{UL-CCTrCH-Information-RL-ReconfPrepTDDItemIE }}

```

```

UL-CCTrCH-Information-RL-ReconfPrepTDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-Information-RL-ReconfPrepTDDItem CRITICALITY ignore TYPE UL-CCTrCH-Information-RL-ReconfPrepTDDItem PRESENCE optional },
}

```

```
...
}

UL-CCTrCH-Information-RL-ReconfPrepTDDItem ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    tFCS              TFCS          OPTIONAL,
    tFCI-Coding       TFCI-Coding  OPTIONAL,      punturing-Limit          Punturing-Limit  OPTIONAL
    ul-DPCH-InformationList-RL-ReconfPrepTDD          UL-DPCH-InformationList-RL-ReconfPrepTDD  OPTIONAL
}

UL-DPCH-InformationList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxnoofDPCHs)) OF
    ProtocolIE-Container {{UL-DPCH-Information-RL-ReconfPrepTDDItemIE }}

UL-DPCH-Information-RL-ReconfPrepTDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-Information-RL-ReconfPrepTDDItem  CRITICALITY          ignore          TYPE          UL-DPCH-Information-RL-ReconfPrepTDDItem  PRESENCE
    mandatory
    },
    ...
}

UL-DPCH-Information-RL-ReconfPrepTDDItem ::= SEQUENCE {
    dPCH-ID          DPCH-ID,
    tDD-ChannelisationCode          TDD-ChannelisationCode  OPTIONAL,
    burstType          BurstType          OPTIONAL,
    midambleShift      MidambleShift      OPTIONAL,
    timeSlot           TimeSlot           OPTIONAL,
    tdd-PhysicalChannelOffset          TDD-PhysicalChannelOffset          OPTIONAL,
    repetitionPeriod      RepetitionPeriod      OPTIONAL,
    repetitionLength      RepetitionLength      OPTIONAL,
    tFCI-Presence         TFCI-Presence         OPTIONAL
}

DL-CCTrCH-InformationList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxnoofCCTrCHs)) OF    ProtocolIE-Container {{DL-CCTrCH-Information-RL-
ReconfPrepTDDItemIE }}

DL-CCTrCH-Information-RL-ReconfPrepTDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-Information-RL-ReconfPrepTDDItem  CRITICALITY          ignore          TYPE          DL-CCTrCH-Information-RL-ReconfPrepTDDItem  PRESENCE
    mandatory
    },
    ...
}

DL-CCTrCH-Information-RL-ReconfPrepTDDItem ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    tFCS              TFCS          OPTIONAL,
    tFCI-Coding       TFCI-Coding  OPTIONAL,      punturing-Limit          Punturing-Limit  OPTIONAL
    dl-DPCH-InformationList-RL-ReconfPrepTDD          DL-DPCH-InformationList-RL-ReconfPrepTDD  OPTIONAL
}
```

```
DL-DPCH-InformationList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxnoofDPCHs)) OF
    ProtocolIE-Container {{DL-DPCH-Information-RL-ReconfPrepTDDItemIE }}

DL-DPCH-Information-RL-ReconfPrepTDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-Information-RL-ReconfPrepTDDItem     CRITICALITY     ignore     TYPE     DL-DPCH-Information-RL-ReconfPrepTDDItem     PRESENCE
    mandatory
    },
    ...
}

DL-DPCH-Information-RL-ReconfPrepTDDItem ::= SEQUENCE {
dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode    TDD-ChannelisationCode    OPTIONAL,
    burstType                BurstType                OPTIONAL,
    midambleShift            MidambleShift            OPTIONAL,
    timeSlot                TimeSlot                OPTIONAL,
tdd-PhysicalChannelOffset    TDD-PhysicalChannelOffset    OPTIONA
repetitionPeriod            RepetitionPeriod            OPTIONAL,
    rpetitionLength            RepetitionLength            OPTIONAL,
    tFCI-Presence                TFCI-Presence                OPTIONAL
}

DCH-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxnoofDCHs)) OF
    ProtocolIE-Container {{DCH-Modify-RL-ReconfPrepTDDItemIE }}

DCH-Modify-RL-ReconfPrepTDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DCH-Modify-RL-ReconfPrepTDDItem     CRITICALITY ignore     TYPE DCH-Modify-RL-ReconfPrepTDDItem     PRESENCE optional },
    ...
}

DCH-Modify-RL-ReconfPrepTDDItem ::= SEQUENCE {
dCH-ID                DCH-ID,
    ul-TransportFormatSet        TransportFormatSet    OPTIONAL,
    dl-TransportFormatSet        TransportFormatSet    OPTIONAL,
    frameHandlingPriority        FrameHandlingPriority    OPTIONAL,
    ul-FP-Mode                UL-FP-Mode                OPTIONAL,
    toAWS                    ToAWS                    OPTIONAL,
    toAWE                    ToAWE                    OPTIONAL,
}

DCH-AddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxnoofDCHs)) OF
    ProtocolIE-Container {{DCH-Add-RL-ReconfPrepTDDItemIE }}

DCH-Add-RL-ReconfPrepTDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DCH-Add-RL-ReconfPrepTDDItem     CRITICALITY ignore     TYPE DCH-Add-RL-ReconfPrepTDDItem     PRESENCE optional },
    ...
}

DCH-Add-RL-ReconfPrepTDDItem ::= SEQUENCE {
```

```

dCH-ID                DCH-ID,
dCH-CombinationIndication  DCH-CombinationIndication  OPTIONAL,
rLC-Mode              RLC-Mode,
ul-CCTrCH-ID         CCTrCH-ID,
dl-CCTrCH-ID         CCTrCH-ID,
ul-TransportFormatSet   TransportFormatSet,
dl-TransportFormatSet   TransportFormatSet,
frameHandlingPriority   FrameHandlingPriority,
payloadCRC-PresenceIndicator  PayloadCRC-PresenceIndicator,
ul-FP-Mode           UL-FP-Mode,
toAWS                ToAWS,
toAWE                ToAWE
}

DCH-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxnoofDCHs)) OF
  ProtocolIE-Container {{DCH-Delete-RL-ReconfPrepTDDItemIE }}

DCH-Delete-RL-ReconfPrepTDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-DCH-Delete-RL-ReconfPrepTDDItem CRITICALITY ignore      TYPE DCH-Delete-RL-ReconfPrepTDDItem  PRESENCE optional },
  ...
}

DCH-Delete-RL-ReconfPrepTDDItem ::= SEQUENCE {
  dCH-ID          DCH-ID
}

DSCH-Information-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxnoofDSCHs)) OF ProtocolIE-Container {{DSCH-Information-Modify-RL-
ReconfPrepTDDItemIE }}

DSCH-Information-Modify-RL-ReconfPrepTDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-DSCH-Information-Modify-RL-ReconfPrepTDDItem CRITICALITY ignore      TYPE DSCH-Information-Modify-RL-ReconfPrepTDDItem  PRESENCE
optional
},
  ...
}

DSCH-Information-Modify-RL-ReconfPrepTDDItem ::= SEQUENCE {
  dSCH-ID          DSCH-ID,
  transportFormatSet   TransportFormatSet  OPTIONAL,
  cCTrCH-ID         CCTrCH-ID  OPTIONAL,
  frameHandlingPriority   FrameHandlingPriority  OPTIONAL,
  toAWE             ToAWE  OPTIONAL,
  toAWS             ToAWS  OPTIONAL
}

DSCH-Information-AddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxnoofDSCHs)) OF
  ProtocolIE-Container {{DSCH-Information-Add-RL-ReconfPrepTDDItemIE }}

DSCH-Information-Add-RL-ReconfPrepTDDItemIE NBAP-PROTOCOL-IES ::= {

```

~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)".~~ TS-25.433-V310-0 (2000-01)
TS 25.433 version 3.0.0 Release 1999

```

{ ID id-DSCH-Information-Add-RL-ReconfPrepTDDItem  CRITICALITY      ignore      TYPE      DCH-Add-RL-ReconfPrepTDDItem      PRESENCE      mandatory
},
...
}

DSCH-Information-Add-RL-ReconfPrepTDDItem ::= SEQUENCE {
    dSCH-ID          DSCH-ID,
    cCTrCH-ID        CCTrCH-ID,
    transportFormatSet  TransportFormatSet,
    frameHandlingPriority  FrameHandlingPriority  OPTIONAL,
    toAWE             ToAWE,
    toAWS             ToAWS
}

DSCH-Information-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxnoofDSCHs)) OF  ProtocolIE-Container {{DCH-Delete-RL-ReconfPrepTDDItemIE }}

DSCH-Information-Delete-RL-ReconfPrepTDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DSCH-Information-Delete-RL-ReconfPrepTDDItem  CRITICALITY      ignore      TYPE      DSCH-Information-Delete-RL-ReconfPrepTDDItem  PRESENCE
optional
},
...
}

DSCH-Information-Delete-RL-ReconfPrepTDDItem ::= SEQUENCE {
    dSCH-ID          DSCH-ID
}

USCH-Information-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxnoofUSCHs)) OF  ProtocolIE-Container {{USCH-Information-Modify-RL-
ReconfPrepTDDItemIE }}

USCH-Information-Modify-RL-ReconfPrepTDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-USCH-Information-Modify-RL-ReconfPrepTDDItem  CRITICALITY      ignore      TYPE      USCH-Information-Modify-RL-ReconfPrepTDDItem  PRESENCE
optional
},
...
}

USCH-Information-Modify-RL-ReconfPrepTDDItem ::= SEQUENCE {
    dSCH-ID          DSCH-ID,
    transportFormatSet  TransportFormatSet  OPTIONAL,
    cCTrCH-ID        CCTrCH-ID      OPTIONAL
}

USCH-Information-AddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxnoofUSCHs)) OF  ProtocolIE-Container {{USCH-Information-Add-RL-ReconfPrepTDDItemIE }}

USCH-Information-Add-RL-ReconfPrepTDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-USCH-Information-Add-RL-ReconfPrepTDDItem  CRITICALITY      ignore      TYPE      USCH-Add-RL-ReconfPrepTDDItem  PRESENCE      optional
},
...

```



```
RL-InformationResponseList-RL-ReconfReady ::= SEQUENCE (SIZE (1..maxnoofRLs)) OF
    ProtocolIE-Container {{RL-InformationResponse-RL-ReconfReadyItemIE }}

RL-InformationResponse-RL-ReconfReadyItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseList-RL-ReconfReadyItem          CRITICALITY ignore          TYPE RL-InformationResponseList-RL-
ReconfReadyItem          PRESENCE mandatory
    },
    ...
}

RL-InformationResponseList-RL-ReconfReadyItem ::= SEQUENCE {
    rL-ID                RL-ID,
    dCHsToBeAdded        DCH-AddList-RL-ReconfReady  OPTIONAL,
    dCHsToBeModified     DCH-ModifyList-RL-ReconfReady  OPTIONAL,
    dSCH-SetupItem       DSCH-SetupItem-RL-ReconfReady  OPTIONAL,
    dSCH-ModifyItem      DSCH-ModifyItem-RL-ReconfReady  OPTIONAL,
    uCH-SetupItem        USCH-SetupItem-RL-ReconfReady  OPTIONAL,
    uSCH-ModifyItem      USCH-ModifyItem-RL-ReconfReady  OPTIONAL
}

DCH-AddList-RL-ReconfReady ::= SEQUENCE (SIZE (1..maxnoofDCHs)) OF
    ProtocolIE-Container {{DCH-Add-RL-ReconfReadyItemIE }}

DCH-Add-RL-ReconfReadyItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DCH-Add-RL-ReconfReadyItem          CRITICALITY ignore          TYPE DCH-Add-RL-ReconfReadyItem          PRESENCE mandatory  },
    ...
}

DCH-Add-RL-ReconfReadyItem ::= SEQUENCE {
    dCH-ID                DCH-ID,
    bindingID              BindingID,
    transportLayerAddress  TransportLayerAddress
}

DCH-ModifyList-RL-ReconfReady ::= SEQUENCE (SIZE (1..maxnoofDCHs)) OF
    ProtocolIE-Container {{DCH-Modify-RL-ReconfReadyItemIE }}

DCH-Modify-RL-ReconfReadyItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DCH-Modify-RL-ReconfReadyItem          CRITICALITY ignore          TYPE DCH-Modify-RL-ReconfReadyItem          PRESENCE mandatory  },
    ...
}

DCH-Modify-RL-ReconfReadyItem ::= SEQUENCE {
    dCH-ID                DCH-ID,
    bindingID              BindingID,
    transportLayerAddress  TransportLayerAddress
}
```



```
}  
  
DSCH-SetupList-RL-ReconfReady ::= SEQUENCE (SIZE (1..maxnoofDSCHs)) OF  
    ProtocolIE-Container {{DSCH-Setup-RL-ReconfReadyItemIE }}  
  
DSCH-Setup-RL-ReconfReadyItemIE NBAP-PROTOCOL-IES ::= {  
    { ID id-DSCH-Setup-RL-ReconfReadyItem          CRITICALITY ignore    TYPE DSCH-Setup-RL-ReconfReadyItem          PRESENCE mandatory    },  
    ...  
}  
  
DSCH-Setup-RL-ReconfReadyitem ::= SEQUENCE {  
    dSCH-ID          DSCH-ID  
    bindingID        BindingID,  
    transportLayerAddress    TransportLayerAddress  
}  
  
DSCH-ModifyList-RL-ReconfReady ::= SEQUENCE (SIZE (1..maxnoofDSCHs)) OF  
    ProtocolIE-Container {{DSCH-Modify-RL-ReconfReadyItemIE }}  
  
DSCH-Modify-RL-ReconfReadyItemIE NBAP-PROTOCOL-IES ::= {  
    { ID id-DSCH-Modify-RL-ReconfReadyItem          CRITICALITY ignore    TYPE DSCH-Modify-RL-ReconfReadyItem          PRESENCE mandatory    },  
    ...  
}  
  
DSCH-ModifyItem-RL-ReconfReadyItem ::= SEQUENCE {  
    dSCH-ID          DSCH-ID  
    bindingID        BindingID,  
    transportLayerAddress    TransportLayerAddress  
}  
  
USCH-SetupList-RL-ReconfReady ::= SEQUENCE (SIZE (1..maxnoofUSCHs)) OF  
    ProtocolIE-Container {{USCH-Setup-RL-ReconfReadyItemIE }}  
  
USCH-Setup-RL-ReconfReadyItemIE NBAP-PROTOCOL-IES ::= {  
    { ID id-USCH-Setup-RL-ReconfReadyItem          CRITICALITY ignore    TYPE USCH-Setup-RL-ReconfReadyItem          PRESENCE mandatory    },  
    ...  
}  
  
USCH-Setup-RL-ReconfReadyitem ::= SEQUENCE {  
    uSCH-ID          USCH-ID  
    bindingID        BindingID,  
    transportLayerAddress    TransportLayerAddress  
}  
  
USCH-ModifyList-RL-ReconfReady ::= SEQUENCE (SIZE (1..maxnoofUSCHs)) OF  
    ProtocolIE-Container {{USCH-Modify-RL-ReconfReadyItemIE }}  
  
USCH-Modify-RL-ReconfReadyItemIE NBAP-PROTOCOL-IES ::= {  
    { ID id-USCH-Modify-RL-ReconfReadyItem          CRITICALITY ignore    TYPE USCH-Modify-RL-ReconfReadyItem          PRESENCE mandatory    },
```

```
    ...
  }

USCH-ModifyItem-RL-ReconfReadyItem ::= SEQUENCE {
    uSCH-ID            USCH-ID
    bindingID          BindingID,
    transportLayerAddress    TransportLayerAddress
}

-- *****
--
-- 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-Cause                           CRITICALITY ignore     TYPE Cause                          PRESENCE mandatory } |
    { ID id-RL-ReconfigurationFailureList-RL-ReconfFail CRITICALITY ignore     TYPE RL-ReconfigurationFailureList-RL-ReconfFail PRESENCE
      optional                               } |
    { ID id-CriticalityDiagnostic           CRITICALITY ignore     TYPE CriticalityDiagnostic           PRESENCE optional
    },
    ...
}

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

RL-ReconfigurationFailureList-RL-ReconfFail ::= SEQUENCE (SIZE (1..maxnoofRLs)) OF
  ProtocolIE-Container {{RL-ReconfigurationFailure-RL-ReconfFailItemIE}}

RL-ReconfigurationFailure-RL-ReconfFailItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-RL-ReconfigurationFailure-RL-ReconfFailItem CRITICALITY ignore     TYPE RL-ReconfigurationFailure-RL-ReconfFailItem PRESENCE optional
    },
    ...
}

RL-ReconfigurationFailure-RL-ReconfFailItem ::= SEQUENCE {
    rL-ID            RL-ID,
    cause            Cause
}
}
```

```
-- *****
--
-- 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 },
    ...
}

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 ignore          TYPE NodeB-CommunicationContextID          PRESENCE mandatory } |
    { ID id-UL-DPCH-InformationItem-RL-ReconfReqFDD CRITICALITY ignore          TYPE UL-DPCH-InformationItem-RL-ReconfReqFDD PRESENCE optional } |
    { ID id-DL-DPCH-InformationItem-RL-ReconfReqFDD CRITICALITY ignore          TYPE DL-DPCH-InformationItem-RL-ReconfReqFDD PRESENCE optional } |
    { ID id-DCH-ModifyList-RL-ReconfReqFDD         CRITICALITY ignore          TYPE DCH-ModifyList-RL-ReconfReqFDD         PRESENCE optional } |
    { ID id-DCH-AddList-RL-ReconfReqFDD            CRITICALITY ignore          TYPE DCH-AddList-RL-ReconfReqFDD            PRESENCE optional } |
    { ID id-DCH-DeleteList-RL-ReconfReqFDD        CRITICALITY ignore          TYPE DCH-DeleteList-RL-ReconfReqFDD        PRESENCE optional } |
    { ID id-DSCH-ModifyItem-RL-ReconfReqFDD       CRITICALITY ignore          TYPE DSCH-ModifyItem-RL-ReconfReqFDD       PRESENCE optional } |
    { ID id-DSCH-AddItem-RL-ReconfReqFDD          CRITICALITY ignore          TYPE DSCH-AddItem-RL-ReconfReqFDD          PRESENCE optional } |
    { ID id-DSCH-DeleteItem-RL-ReconfReqFDD       CRITICALITY ignore          TYPE DSCH-DeleteItem-RL-ReconfReqFDD       PRESENCE optional } |
    { ID id-RL-InformationList-RL-ReconfReqFDD    CRITICALITY ignore          TYPE RL-InformationList-RL-ReconfReqFDD    PRESENCE optional },
    ...
}

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

UL-DPCH-InformationItem-RL-ReconfReqFDD ::= SEQUENCE {
    tFCS          TFCS          OPTIONAL
}

DL-DPCH-InformationItem-RL-ReconfReqFDD ::= SEQUENCE {
    tFCS          TFCS          OPTIONAL
    tFCI-SignallingMode    TFCI-SignallingMode OPTIONAL
}

DCH-ModifyList-RL-ReconfReqFDD ::= SEQUENCE (SIZE (1..maxnoofDCHs)) OF
    ProtocolIE-Container {{DCH-Modify-RL-ReconfReqFDDItemIE }}

DCH-Modify-RL-ReconfReqFDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DCH-Modify-RL-ReconfReqFDDItem CRITICALITY ignore          TYPE DCH-Modify-RL-ReconfReqFDDItem PRESENCE optional },
    ...
}

DCH-Modify-RL-ReconfReqFDDItem ::= SEQUENCE {
    dCH-ID          DCH-ID,
    ul-TransportFormatSet    TransportFormatSet OPTIONAL,

```

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```
dl-TransportFormatSet      TransportFormatSet  OPTIONAL,
frameHandlingPriority      FrameHandlingPriority  OPTIONAL,
ul-FP-Mode                UL-FP-Mode          OPTIONAL,
toAWS                    ToAWS              OPTIONAL,
toAWE                    ToAWE              OPTIONAL
}
```

```
DCH-AddList-RL-ReconfReqFDD ::= SEQUENCE (SIZE (1..maxnoofDCHs)) OF
  ProtocolIE-Container {{DCH-Add-RL-ReconfReqFDDItemIE }}
```

```
DCH-Add-RL-ReconfReqFDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-DCH-Add-RL-ReconfReqFDDItem CRITICALITY ignore    TYPE DCH-Add-RL-ReconfReqFDDItem PRESENCE optional },
  ...
}
```

```
DCH-Add-RL-ReconfReqFDDItem ::= SEQUENCE {
  dCH-ID          DCH-ID,
  ul-TransportFormatSet  TransportFormatSet,
  dl-TransportFormatSet  TransportFormatSet,
  frameHandlingPriority  FrameHandlingPriority,
  payloadCRC-PresenceIndicator  PayloadCRC-PresenceIndicator,
  ul-FP-Mode          UL-FP-Mode,
  toAWS              ToAWS,
  toAWE              ToAWE
}
```

```
DCH-DeleteList-RL-ReconfReqFDD ::= SEQUENCE (SIZE (1..maxnoofDCHs)) OF
  ProtocolIE-Container {{DCH-Delete-RL-ReconfReqFDDItemIE }}
```

```
DCH-Delete-RL-ReconfReqFDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-DCH-Delete-RL-ReconfReqFDDItem CRITICALITY ignore    TYPE DCH-Delete-RL-ReconfReqFDDItem PRESENCE optional },
  ...
}
```

```
DCH-Delete-RL-ReconfReqFDDItem ::= SEQUENCE {
  dCH-ID          DCH-ID
}
```

```
DSCH-ModifyItem-RL-ReconfReqFDD ::= SEQUENCE {
  dl-TransportFormatSet  TransportFormatSet  OPTIONAL,
  rL-ID                 RL-ID              OPTIONAL,
  frameHandlingPriority  FrameHandlingPriority  OPTIONAL,
  toAWS                ToAWS              OPTIONAL,
  toAWE                ToAWE              OPTIONAL
}
```

```
DSCH-AddItem-RL-ReconfReqFDD ::= SEQUENCE {
  dl-TransportFormatSet  TransportFormatSet,
  rL-ID                 RL-ID,
```

```
frameHandlingPriority      FrameHandlingPriority,  
toAWS                     ToAWS,  
toAWE                     ToAWE  
}  
  
DSCH-DeleteItem-RL-ReconfReqFDD ::= SEQUENCE {  
    rL-ID                 RL-ID  
}  
  
RL-InformationList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxnoofRLs)) OF  
    ProtocolIE-Container { {RL-Information-RL-ReconfPrepFDDItemIE } }  
  
RL-Information-RL-ReconfPrepFDDItemIE NBAP-PROTOCOL-IES ::= {  
    { ID id-RL-Information-RL-ReconfPrepFDDItem CRITICALITY ignore  TYPE RL-Information-RL-ReconfPrepFDDItem PRESENCE optional },  
    ...  
}  
  
RL-Information-RL-ReconfPrepFDDItem ::= SEQUENCE {  
    rL-ID                 RL-ID,  
    maxDL-Power          DL-Power          OPTIONAL,  
    minDL-Power          DL-Power          OPTIONAL  
}  
  
-- *****  
--  
-- 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 ignore  TYPE NodeB-CommunicationContextID      PRESENCE mandatory } |  
    { ID id-UL-CCTrCH-InformationList-RL-ReconfReqTDD  CRITICALITY ignore  TYPE UL-CCTrCH-InformationList-RL-ReconfReqTDD  PRESENCE optional } |  
    { ID id-DL-CCTrCH-InformationList-RL-ReconfReqTDD  CRITICALITY ignore  TYPE DL-CCTrCH-InformationList-RL-ReconfReqTDD  PRESENCE optional } |  
    { ID id-DCH-ModifyList-RL-ReconfReqTDD           CRITICALITY ignore  TYPE DCH-ModifyList-RL-ReconfReqTDD           PRESENCE optional } |  
    { ID id-DCH-AddList-RL-ReconfReqTDD              CRITICALITY ignore  TYPE DCH-AddList-RL-ReconfReqTDD              PRESENCE optional } |  
    { ID id-DCH-DeleteList-RL-ReconfReqTDD          CRITICALITY ignore  TYPE DCH-DeleteList-RL-ReconfReqTDD          PRESENCE optional } |  
    { ID id-DSCH-ModifyList-RL-ReconfReqTDD         CRITICALITY ignore  TYPE DSCH-ModifyList-RL-ReconfReqTDD         PRESENCE optional } |  
    { ID id-DSCH-AddList-RL-ReconfReqTDD            CRITICALITY ignore  TYPE DSCH-AddList-RL-ReconfReqTDD            PRESENCE optional } |  
    { ID id-DSCH-DeleteList-RL-ReconfReqTDD        CRITICALITY ignore  TYPE DSCH-DeleteList-RL-ReconfReqTDD        PRESENCE optional } |  
    }
```

```
{ ID id-USCH-ModifyList-RL-ReconfReqTDD    CRITICALITY ignore   TYPE USCH-ModifyList-RL-ReconfReqTDD    PRESENCE optional } |
{ ID id-USCH-AddList-RL-ReconfReqTDD      CRITICALITY ignore   TYPE USCH-AddList-RL-ReconfReqTDD      PRESENCE optional } |
{ ID id-USCH-DeleteList-RL-ReconfReqTDD   CRITICALITY ignore   TYPE USCH-DeleteList-RL-ReconfReqTDD   PRESENCE optional },
...
}

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

UL-CCTrCH-InformationList-RL-ReconfReqTDD ::= SEQUENCE (SIZE (1..maxnoofCCTrCHs)) OF
ProtocolIE-Container {{UL-CCTrCH-Information-RL-ReconfReqTDDItemIE }}

UL-CCTrCH-Information-RL-ReconfReqTDDItemIE NBAP-PROTOCOL-IES ::= {
{ ID id-UL-CCTrCH-Information-RL-ReconfReqTDDItem    CRITICALITY ignore   TYPE    UL-CCTrCH-Information-RL-ReconfReqTDDItem
PRESENCE    mandatory
},
...
}

UL-CCTrCH-Information-RL-ReconfReqTDDItem ::= SEQUENCE {
cTrCH-ID          CCTrCH-ID,
tFCS              TFCS,
puncturingLimit   PuncturingLimit
}

DL-CCTrCH-InformationList-RL-ReconfReqTDD ::= SEQUENCE (SIZE (1..maxnoofCCTrCHs)) OF
ProtocolIE-Container {{DL-CCTrCH-Information-RL-ReconfReqTDDItemIE }}

DL-CCTrCH-Information-RL-ReconfReqTDDItemIE NBAP-PROTOCOL-IES ::= {
{ ID id-DL-CCTrCH-Information-RL-ReconfReqTDDItem    CRITICALITY ignore   TYPE    DL-CCTrCH-Information-RL-ReconfReqTDDItem
PRESENCE    mandatory
},
...
}

DL-CCTrCH-Information-RL-ReconfReqTDDItem ::= SEQUENCE {
cTrCH-ID          CCTrCH-ID,
tFCS              TFCS,
puncturingLimit   PuncturingLimit
}

DCH-ModifyList-RL-ReconfReqTDD ::= SEQUENCE (SIZE (1..maxnoofDCHs)) OF
ProtocolIE-Container {{DCH-Modify-RL-ReconfReqTDDItemIE }}

DCH-Modify-RL-ReconfReqTDDItemIE NBAP-PROTOCOL-IES ::= {
{ ID id-DCH-Modify-RL-ReconfReqTDDItem    CRITICALITY ignore   TYPE DCH-Modify-RL-ReconfReqTDDItem PRESENCE optional },
```

```
    ...
}

DCH-Modify-RL-ReconfReqTDDItem ::= SEQUENCE {
    dCH-ID             DCH-ID,
    ul-CCTrCH-ID      CCTrCH-ID,
    dl-CCTrCH-ID      CCTrCH-ID,
    ul-TransportFormatSet   TransportFormatSet OPTIONAL,
    dl-TransportFormatSet   TransportFormatSet OPTIONAL,
    frameHandlingPriority   FrameHandlingPriority   OPTIONAL,
    ul-FP-Mode           UL-FP-Mode           OPTIONAL,
    toAWS                ToAWS                OPTIONAL,
    toAWE                ToAWE                OPTIONAL
}

DCH-AddList-RL-ReconfReqTDD ::= SEQUENCE (SIZE (1..maxnoofDCHs)) OF
    ProtocolIE-Container {{DCH-Add-RL-ReconfReqTDDItemIE }}

DCH-Add-RL-ReconfReqTDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DCH-Add-RL-ReconfReqTDDItem CRITICALITY ignore     TYPE DCH-Add-RL-ReconfReqTDDItem PRESENCE optional },
    ...
}

DCH-Add-RL-ReconfReqTDDItem ::= SEQUENCE {
    dCH-ID             DCH-ID,
    rLC-Mode           RLC-Mode,
    ul-CCTrCH-ID      CCTrCH-ID,
    dl-CCTrCH-ID      CCTrCH-ID,
    ul-TransportFormatSet   TransportFormatSet,
    dl-TransportFormatSet   TransportFormatSet,
    frameHandlingPriority   FrameHandlingPriority,
    payloadCRC-PresenceIndicator   PayloadCRC-PresenceIndicator,
    ul-FP-Mode           UL-FP-Mode,
    toAWS                ToAWS,
    toAWE                ToAWE
}

DCH-DeleteList-RL-ReconfReqTDD ::= SEQUENCE (SIZE (1..maxnoofDCHs)) OF
    ProtocolIE-Container {{DCH-Delete-RL-ReconfReqTDDItemIE }}

DCH-Delete-RL-ReconfReqTDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DCH-Delete-RL-ReconfReqTDDItem CRITICALITY ignore     TYPE DCH-Delete-RL-ReconfReqTDDItem PRESENCE optional },
    ...
}

DCH-Delete-RL-ReconfReqTDDItem ::= SEQUENCE {
    dCH-ID             DCH-ID
}
```



```
DSCH-ModifyList-RL-ReconfReqTDD ::= SEQUENCE (SIZE (1..maxnoofDSCHs)) OF
  ProtocolIE-Container {{DSCH-Modify-RL-ReconfReqTDDItemIE }}
```

```
DSCH-Modify-RL-ReconfReqTDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-DSCH-Modify-RL-ReconfReqTDDItem CRITICALITY ignore TYPE DSCH-Modify-RL-ReconfReqTDDItem PRESENCE optional },
  ...
}
```

```
DSCH-Modify-RL-ReconfReqTDDItem ::= SEQUENCE {
  dSCH-ID DSCH-ID,
  cCtrCH-ID CCtrCH-ID,
  transportFormatSet TransportFormatSet OPTIONAL,
  frameHandlingPriority FrameHandlingPriority OPTIONAL,
  toAWE ToAWE OPTIONAL,
  toAWS ToAWS OPTIONAL
}
```

```
DSCH-AddList-RL-ReconfReqTDD ::= SEQUENCE (SIZE (1..maxnoofDSCHs)) OF
  ProtocolIE-Container {{DSCH-Add-RL-ReconfReqTDDItemIE }}
```

```
DSCH-Add-RL-ReconfReqTDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-DSCH-Add-RL-ReconfReqTDDItem CRITICALITY ignore TYPE DSCH-Add-RL-ReconfReqTDDItem PRESENCE optional },
  ...
}
```

```
DSCH-Add-RL-ReconfReqTDDItem ::= SEQUENCE {
  dSCH-ID DSCH-ID,
  cCtrCH-ID CCtrCH-ID,
  transportFormatSet TransportFormatSet,
  frameHandlingPriority FrameHandlingPriority OPTIONAL,
  toAWE ToAWE,
  toAWS ToAWS
}
```

```
DSCH-DeleteList-RL-ReconfReqTDD ::= SEQUENCE (SIZE (1..maxnoofDSCHs)) OF
  ProtocolIE-Container {{DSCH-Delete-RL-ReconfReqTDDItemIE }}
```

```
DSCH-Delete-RL-ReconfReqTDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-DSCH-Delete-RL-ReconfReqTDDItem CRITICALITY ignore TYPE DSCH-Delete-RL-ReconfReqTDDItem PRESENCE optional },
  ...
}
```

```
DSCH-Delete-RL-ReconfReqTDDItem ::= SEQUENCE {
  dSCH-ID DSCH-ID
}
```

```
USCH-ModifyList-RL-ReconfReqTDD ::= SEQUENCE (SIZE (1..maxnoofUSCHs)) OF
  ProtocolIE-Container {{USCH-Modify-RL-ReconfReqTDDItemIE }}
```

```

USCH-Modify-RL-ReconfReqTDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-USCH-Modify-RL-ReconfReqTDDItem    CRITICALITY ignore    TYPE USCH-Modify-RL-ReconfReqTDDItem    PRESENCE optional },
    ...
}

USCH-Modify-RL-ReconfReqTDDItem ::= SEQUENCE {
    uSCH-ID                USCH-ID,
    cCTrCH-ID              CCTrCH-ID    OPTIONAL,
    transportFormatSet     TransportFormatSet    OPTIONAL,
}

USCH-AddList-RL-ReconfReqTDD ::= SEQUENCE (SIZE (1..maxnoofUSCHs)) OF
    ProtocolIE-Container {{USCH-Add-RL-ReconfReqTDDItemIE }}

USCH-Add-RL-ReconfReqTDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-USCH-Add-RL-ReconfReqTDDItem    CRITICALITY ignore    TYPE USCH-Add-RL-ReconfReqTDDItem    PRESENCE optional },
    ...
}

USCH-Add-RL-ReconfReqTDDItem ::= SEQUENCE {
    uSCH-ID                USCH-ID,
    cCTrCH-ID              CCTrCH-ID,
    transportFormatSet     TransportFormatSet,
}

USCH-DeleteList-RL-ReconfReqTDD ::= SEQUENCE (SIZE (1..maxnoofUSCHs)) OF
    ProtocolIE-Container {{USCH-Delete-RL-ReconfReqTDDItemIE }}

USCH-Delete-RL-ReconfReqTDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-USCH-Delete-RL-ReconfReqTDDItem CRITICALITY ignore    TYPE USCH-Delete-RL-ReconfReqTDDItem    PRESENCE mandatory },
    ...
}

USCH-Delete-RL-ReconfReqTDDItem ::= SEQUENCE {
    uSCH-ID                USCH-ID
}

-- *****
--
-- 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-ReconfResp      CRITICALITY ignore TYPE RL-InformationResponseList-RL-ReconfResp      PRESENCE optional }
}|
{ ID id-CriticalityDiagnostic              CRITICALITY ignore TYPE CriticalityDiagnostic              PRESENCE optional
  },
  ...
}

RL-InformationResponseList-RL-ReconfResp ::= SEQUENCE (SIZE (1..maxnoofRLs)) OF
ProtocolIE-Container { {RL-InformationResponseItem-RL-ReconfRespIE } }

RL-InformationResponseItem-RL-ReconfRespIE NBAP-PROTOCOL-IE ::= {
  { ID id-RL-InformationResponseItem-RL-ReconfResp      CRITICALITY ignore TYPE RL-InformationResponseItem-RL-ReconfResp      PRESENCE      mandatory
  },
  ...
}

RL-InformationResponseItem-RL-ReconfResp ::= SEQUENCE {
  rL-ID              RL-ID,
  dCHsToBeAdded     DCH-AddList-RL-ReconfResp    OPTIONAL,
  dCHsToBeModified  DCH-ModifyList-RL-ReconfResp  OPTIONAL,
  dSCHsToBeSetup    DSCH-SetupList-RL-ReconfResp  OPTIONAL,
  dSCHsToBeModifie  DSCH-ModifyList-RL-ReconfResp  OPTIONAL,
  uSCHsToBeSetup    USCH-SetupList-RL-ReconfResp  OPTIONAL,
  uSCHsToBeModifie  USCH-ModifyList-RL-ReconfResp  OPTIONAL
  ...
}

DCH-ModifyList-RL-ReconfResp ::= SEQUENCE (SIZE (1..maxnoofDCHs)) OF
ProtocolIE-Container {{DCH-Modify-RL-ReconfRespItemIE }}

DCH-Modify-RL-ReconfRespItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-DCH-Modify-RL-ReconfRespItem      CRITICALITY ignore TYPE DCH-Modify-RL-ReconfRespItem      PRESENCE optional },
  ...
}

DCH-Modify-RL-ReconfRespItem ::= SEQUENCE {
  dCH-ID            DCH-ID,
  bindingID         BindingID,
  transportLayerAddress      TransportLayerAddress
}

DCH-AddList-RL-ReconfResp ::= SEQUENCE (SIZE (1..maxnoofDCHs)) OF
ProtocolIE-Container {{DCH-Add-RL-ReconfRespItemIE }}

DCH-Add-RL-ReconfRespItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-DCH-Add-RL-ReconfRespItem      CRITICALITY ignore TYPE DCH-Add-RL-ReconfRespItem      PRESENCE optional },
  ...
}
```

```
}  
  
DCH-Add-RL-ReconfRespItem ::= SEQUENCE {  
    dCH-ID          DCH-ID,  
    bindingID       BindingID,  
    transportLayerAddress TransportLayerAddress  
}  
  
DSCH-SetupList-RL-ReconfResp ::= SEQUENCE (SIZE (1..maxnoofDSCHs)) OF  
    ProtocolIE-Container {{DSCH-Setup-RL-ReconfRespItemIE }}  
  
DSCH-Setup-RL-ReconfRespItemIE NBAP-PROTOCOL-IES ::= {  
    { ID id-DSCH-Setup-RL-ReconfRespItem CRITICALITY ignore TYPE DSCH-Setup-RL-ReconfRespItem PRESENCE optional },  
    ...  
}  
  
DSCH-Setup-RL-ReconfRespItem ::= SEQUENCE {  
    dSCH-ID          DSCH-ID,  
    bindingID       BindingID,  
    transportLayerAddress TransportLayerAddress  
}  
  
DSCH-ModifyList-RL-ReconfResp ::= SEQUENCE (SIZE (1..maxnoofDSCHs)) OF  
    ProtocolIE-Container {{DSCH-Modify-RL-ReconfRespItemIE }}  
  
DSCH-Modify-RL-ReconfRespItemIE NBAP-PROTOCOL-IES ::= {  
    { ID id-DSCH-Modify-ReconfRespItem CRITICALITY ignore TYPE DSCH-Modify-RL-ReconfRespItem PRESENCE optional },  
    ...  
}  
  
DSCH-Modify-RL-ReconfRespItem ::= SEQUENCE {  
    dSCH-ID          DSCH-ID,  
    bindingID       BindingID,  
    transportLayerAddress TransportLayerAddress  
}  
  
USCH-ModifyList-RL-ReconfResp ::= SEQUENCE (SIZE (1..maxnoofUSCHs)) OF  
    ProtocolIE-Container {{USCH-Modify-RL-ReconfRespItemIE }}  
  
USCH-Modify-RL-ReconfRespItemIE NBAP-PROTOCOL-IES ::= {  
    { ID id-USCH-Modify-RL-ReconfRespItem CRITICALITY ignore TYPE USCH-Modify-RL-ReconfRespItem PRESENCE optional },  
    ...  
}  
  
USCH-Modify-RL-ReconfRespItem ::= SEQUENCE {  
    uSCH-ID          USCH-ID,  
    cCTrCH-ID       CCTrCH-ID,  
    transportFormatSet TransportFormatSet,  
}
```

```

USCH-ModifyList-RL-ReconfResp ::= SEQUENCE (SIZE (1..maxnoofUSCHs)) OF
    ProtocolIE-Container {{USCH-Modify-RL-ReconfRespItemIE }}

USCH-Modify-RL-ReconfRespItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-USCH-Modify-RL-ReconfRespItem      CRITICALITY ignore      TYPE USCH-Modify-RL-ReconfRespItem      PRESENCE optional },
    ...
}

USCH-Modify-RL-ReconfRespItem ::= SEQUENCE {
    uSCH-ID          USCH-ID,
    cCTrCH-ID        CCTrCH-ID      OPTIONAL,
    transportFormatSet  TransportFormatSet  OPTIONAL,
}

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

-- *****
--
-- 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 ignore      TYPE NodeB-CommunicationContextID      PRESENCE mandatory } |
    { ID id-RL-informationList-RL-Del-Req      CRITICALITY ignore      TYPE RL-informationList-RL-Del-Req      PRESENCE mandatory } ,
    ...
}

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

RL-informationList-RL-Del-Req ::= SEQUENCE (SIZE (1..maxnoofRLs)) OF
    ProtocolIE-Container {{RL-informationList-RL-Del-ReqItemIE }}

RL-informationList-RL-Del-ReqItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-RL-informationList-RL-Del-ReqItem  CRITICALITY ignore      TYPE RL-informationList-RL-Del-ReqItem  PRESENCE mandatory },
    ...
}

```

```

}

RL-informationList-RL-Del-ReqItem ::= SEQUENCE {
    rL-ID          RL-ID
}

-- *****
--
-- 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-CriticalityDiagnostic           CRITICALITY ignore     TYPE CriticalityDiagnostic       PRESENCE optional   } |
    ...
}

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

-- *****
--
-- DL POWER CONTROL REQUEST FDD
--
-- *****

DLPowerControlRequestFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{DLPowerControlRequestFDD-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{DLPowerControlRequestFDD-Extensions}}    OPTIONAL,
    privateExtensions  PrivateExtensionContainer {{DLPowerControlRequestFDD-PrivateExtensions}}    OPTIONAL,
    ...
}

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

```

```

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

DLPowerControlRequestFDD-PrivateExtensions NBAP-PRIVATE-EXTENSION ::= {
    ...
}

ProcedureScopeType ::= CHOICE {
    all-RL          All-RL,
    individualRL    IndividualRL
}

All-RL ::= SEQUENCE {
    dl-ReferencePower      DL-Power
}

IndividualRL ::= SEQUENCE {
    dl-ReferencePowerInformationList-PC          DL-ReferencePowerInformationList-PC
}

DL-ReferencePowerInformationList-PC ::= SEQUENCE (SIZE (1..maxnoofRLs)) OF
    ProtocolIE-Container {{DL-ReferencePowerInformationList-PCItemIE }}

DL-ReferencePowerInformationList-PCItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DL-ReferencePowerInformationList-PCItem      CRITICALITY    ignore    TYPE    DL-ReferencePowerInformationList-PCItem    PRESENCE
    mandatory
    },
    ...
}

DL-ReferencePowerInformationList-PCItem ::= SEQUENCE {
    rL-ID          RL-ID,
    dl-ReferencePower      DL-Power
}

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

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

```

```

DedicatedMeasurementInitiationRequest-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-NodeB-CommunicationContextID          CRITICALITY ignore          TYPE NodeB-CommunicationContextID          PRESENCE mandatory } |
  { ID id-MeasurementID                          CRITICALITY ignore          TYPE MeasurementID                          PRESENCE mandatory } |
  { ID id-DedicatedMeasurementObjectType-Req    CRITICALITY ignore          TYPE DedicatedMeasurementObjectType-Req    PRESENCE mandatory } |
  { ID id-DedicatedMeasurementType              CRITICALITY ignore          TYPE DedicatedMeasurementType              PRESENCE mandatory } |
  { ID id-MeasurementCharacteristics             CRITICALITY ignore          TYPE MeasurementCharacteristics           PRESENCE mandatory } |
  { ID id-ReportCharacteristics                 CRITICALITY ignore          TYPE ReportCharacteristics                 PRESENCE mandatory } ,
  ...
}

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

DedicatedMeasurementObjectType-Req ::= ENUMERATED {
  rL          RL-DMeasureReq,
  all-RL      All-DMeasureReq
}

RL-DMeasureReq ::= SEQUENCE {
  rL-InformationList RL-InformationList-DMeasureReq
}

RL-InformationList-DMeasureReq ::= SEQUENCE (SIZE (1..maxnoofRLs)) OF
  ProtocolIE-Container {{ RL-InformationList-DMeasureReqItemIE }}

RL-InformationList-DMeasureReqItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationList-DMeasureReqItem    CRITICALITY ignore
  TYPE RL-InformationList-DMeasureReqItem      PRESENCE mandatory
  } ,
  ...
}

RL-InformationList-DMeasureReqItem ::= SEQUENCE {
  rL-ID          RL-ID,
  dPCH-ID        DPCH-ID
}

All-RL-Req ::= SEQUENCE {
  dedicatedMeasurementValue DedicatedMeasurementValue
}

-- *****
--
-- 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-Resp CRITICALITY ignore TYPE DedicatedMeasurementObjectType-Resp PRESENCE mandatory } |
    { ID id-CFN CRITICALITY ignore TYPE CFN PRESENCE mandatory } |
    { ID id-CriticalityDiagnostic CRITICALITY ignore TYPE CriticalityDiagnostic PRESENCE optional }
},
...
}

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

DedicatedMeasurementObjectType-Resp ::= ENUMERATED {
    rL           RL-Resp,
    all-RL      All-RL-resp
}

RL-Resp ::= SEQUENCE {
    rL-InformationList-DMeasureResponse           RL-InformationList-DmeasureResponse
}

RL-InformationList-DmeasureResponse ::= SEQUENCE (SIZE (1..maxnoofRLs)) OF
    ProtocolIE-Container {{RL-Information-DMeasureResponseItemIE }}

RL-Information-DMeasureResponseItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-DMeasureResponseItem CRITICALITY ignore TYPE RL-Information-DMeasureResponseItem PRESENCE mandatory }
},
...
}

RL-Information-DMeasureResponseItem ::= SEQUENCE {
    rL-ID           RL-ID,
    dedicatedMeasurementValue DedicatedMeasurementValue
}

All-RL-Resp ::= SEQUENCE {
    dedicatedMeasurementValue DedicatedMeasurementValue
}

-- *****
    
```

```

--
-- 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-CriticalityDiagnostic           CRITICALITY ignore    TYPE CriticalityDiagnostic           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-Rep CRITICALITY ignore    TYPE DedicatedMeasurementObjectType-Rep PRESENCE mandatory } |
    { ID id-CFN                            CRITICALITY ignore    TYPE CFN                            PRESENCE mandatory },
    ...
}

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

```

```

DedicatedMeasurementObjectRep ::= ENUMERATED {
    rL                RL-Rep,
    all-RL            All-RL-Rep
}

RL-Rep ::= SEQUENCE {
    rL-InformationList-DMeasureReport          RL-InformationList-DMeasureReport
}

RL-InformationList-DmeasureReport ::= SEQUENCE (SIZE (1..maxnoofRLs)) OF
    ProtocolIE-Container {{RL-Information-DMeasureReportItemIE }}

RL-Information-DMeasureReportItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-DMeasureReportItem    CRITICALITY ignore    TYPE RL-Information-DMeasureReportItem    PRESENCE mandatory    },
    ...
}

RL-Information-DMeasureReportItem ::= SEQUENCE {
    rL-ID                RL-ID,
    dedicatedMeasurementValue    DedicatedMeasurementValue
}

All-RL-Rep ::= SEQUENCE {
    dedicatedMeasurementValue    DedicatedMeasurementValue
}

-- *****
--
-- 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 } |
    { ID id-CriticalityDiagnostic            CRITICALITY ignore      TYPE CriticalityDiagnostic            PRESENCE optional
    },
    ...
}

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-RL-InformationList-RL-FailInd    CRITICALITY ignore      TYPE RL-InformationList-RL-FailInd    PRESENCE mandatory } |
    { ID id-CriticalityDiagnostic            CRITICALITY ignore      TYPE CriticalityDiagnostic            PRESENCE optional
    },
    ...
}

```

```
}  
  
RadioLinkFailureIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {  
    ...  
}  
  
RL-InformationList-RL-FailInd ::= SEQUENCE (SIZE (1..maxnoofRLs)) OF  
    ProtocolIE-Container {{ RL-InformationList-RL-FailIndItemIE }}  
  
RL-InformationList-RL-FailInd ItemIE NBAP-PROTOCOL-IES ::= {  
    { I D id- RL-InformationList-RL-FailIndItem CRITICALITY ignore      TYPE RL-InformationList-RL-FailIndItem      PRESENCE mandatory  },  
    ...  
}  
  
RL-InformationList-RL-FailIndItem ::= SEQUENCE {  
    rL-ID          RL-ID,  
    cause          Cause  
}  
  
-- *****  
--  
-- 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-RL-InformationList-RL-RestoreInd      CRITICALITY ignore      TYPE RL-InformationList-RL-RestoreInd      PRESENCE mandatory  },  
    ...  
}  
  
RadioLinkRestoreIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {  
    ...  
}  
  
RL-InformationList-RL-RestoreInd ::= SEQUENCE (SIZE (1..maxnoofRLs)) OF  
    ProtocolIE-Container {{RL-InformationList-RL-RestoreIndItemIE }}  
  
RL-InformationList-RL-RestoreIndItemIE NBAP-PROTOCOL-IES ::= {  
    { I D id-RL-InformationList-RL-RestoreIndItem      CRITICALITY ignore      TYPE RL-InformationList-RL-RestoreIndItem      PRESENCE mandatory  },  
    ...  
}
```

```

    }

RL-InformationList-RL-RestoreIndItem ::= SEQUENCE {
    rL-ID          RL-ID
}

-- *****
--
-- COMPRESSED MODE PREPARE FDD
--
-- *****

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

CompressedModePrepareFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-NodeB-CommunicationContextID   CRITICALITY ignore      TYPE NodeB-CommunicationContextID  PRESENCE mandatory } |
    { ID id-TGP1                        CRITICALITY ignore      TYPE TGP1                        PRESENCE mandatory } |
    { ID id-TGP2                        CRITICALITY ignore      TYPE TGP2                        PRESENCE optional } |
    { ID id-TGL                         CRITICALITY ignore      TYPE TGL                         PRESENCE mandatory } |
    { ID id-TGD                         CRITICALITY ignore      TYPE TGD                         PRESENCE mandatory } |
    { ID id-UL-DL-CompressedModeSeletion  CRITICALITY ignore      TYPE UL-DL-CompressedModeSeletion PRESENCE mandatory } |
    { ID id-CompressesModeMethod          CRITICALITY ignore      TYPE CompressesModeMethod        PRESENCE mandatory } |
    { ID id-GapPositionMode                CRITICALITY ignore      TYPE GapPositionMode              PRESENCE mandatory } |
    { ID id-SN                            CRITICALITY ignore      TYPE SN                            PRESENCE optional } |
    -- This IE is present if Gap position mode = 'flexible position'--
    { ID id-DL-FrameType                  CRITICALITY ignore      TYPE DL-FrameType                 PRESENCE mandatory } |
    { ID id-ScramblingCodeChange          CRITICALITY ignore      TYPE ScramblingCodeChange         PRESENCE optional } |
    -- This IE is present if Compressed mode method = 'SF/2' --
    { ID id-PowerControlMode              CRITICALITY ignore      TYPE PowerControlMode             PRESENCE mandatory } |
    { ID id-PowerResumeMode               CRITICALITY ignore      TYPE PowerResumeMode              PRESENCE mandatory } |
    { ID id-UL-DeltaEb-No                 CRITICALITY ignore      TYPE UL-DeltaEb-No                PRESENCE mandatory } |
    { ID id-UL-DeltaEb-NoAfter            CRITICALITY ignore      TYPE UL-DeltaEb-NoAfter           PRESENCE mandatory } |
    ...
}

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

-- *****
--
-- COMPRESSED MODE READY FDD
--
-- *****

```

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

```
CompressedModeReadyFDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-CRNCCommunicationContextID        CRITICALITY ignore          TYPE CRNC-CommunicationContextID PRESENCE mandatory },
  ...
}
```

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

```
-- *****
--
-- COMPRESSED MODE COMMIT FDD
--
-- *****
```

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

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

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

```
-- *****
--
-- COMPRESSED MODE FAILURE FDD
--
-- *****
```

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

```
...
}

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

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

-- *****
--
-- COMPRESSED MODE CANCEL FDD
--
-- *****

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

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

CompressedModeCancelFDD-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 Cause CRITICALITY ignore TYPE Cause PRESENCE mandatory } |
{ ID id-CRNC-CommunicationContextID CRITICALITY ignore TYPE CRNC-CommunicationContextID PRESENCE optional } |
-- This IE is only present when message is transmitted by RNC --
{ ID id-NodeB-CommunicationContextID CRITICALITY ignore TYPE NodeB-CommunicationContextID PRESENCE optional } |
-- This IE is only present when message is transmitted by NodeB --
 { ID id-Cause CRITICALITY ignore TYPE Cause PRESENCE mandatory } |
{ ID id-CriticalityDiagnostic CRITICALITY ignore TYPE L3-CriticalityDiagnostic PRESENCE optional },
-- At least either or Cause IE or Criticality Diagnostic IE shall be present--
...
}

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

END

```

9.3.4 NBAP Information Elements

```

--*****
--
-- Information Element Definitions
--
--*****

NBAP-IEs
DEFINITIONS AUTOMATIC TAGS ::=
BEGIN

IMPORTS
    maxTFcount,
    maxnoofTFCs,
    maxCTF-1,
    maxRM,

FROM NBAP-Constants;

DTX-InsertionPoint ::= INTEGER
DedicatedMeasurementValue ::= INTEGER
DeltaTPC ::= INTEGER

-----

```

```
-- A
-----

-- to do
AcknowledgedRA-TriesValue ::= TBD

AddOrDeleteIndicator ::= ENUMERATED {
add,
delete
}

AICH-TransmissionTiming ::= ENUMERATED {
timing0,
timing1
}

AvailabilityStatus ::= ENUMERATED {
empty,
in-test,
failed,
power-off,
off-line,
off-duty,
dependency,
degraded,
not-installed,
log-full,
...
}

--to do
AveragingDuration ::= TBD

-----
-- B
-----

BCCH-ModificationTime ::= INTEGER (0| 2| 4| .. | 4095)

BindingID ::= OCTET STRING (SIZE (4))

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.
```

```
BurstType ::= ENUMERATED {
type1,
type2
}

-----
-- C
-----

Cause ::= ENUMERATED {
radioNetworkLayer      RadioNetworkLayerCause,
transportLayer         TransportLayerCause,
protocol               ProtocolCause,
misc                   MiscellaneousCause
...
}

CCTrCH-ID ::= INTEGER (1..15)

CellID-Length ::= ENUMERATED {
short,
medium,
long
}

CFN ::= INTEGER (0..255)

ChipOffset ::= INTEGER (0..38399)

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

CodingRate ::= ENUMERATED {
rate1-2,
rate1-3
}

CommonMeasurementObjectType ::= ENUMERATED {
cell,
rach,
...
}

CommonMeasurementType ::= SEQUENCE {
rssi          RSSI-Value,
transmitted-carrier-power      TransmittedCarrierPowerValue,
acknowledged-ra-tries          AcknowledgedRA-TriesValue,
time-slot-iscp                TimeSlotISCP-Value,
...
}
```

~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)". X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)".~~ **3G**
~~TS 25.433 version 3.0.0 Release 1999~~

```
}  
  
CommonPhysicalChannelID ::= INTEGER (0..255)  
  
CommonTransportChannelID ::= INTEGER (0..255)  
  
CommunicationControlPortID ::= INTEGER (0..65535)  
  
CompressedModeMethod ::= ENUMERATED {  
  none,  
  puncturing,  
  half-sFSF-2,  
  higher-Layer-Schedulinggating,  
  none  
}  
  
ConfigurationGenerationID ::= INTEGER (0..255)  
  
CRC-Size ::= ENUMERATED {  
  size0,  
  size12,  
  size16,  
  size24  
}  
  
CRNC-CommunicationContextID ::= INTEGER (0..1048575)  
  
CTFC ::= INTEGER (0..maxCTF-1)  
  
-----  
-- D  
-----  
  
DCH-CombinationInd ::= INTEGER (0..255)  
  
DCH-ID ::= INTEGER (0..255)  
  
DedicatedMeasurementObjectType1 ::= ENUMERATED {  
  cell,  
  rach,  
  ...  
}  
  
DedicatedMeasurementObjectType2 ::= SEQUENCE {  
  sir-value          SIR-Value          OPTIONAL,  
  sir-error-value   SIR-ErrorValue     OPTIONAL,  
  transmitted-code-power TransmittedCodePowerValue OPTIONAL,  
  time-slot-iscp    TimeSlotISCP-Value OPTIONAL,
```

```
...
}

DedicatedMeasurementObjectType3 ::= ENUMERATED {
    rl,
    all-rl,
    ...
}

-- Reference: 25.215 and 25.225
DedicatedMeasurementType ::= ENUMERATED {
    sir,
    sir-error,
    transmitted-code-power,
    timeslot-iscp,
    ...
}

D-FieldLength ::= ENUMERATED {
    d-length1,
    d-lngth2
}

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

DiversityIndication ::= ENUMERATED {
    combined,
    not-combined
}

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

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

DL-FrameType ::= ENUMERATED {
    typeA,
    typeB
}
```

```
-- -35..15 is transformed into 0..50. 0.1 steps gives 0..500
-- Power0 indicates -35dB, Power1 indicates -34.9dB, ..., Power500 indicates 15dB
DL-Power ::= ENUMERATED {
power0,
power1,
...
}

-- 0= Primary scrambling code of the cell, 1..15= Secondary scrambling code --
DL-ScramblingCode ::= INTEGER (0..15)

DPCH-ID ::= INTEGER (0..15)

DPCH-Offset ::= INTEGER (0..255)

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

-- to do
-- the parameter need to be defined. It may correspond to the DL TFS defined for DCH
DSCH-TransportFormatSet ::= TBD

-- to do
-- the parameter need to be defined. It may correspond to the DL TFS defined for DCH
DSCH-TransportFormatCombinationSet ::= TBD

DTX-InsertionPosition ::= ENUMERATED {
fixed,
flexible
}

DynamicTransportFormatInformation ::= SEQUENCE (SIZE (1..maxTFcount)) OF
SEQUENCE {
numberofTransportBlocks      NumberOfTransportBlocks,
transportBlockSize           TransportBlockSize OPTIONAL
-- This IE is only present if Number of Transport Blocks is greater than 0 --,
mode-dynamicTFS              Mode-DynamicTFS
...
}

-----
-- E
-----

EventA ::= SEQUENCE {
measurementThreshold          MeasurementThreshold,
measurementHysteresisTime     MeasurementHysteresisTime OPTIONAL
}

EventB ::= SEQUENCE {
```

```

measurementThreshold      MeasurementThreshold,
measurementHysteresisTime MeasurementHysteresisTime  OPTIONAL
}

EventC ::= SEQUENCE {
  measurementIncreaseThreshold MeasurementIncreaseThreshold,
  measurementChangeTime      MeasurementChangeTime
}

EventD ::= SEQUENCE {
  measurementDecreaseThreshold MeasurementDecreaseThreshold,
  measurementChangeTime      MeasurementChangeTime
}

EventE ::= SEQUENCE {
  measurementThreshold1      MeasurementThreshold1,
  measurementThreshold2      MeasurementThreshold2  OPTIONAL,
  measurementHysteresisTime  MeasurementHysteresisTime  OPTIONAL,
  reportPeriodicity          ReportPeriodicity      OPTIONAL
}

EventF ::= SEQUENCE {
  measurementThreshold1      MeasurementThreshold1,
  measurementThreshold2      MeasurementThreshold2  OPTIONAL,
  measurementHysteresisTime  MeasurementHysteresisTime  OPTIONAL,
  reportPeriodicity          ReportPeriodicity      OPTIONAL
}

-----
-- F
-----

-- The maximum value is equal to the DL spreading factor □ --
FDD-DL-ChannalisationCodeNumber ::= INTEGER(0.. 255)

-- 0: 0 chip, 1: 256 chip, 2: 512 chip, .. ,149: 38144 chip [TS 25.211] --
FDD-S-CCPCH-Offset ::= INTEGER (0.. 149)

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

-----
-- G
-----

GapPeriod ::= INTEGER(0..255)

```

```
Gap Position Mode ::= ENUMERATED {
fixed,
flexible
}

-----
-- H
-----

-----
-- I
-----

-- to do
IB-SG ::= BIT STRING

IB-SG-POS ::= INTEGER (0..4095)

IB-SG-REP ::= INTEGER {rep(16), rep(32), rep(64), rep(128), rep(256), rep(512), rep(1024), rep(2048)}

IB-Type :: Enumerated {
MIB,
SIB1,
SIB2,
SIB12
}

IndicationType ::= ENUMERATED {
noFailure,
serviceImpacting,
cellControl,
...
}

-----
-- J
-----

-----
-- L
-----

LocalCell-ID ::= INTEGER (0..268435455)

-----
-- M
-----
-- dBm, granularity 1 dBm
```


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```
-- dl-power0 indicates 0 dBm
MaximumDL-PowerCapability ::= ENUMERATED{
dl-power0,
dl-power1,
dl-power2,
...
}

-- Unit dBm, 0 to 50, Granularity 1 dB
MaximumTransmissionPower ::= ENUMERATED {
power0,
power1,
power2,
...
}

MaxNumberOfUL-DPDCHs ::= INTEGER (1..6)

MaxPRACH-MidambleShifts ::= ENUMERATED {
shift4,
shift8
}

-- 10ms to 1min, Step10ms
MeasurementChangeTime ::= ENUMERATED {
time10ms,
time20ms,
time30ms,
...
}

MeasurementCharacteristics ::= SEQUENCE {
    measurementFrequency      MeasurementFrequency,
    averagingDuration          AveragingDuration
}

-- to do
MeasurementDecreaseThreshold ::= TBD

-- to do
MeasurementFrequency ::= TBD

-- to do
MeasurementIncreaseThreshold ::= TBD

-- to do
-- 10ms to 1min, Step10ms --
MeasurementHysteresisTime ::= ENUMERATED {
```

```
time10ms,  
time20ms,  
time30ms,  
...  
}  
  
MeasurementID ::= INTEGER (0..1048575)  
  
-- to do  
MeasurementThreshold ::= TBD  
  
-- to do  
MeasurementThreshold1 ::= TBD  
  
-- to do  
MeasurementThreshold2 ::= TBD  
  
MeasurementType ::= ENUMERATED {  
sCH,  
syncRACH-access  
}  
  
MessageDiscriminator ::= ENUMERATED {  
common,  
dedicated  
}  
  
MidambleShift ::= INTEGER (0..15)  
  
MinimumSpreadingFactor ::= ENUMERATED {  
sF4,  
sF16,  
sF32,  
sF64,  
sF128,  
sF256,  
sF512  
}  
  
MinUL-ChannelisationCodeLength ::= ENUMERATED {  
code-length4,  
code-length8,  
code-length16,  
code-length32,  
code-length64,  
code-length128,  
code-length256  
}
```

```
MiscellaneousCause ::= ENUMERATED {
control-processing-overload,
hardware-failure,
oam-intervention,
not-enough-user-plane-processing-resources,
unspecified
}

Mode-DynamicTFS ::= CHOICE {
tdd-mode-dynamic    TransmissionTimeInterval-Dynamic,
...
}

Mode-SemiStaticTFS ::= CHOICE {
tdd-mode-semistatic TransmissionTimeInterval-SemiStatic,
...
}

-----
-- N
-----

-- to do
NumberOfChannelElements ::= TBD

NodeB-CommunicationContextID ::= INTEGER (0..1048576)

NumberOfTransportBlocks ::= INTEGER (0..4095)

-----
-- O
-----

-----
-- P
-----

PagingIndicatorLength ::= ENUMERATED {
ind-length2,
ind-length4,
ind-length8
}

PayloadCRC-PresenceIndicator ::= ENUMERATED {
CRC-Included,
CRC-NotIncluded
}

PD ::= INTEGER(0..2047)
```

```
PICH-Mode ::= ENUMERATED {
noofPI18,
noofPI36,
noofPI72,
noofPI144
}

PilotBitsUsedIndicator ::= ENUMERATED {
pilot-bits-used,
pilot-bits-not-used
}

PowerControlMode ::= ENUMERATED {
pcm0,
pcm1,
...
}

-- Chips. Step size is 3 chips. 0=0 chips, 1=3 chips .. --
--** TODO. -15..40 is transformed to 0..55. 0.1 steps gives 0..550 **
PowerOffset ::= INTEGER (0..24)

PowerResumeMode ::= ENUMERATED {
prm0,
prm1,
...
}

PRACH-Midamble ::= ENUMERATED {
inverted,
direct
}

PreambleScramblingCode ::= INTEGER (0..4095)

-- Bit 0=P0, Bit 1=P1, .. ,Bit 15=P15 [25.213] --
PreambleSignatures ::= BIT STRING (SIZE (16))

-- Unit dBm, -15 to 40, Granularity 0.1 dB
-- cpich-power1 indicates 15 dB
PrimaryCPICH-Power ::= ENUMERATED {
cpich-power1,
cpich-power2,
...
}

PrimaryScramblingCode ::= INTEGER (0..511)
```

```
PropagationDelay ::= INTEGER (0..255)

ProtocolCause ::= ENUMERATED
transaction-not-allowed,
transfer-syntax-error,
abstract-syntax-error -reject,
abstract-syntax-error-ignore-and-notify,
message-not-compatible-with-receiver-state,
semantic-error,
unspecified
}

-- PCCPCH Power unit dBm
-- PCCPCH Power step 0.1dBm
PCCPCH-power ::= INTEGER (-15..40)

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

PSCH-Power ::= INTEGER (0..511)

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

-----
-- R
-----

-- SF
RACH-SlotFormat ::= ENUMERATED {
format256,
format128,
format64,
format32
}

-- Bit 0=Sub Channel Number 0, Bit 1=Sub Channel Number 1, ..., Bit 14=Sub Channel Number 14 --
RACH-SubChannelNumbers ::= BIT STRING (SIZE (15))

RadioNetworkLayerCause ::= Enumerated {
unknown-C-ID,
cell-not-available,
power-level-not-supported,
ul-scramblingcode-already-in-use,
dl-radio-resources-not-available,
ul-radio-resources-not-available,
rl-Already-ActivatedorAllocated,
nodeB-Resources-Unavailable,
insufficient-physical-channel-resources,
measurement-not-supported-for-the-object,
```

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```
macrodiversity-combining-not-possible,
reconfiguration-not-allowed,
requested-configuration-not-supported,
synchronizationsynchronisation-failure,
sIB-Origination-in-Node-B-not-Supported,
unspecified
}

RateMatchingAttribute ::= INTEGER (1..maxRM)

RepetitionLength ::= ENUMERATED {
length1,
length2,
length4,
length8
}

ReportCharacteristicsType ::= CHOICE {
onDemand          NULL,
periodic          ReportPeriodicity,
event-a           EventA,
event-b           EventB,
event-c           EventC,
event-d           EventD,
event-e           EventE,
event-f           EventF
}

-- 10ms to 1min, step 10ms or
-- 1min to 1hour, step 1min
ReportPeriodicity ::= CHOICE {
msec              INTEGER (1..1000),
min               INTEGER (1..60)
}

ResourceOperationalState ::= ENUMERATED {
enabled,
disabled
}

RLC-Mode ::= ENUMERATED {
acknowledgedMode,
unacknowledgedMode,
transparentMode
}

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

RNC-ID ::= INTEGER (0..4095)
```

```

-- -30..-100 step 0.1
-- rssi1 indicates -30
RSSI-Value ::= ENUMERATED {
rssi1,
rssi2,
...
}
-----
-- S
-----

ScramblingCodeChange ::= ENUMERATED {
change,
no-change
}

Scrambling Code Word Number ::= INTEGER (0..255)

SecondaryCCPCH-SlotFormat ::= INTEGER(0..8)

SegmentType ::= ENUMERATED {
first,
subsequent,
last,
complete
}

SemiStaticTransportFormatInformation ::= SEQUENCE {
transmissionTimeInterval      TransmissionTimeInterval,
typeOfChannelCoding           TypeOfChannelCoding,
codingRate                     CodingRate      OPTIONAL
-- This IE is only present if IE Type of channel coding is Convolutional or Turbo --,
rateMatchingAttribute         RateMatchingAttribute,
cRC-Size                       CRC-Size,
mode-semistatic                Mode-SemiStatic
}

S-FieldLength ::= ENUMERATED {
s-length1,
s-length2
}

SIB-DeletionIndicator ::= ENUMERATED {
noDeletion,
deletion
}

SIB-Originator ::= ENUMERATED {

```

```
nodeB,  
cRNC  
}  
  
--** TODO. -10..10 is transformed to 0..10. 0.1 steps gives 0..200 **  
-- sir-error-value1 indicates 0 dB  
SIR-ErrorValue ::= ENUMERATED {  
sir-error-value1,  
sir-error-value2,  
...  
}  
  
--** TODO. -10..20 is transformed to 0..30. 0.1 steps gives 0..300 **  
-- sir-value1 indicates 0 dB  
SIR-Value ::= ENUMERATED {  
sir-value1,  
sir-value2,  
...  
}  
  
SSDT-CellIdentity ::= ENUMERATED {a, b, c, d, e, f, g, h}  
  
SSDT-Indication ::= ENUMERATED {  
ssdtActiveInTheUE,  
ssdtNotActiveInTheUE  
}  
  
STTD-Indicator ::= ENUMERATED {  
active,  
inactive  
}  
  
SSDT-SupportIndicator ::= ENUMERATED {  
sSDT-not-supported,  
sSDT-Supported  
}  
  
ShutdownTimer ::= INTEGER (1..3600)  
  
SynchronisationMethod ::= ENUMERATED {  
external-reference,  
locked-toMaster-cell,  
one-time-synchronisation  
}  
  
-----  
-- T  
-----
```



```
T-Cell ::= ENUMERATED {
    chip-0,
    chip-256,
    chip-512,
    chip-768,
    chip-1024,
    chip-1280,
    chip-1536,
    chip-1892,
    chip-2048,
    chip-2304
}
```

```
TDD-ChannelisationCode ::= ENUMERATED {
    channelisationCode1-1,
    channelisationCode2-1,
    channelisationCode2-2,
    channelisationCode4-1,
    channelisationCode4-2,
    ...
}
```

~~the ChipOffset is -19200 to +19199~~
~~TDD-ChipOffset ::= INTEGER (-19200..19199)~~

```
TransmissionTimeInterval-Dynamic ::= SEQUENCE (SIZE (1..maxTTIcount)) OF
    ENUMERATED {tti10, tti20, tti40, tti80}
}
```

```
TransmissionTimeInterval-SemiStatic ::= ENUMERATED {
    frameRelated,
    timeSlotRelated
}
```

~~TDD-S-CCPCH-Offset ::= INTEGER (0..63)~~

```
TFCI-Presence ::= ENUMERATED {
    present,
    not-present
}
```

```
TFCI-SignallingMode ::= ENUMERATED {
    normal,
    split
}
```

```
TFCS ::= SEQUENCE (SIZE (1..maxnoofTFCS)) OF
    SEQUENCE {
```

```

    cTFC          CTFC
}

TFS ::= SEQUENCE {
    dynamicTransportFormatInformation          DynamicTransportFormatInformation,
    semiStaticTransportFormatInformation      SemiStaticTransportFormatInformation
}

TGD ::= INTEGER (0..255)

TGL ::= INTEGER (3,4,7,10,14)

TimeSlot ::= INTEGER (0..14)

TimeSlotDirection ::= ENUMERATED {
    ul,
    dl
}

-- to do
TimeSlotISCP-Value ::= TBD

TimeSlotStatus ::= ENUMERATED {
    active,
    not-active
}

ToAWE ::= INTEGER (0..2559) -- msec. --
ToAWS ::= INTEGER (0..1279) -- msec. --

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

Transmit Diversity Indicator ::= ENUMERATED {
    active,
    Inactive
}

TransmissionTimeInterval ::= ENUMERATED {
    time-interval10,
    time-interval20,
    time-interval40,
    time-interval80
}
```

```
}          -- mec --

--** TODO. -35..15 is transformed to 0..50. 0.1 steps gives 0..500 **
-- carrier-power1 indicates 5 dB
TransmittedCarrierPowerValue ::= ENUMERATED {
carrier-power1,
carrier-power2,
...
}

--** TODO. -35..15 is transformed to 0..50. 0.1 steps gives 0..500 **
-- code-power1 indicated 5 dB
TransmittedCodePowerValue ::= ENUMERATED {
code-power1,
code-power2,
...
}

TransportBlockSize ::= INTEGER (1..5000)
-- bit --

TSTD-Indicator ::= ENUMERATED {
active,
inactive
}

TransportLayerAddress ::= OCTET STRING (SIZE (1..20, ...))

TransportLayerCause ::= ENUMERATED {
transport-link-failure,
transmission-port-not-available,
transport-resource-unavailable,
unspecified
}

TypeOfChannelCoding ::= ENUMERATED {
no-coding,
convolutional,
turbo
}

-----
-- U
-----

UARFCN ::= INTEGER (174 .. 474)

UL-DL-CompressedModeSelection ::= ENUMERATED {
ul-only,
```

```
dl-only,  
both-UlandDL  
}  
  
UL-DPCH-SlotFormat ::= INTEGER (0..5)  
  
UL-EbNo ::= INTEGER (0..255)  
-- Resolution is 0.1 dB, range 0-25.5 dB --  
  
UL-FP-Mode ::= ENUMERATED {  
normal,  
silent  
}  
  
-- unit dBm, step 0.1dBm  
UL-InterferenceLevel ::= INTEGER (-128..60)  
  
UL-PunctureLimit ::= INTEGER (0..100)  
  
UL-ScramblingCode ::= SEQUENCE {  
    uL-ScramblingCodeNumber    UL-ScramblingCodeNumber,  
    uL-ScramblingCodeLength    UL-ScramblingCodeLength  
}  
  
-- 2^24  
UL-ScramblingCodeLength ::= INTEGER (0..16777215)  
  
UL-ScramblingCodeNumber ::= ENUMERATED {  
short,  
long  
}  
  
UplinkDeltaEb-No ::= ENUMERATED {  
deltaEb-No-6dB,  
...  
}  
  
UplinkDeltaEb-No-after ::= ENUMERATED {  
deltaEb-No-after-6dB,  
...  
}  
  
END
```

9.3.5 NBAP Common Data Type Definitions

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

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```
-- Common definitions
--
-- *****

NBAP-CommonDataTypes -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

Criticality      ::= ENUMERATED { reject, ignore, notify }

MessageDiscriminator  ::= ENUMERATED { common, dedicated }

Presence        ::= ENUMERATED { optional, conditional, mandatory }

PrivateExtensionID ::= CHOICE {
    local          INTEGER (0..65535),
    global         OBJECT IDENTIFIER
}

ProcedureID     ::= SEQUENCE {
    procedureCode   INTEGER (0..255),
    ddMode          ENUMERATED { tdd, fdd, common }
}

ProtocolExtensionID ::= INTEGER (0..65535)

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

TransactionID   ::= INTEGER (0..255)

END
```

9.3.6 NBAP Extension Definitions

```
-- *****
--
-- Container definitions
--
-- *****

NBAP-Containers -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
```

```
--
-- *****
IMPORTS
    Criticality,
    Presence,
    PrivateExtensionID,
    ProtocolExtensionID,
    ProtocolIE-ID
FROM NBAP-CommonDataTypes

    maxProtocolExtensions,
    maxPrivateExtensions,
    maxProtocolIEs
FROM NBAP-Constants;

-- *****
--
-- 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
}
WITH SYNTAX {
    ID          &id
    CRITICALITY &criticality
    EXTENSION   &Extension
}

-- *****
--
-- Class Definition for Private Extensions
--
-- *****

NBAP-PRIVATE-EXTENSION ::= CLASS {
    &id          PrivateExtensionID,
    &criticality Criticality,
    &Extension
}
WITH SYNTAX {
    ID          &id
    CRITICALITY &criticality
    EXTENSION   &Extension
}

-- *****
--
-- Container for Protocol IEs
--
-- *****
```

```
ProtocolIE-Container {NBAP-PROTOCOL-IES : IEsSetParam} ::=
    SEQUENCE (SIZE (0..maxProtocolIEs)) OF
        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 Extensions
--
-- *****

PrivateExtensionContainer {NBAP-PRIVATE-EXTENSION : ExtensionSetParam} ::=
SEQUENCE (SIZE (1..maxPrivateExtensions)) OF
PrivateExtensionField {{ExtensionSetParam}}

PrivateExtensionField {NBAP-PRIVATE-EXTENSION : ExtensionSetParam} ::= SEQUENCE {
  id      NBAP-PRIVATE-EXTENSION.&id
  ({ExtensionSetParam}),
  criticality NBAP-PRIVATE-EXTENSION.&criticality
  ({ExtensionSetParam}@id),
  extensionValue NBAP-PRIVATE-EXTENSION.&Extension
  ({ExtensionSetParam}@id)
}

END
```

9.3.7 Constant Definitions for NBAP

```
-- *****
--
-- Constant definitions
--
-- *****

NBAP-Constants -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- Elementary Procedures
--
-- *****
```

```
id-audit INTEGER ::= 0
id-auditRequired INTEGER ::= 1
id-blockResource INTEGER ::= 2
id-cellDeletion INTEGER ::= 3
id-cellReconfiguration INTEGER ::= 4
id-cellSetup INTEGER ::= 5
id-commonMeasurementFailure INTEGER ::= 6
id-commonMeasurementInitiation INTEGER ::= 7
id-commonMeasurementReport INTEGER ::= 8
id-commonMeasurementTermination INTEGER ::= 9
id-commonTransportChannelDeletion INTEGER ::= 10
id-commonTransportChannelReconfiguration INTEGER ::= 11
id-commonTransportChannelSetup INTEGER ::= 12
id-compressedModeControlCancellation INTEGER ::= 13
id-compressedModeControlCommit INTEGER ::= 14
id-compressedModeControlPreparation INTEGER ::= 15
id-dedicatedMeasurementFailure INTEGER ::= 16
id-dedicatedMeasurementInitiation INTEGER ::= 17
id-dedicatedMeasurementReport INTEGER ::= 18
id-dedicatedMeasurementTermination INTEGER ::= 19
id-dlPowerControl INTEGER ::= 20
id-neighbourCellMeasurement INTEGER ::= 21
id-radioLinkAddition INTEGER ::= 22
id-radioLinkDeletion INTEGER ::= 23
id-radioLinkFailure INTEGER ::= 24
id-radioLinkReconfigurationCommit INTEGER ::= 25
id-radioLinkReconfigurationCancel INTEGER ::= 26
id-radioLinkRestoration INTEGER ::= 27
id-radioLinkSetup INTEGER ::= 28
id-resourceStatusIndication INTEGER ::= 29
id-synchronisationAdjustment INTEGER ::= 30
id-synchronisationFailure INTEGER ::= 31
id-synchronisationRestart INTEGER ::= 32
id-synchronisedRadioLinkReconfigurationPreparation INTEGER ::= 33
id-systemInformationUpdate INTEGER ::= 34
id-unblockResource INTEGER ::= 35
id-unsynchronisedRadioLinkReconfiguration INTEGER ::= 36

-- *****
--
-- Extension constants
--
-- *****

maxPrivateExtensions INTEGER ::= 65535
maxProtocolExtensions INTEGER ::= 65535
maxProtocolIEs INTEGER ::= 65535

-- *****
```

```
--  
-- Lists  
--  
-- *****  
  
maxSF                INTEGER ::= 10  
maxnoofDLCodes      INTEGER ::= 10  
maxnoofRLs          INTEGER ::= 10  
maxnoofDPCHs        INTEGER ::= 10  
maxnoofSCCPCHs      INTEGER ::= 10  
maxnoofPRACHs       INTEGER ::= 10  
maxnoofDCHs         INTEGER ::= 10  
maxnoofDSCHs        INTEGER ::= 10  
maxnoofFACHs        INTEGER ::= 10  
maxnoofCCTrCHs     INTEGER ::= 10  
maxnoofPCHs         INTEGER ::= 10  
maxnoofPUCSHs       INTEGER ::= 10  
maxnoofTFCs         INTEGER ::= 10  
maxnoofUSCHs        INTEGER ::= 10  
maxUCIDinNodeB      INTEGER ::= 10  
maxCellinNodeB      INTEGER ::= 10  
maxCCPinNodeB       INTEGER ::= 10  
maxCTF-1            INTEGER ::= 10  
maxLocalCellinNodeB INTEGER ::= 10  
maxPCHinNodeB       INTEGER ::= 10  
maxRACHCell         INTEGER ::= 10  
maxnoofFACHCell     INTEGER ::= 10  
maxPCHCell          INTEGER ::= 10  
maxUSCHCell         INTEGER ::= 10  
maxAICHCell         INTEGER ::= 10  
maxMIBSEG           INTEGER ::= 10  
maxSIBSEG           INTEGER ::= 10  
maxnoofFDDNeighbours INTEGER ::= 10  
maxnoofTDDNeighbours INTEGER ::= 10  
maxTFcount          INTEGER ::= 10  
maxnoofTFCs         INTEGER ::= 10  
maxFACHCell         INTEGER ::= 10  
maxnoCCTrCH         INTEGER ::= 10  
maxnoCCTrCHs        INTEGER ::= 10  
maxnoofCCTrCH       INTEGER ::= 10  
maxnoofDPCH         INTEGER ::= 10  
maxnoofPUSHs        INTEGER ::= 10  
maxnoofRL-1         INTEGER ::= 10  
maxnoofRL-2         INTEGER ::= 10  
maxRM               INTEGER ::= 10  
  
-- *****  
--
```

```
-- IEs
--
-- *****

id-AICH-Information-ResourceStatIndItem          INTEGER ::= 0
id-AICH-ParametersList                          INTEGER ::= 1
id-AICH-ParametersListItem                      INTEGER ::= 2
id-AllowedSlotFormatInformationListItem-CTCHreconf-Req-FDD  INTEGER ::= 3
id-AllowedSlotFormatInformationListItem-CTCHsetup-Req-FDD  INTEGER ::= 4
id-BlockingPriorityIndicator                    INTEGER ::= 5
id-CCTrCH-ParametersList                       INTEGER ::= 6
id-CCTrCH-ParametersListItem                   INTEGER ::= 7
id-CFN                                          INTEGER ::= 8
id-CRNC-CommunicationContextID                 INTEGER ::= 9
id-CRNCommunicationContextID                   INTEGER ::= 10
id-Cause                                        INTEGER ::= 11
id-Cell-Information-ResourceStatIndItem        INTEGER ::= 12
id-Cell-InformationItem                        INTEGER ::= 13
id-Cell-InformationList                       INTEGER ::= 14
id-Cell-Parameter                             INTEGER ::= 15
id-Cell-ParametersItem                        INTEGER ::= 16
id-Cell-ParametersList                       INTEGER ::= 17
id-CellParameter                             INTEGER ::= 18
id-CommonMeasurementObjectType                 INTEGER ::= 19
id-CommonMeasurementType                      INTEGER ::= 20
id-CommonPhysicalChannelID                    INTEGER ::= 21
id-CommonPhysicalChannelType-CTCHsetup-Req-FDD  INTEGER ::= 22
id-CommonPhysicalChannelType-CTCHsetup-Response  INTEGER ::= 23
id-CommunicationControlPort-InformationItem    INTEGER ::= 24
id-CommunicationControlPortID                 INTEGER ::= 25
id-CommunicationControlPortInformation-ResourceStatIndItem  INTEGER ::= 26
id-CommunicationControlPortInformationList     INTEGER ::= 27
id-CompressesModeMethod                       INTEGER ::= 28
id-ConfigurationGenerationID                  INTEGER ::= 29
id-DCH-Add-RL-ReconfPrepFDDItem               INTEGER ::= 30
id-DCH-Add-RL-ReconfPrepTDDItem               INTEGER ::= 31
id-DCH-Add-RL-ReconfReadyItem                 INTEGER ::= 32
id-DCH-Add-RL-ReconfReqFDDItem                INTEGER ::= 33
id-DCH-Add-RL-ReconfReqTDDItem                INTEGER ::= 34
id-DCH-AddItem-RL-ReconfResp                  INTEGER ::= 35
id-DCH-AddList-RL-ReconfPrepFDD               INTEGER ::= 36
id-DCH-AddList-RL-ReconfPrepTDD               INTEGER ::= 37
id-DCH-AddList-RL-ReconfReqFDD                INTEGER ::= 38
id-DCH-AddList-RL-ReconfReqTDD                INTEGER ::= 39
id-DCH-Delete-RL-ReconfPrepFDDItem             INTEGER ::= 40
id-DCH-Delete-RL-ReconfPrepTDDItem             INTEGER ::= 41
id-DCH-Delete-RL-ReconfReqFDDItem             INTEGER ::= 42
id-DCH-Delete-RL-ReconfReqTDDItem             INTEGER ::= 43
id-DCH-DeleteList-RL-ReconfPrepFDD            INTEGER ::= 44
```

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id-DCH-DeleteList-RL-ReconfPrepTDD INTEGER ::= 45
id-DCH-DeleteList-RL-ReconfReqFDD INTEGER ::= 46
id-DCH-DeleteList-RL-ReconfReqTDD INTEGER ::= 47
id-DCH-Information-RL-SetupReqFDDItem INTEGER ::= 48
id-DCH-Information-RL-SetupReqTDDItem INTEGER ::= 49
id-DCH-InformationList-RL-SetupReqFDD INTEGER ::= 50
id-DCH-InformationList-RL-SetupReqTDD INTEGER ::= 51
id-DCH-InformationResponse-RL-SetupFailFDDItem INTEGER ::= 52
id-DCH-InformationResponse-RL-setupResTDDItem INTEGER ::= 53
id-DCH-InformationResponseItem INTEGER ::= 54
id-DCH-Modify-RL-ReconfPrepFDDItem INTEGER ::= 55
id-DCH-Modify-RL-ReconfPrepTDDItem INTEGER ::= 56
id-DCH-Modify-RL-ReconfReadyItem INTEGER ::= 57
id-DCH-Modify-RL-ReconfReqFDDItem INTEGER ::= 58
id-DCH-Modify-RL-ReconfReqTDDItem INTEGER ::= 59
id-DCH-ModifyItem-RL-ReconfResp INTEGER ::= 60
id-DCH-ModifyList-RL-ReconfPrepFDD INTEGER ::= 61
id-DCH-ModifyList-RL-ReconfPrepTDD INTEGER ::= 62
id-DCH-ModifyList-RL-ReconfReqFDD INTEGER ::= 63
id-DCH-ModifyList-RL-ReconfReqTDD INTEGER ::= 64
id-DL-CCTrCH-Information-RL-ReconfPrepTDDItem INTEGER ::= 65
id-DL-CCTrCH-Information-RL-ReconfReqTDDItem INTEGER ::= 66
id-DL-CCTrCH-Information-RL-SetupReqTDDItem INTEGER ::= 67
id-DL-CCTrCH-InformationItem INTEGER ::= 68
id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD INTEGER ::= 69
id-DL-CCTrCH-InformationList-RL-ReconfReqTDD INTEGER ::= 70
id-DL-CCTrCH-InformationList-RL-SetupReqTDD INTEGER ::= 71
id-DL-CCTrCHInformationItem INTEGER ::= 72
id-DL-CCTrCHInformationList INTEGER ::= 73
id-DL-CodeInformation INTEGER ::= 74
id-DL-CodeInformation-RL-ReconfPrepFDDItem INTEGER ::= 75
id-DL-CodeInformation-RL-SetupReqFDDItem INTEGER ::= 76
id-DL-DPCH-Information-RL-ReconfPrepFDD INTEGER ::= 77
id-DL-DPCH-Information-RL-ReconfPrepTDDItem INTEGER ::= 78
id-DL-DPCH-Information-RL-SetupReqTDDItem INTEGER ::= 79
id-DL-DPCH-InformationItem INTEGER ::= 80
id-DL-DPCH-InformationItem-RL-ReconfReqFDD INTEGER ::= 81
id-DL-DPCH-InformationItem-RL-SetupReqFDD INTEGER ::= 82
id-DL-FrameType INTEGER ::= 83
id-DL-ReferencePowerInformationItem INTEGER ::= 84
id-DSCH-AddItem-RL-ReconfPrepFDD INTEGER ::= 85
id-DSCH-AddItem-RL-ReconfReqFDD INTEGER ::= 86
id-DSCH-DeleteItem-RL-ReconfPrepFDD INTEGER ::= 87
id-DSCH-DeleteItem-RL-ReconfReqFDD INTEGER ::= 88
id-DSCH-ID INTEGER ::= 89
id-DSCH-Information-RL-SetupReqFDDItem INTEGER ::= 90
id-DSCH-InformationList-RL-SetupReqFDD INTEGER ::= 91
id-DSCH-InformationResponse-RL-SetupFailFDDItem INTEGER ::= 92
id-DSCH-InformationResponse-RL-setupResFDDItem INTEGER ::= 93

~~X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)" X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)" X.691, (12/94) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)" 3G TS-25.433 V3.0.0 (2000-01)~~

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id-DSCH-ModifyItem-RL-ReconfPrepFDD INTEGER ::= 94
id-DSCH-ModifyItem-RL-ReconfReqFDD INTEGER ::= 95
id-DedicatedMeasurementObjectType INTEGER ::= 96
id-DedicatedMeasurementType INTEGER ::= 97
id-FACH-Information-ResourceStatIndItem INTEGER ::= 98
id-FACH-InformationItem INTEGER ::= 99
id-FACH-ListItem INTEGER ::= 100
id-FACH-ParametersList-CTChreconf-Req-FDD INTEGER ::= 101
id-FACH-ParametersList-CTChreconf-Req-TTD INTEGER ::= 102
id-FACH-ParametersListItem-CTChreconf-Req-FDD INTEGER ::= 103
id-FACH-ParametersListItem-CTChreconf-Req-TTD INTEGER ::= 104
id-FACH-ParametersListItem-CTChsetup-Req-FDD INTEGER ::= 105
id-FACH-ParametersListItem-CTChsetup-Response INTEGER ::= 106
id-GapStartingSlotNumber INTEGER ::= 107
id-IndicationType INTEGER ::= 108
id-Local-Cell-Information-ResourceStatIndItem INTEGER ::= 109
id-Local-CellInformation-ResourceStatIndItem INTEGER ::= 110
id-LocalCell-ID INTEGER ::= 111
id-LocalCell-InformationItem INTEGER ::= 112
id-LocalCellInformationList INTEGER ::= 113
id-MIB-SegmentInformationItem INTEGER ::= 114
id-MIB-SegmentInformationList INTEGER ::= 115
id-MaximumTransmissionPower INTEGER ::= 116
id-MeasuredCellInfo INTEGER ::= 117
id-MeasurementCharacteristics INTEGER ::= 118
id-MeasurementID INTEGER ::= 119
id-MeasurementType INTEGER ::= 120
id-NeighbouringFDD-Cell-InformationItem INTEGER ::= 121
id-NeighbouringTDD-Cell-InformationItem INTEGER ::= 122
id-NodeB-CommunicationContextID INTEGER ::= 123
id-PCCPCH-Information INTEGER ::= 124
id-PCH-Information-ResourceStatIndItem INTEGER ::= 125
id-PCH-InformationItem INTEGER ::= 126
id-PCH-ListItem INTEGER ::= 127
id-PCH-Parameters-CTChreconf-Req-FDD INTEGER ::= 128
id-PCH-ParametersList INTEGER ::= 129
id-PCH-ParametersListItem INTEGER ::= 130
id-PICH-Parameters-CTChreconf-Req-FDD INTEGER ::= 131
id-PRACH-ParametersList INTEGER ::= 132
id-PRACH-ParametersListItem INTEGER ::= 133
id-PSCH-Information INTEGER ::= 134
id-PSCHandPCCPCH-Information INTEGER ::= 135
id-PUSCH-ListItem INTEGER ::= 136
id-PatternDuration INTEGER ::= 137
id-PowerControlMode INTEGER ::= 138
id-PowerResumeMode INTEGER ::= 139
id-PrimaryCCPCH-Information INTEGER ::= 140
id-PrimaryCPICH-Information INTEGER ::= 141
id-PrimarySCH-Information INTEGER ::= 142

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id-PrimaryScramblingCode          INTEGER ::= 143
id-ProcedureScopeType             INTEGER ::= 144
id-RACH-Information-ResourceStatIndItem  INTEGER ::= 145
id-RACH-InformationItem           INTEGER ::= 146
id-RL-ID                           INTEGER ::= 147
id-RL-Information                  INTEGER ::= 148
id-RL-Information-DMeasureReportItem  INTEGER ::= 149
id-RL-Information-DMeasureRequestItem  INTEGER ::= 150
id-RL-Information-DMeasureResponseItem  INTEGER ::= 151
id-RL-Information-RL-ReconfPrepFDDItem  INTEGER ::= 152
id-RL-Information-RL-SetupReqFDDItem    INTEGER ::= 153
id-RL-InformationItem             INTEGER ::= 154
id-RL-InformationItem-RL-SetupReqTDD    INTEGER ::= 155
id-RL-InformationList             INTEGER ::= 156
id-RL-InformationList-RL-ReconfReqFDD   INTEGER ::= 157
id-RL-InformationList-RL-SetupReqFDD    INTEGER ::= 158
id-RL-InformationResponse-RL-setupResFDDItem  INTEGER ::= 159
id-RL-InformationResponseItem-RL-ReconfResp  INTEGER ::= 160
id-RL-InformationResponseList-RL-ReconfReady  INTEGER ::= 161
id-RL-InformationResponseList-RL-ReconfReadyItem  INTEGER ::= 162
id-RL-InformationResponseList-RL-ReconfResp  INTEGER ::= 163
id-RL-InformationResponseList-RL-setupResFDD  INTEGER ::= 164
id-RL-InformationResponseList-RL-setupResTDD  INTEGER ::= 165
id-RL-ReconfigurationFailure-RL-ReconfFailItem  INTEGER ::= 166
id-RL-ReconfigurationFailureList-RL-ReconfFail  INTEGER ::= 167
id-RL-ResponseInformation          INTEGER ::= 168
id-RL-ResponseInformationItem       INTEGER ::= 169
id-RL-ResponseInformationList       INTEGER ::= 170
id-RL-informationItem              INTEGER ::= 171
id-RL-informationList               INTEGER ::= 172
id-RadioLinkInformation-RL-ReconfPrepFDDItem  INTEGER ::= 173
id-RadioLinkInformation-RL-ReconfPrepTDD  INTEGER ::= 174
id-RadioLinkInformation-RL-ReconfReqTDD  INTEGER ::= 175
id-RadioLinkInformationList-RL-ReconfPrepFDD  INTEGER ::= 176
id-ReportCharacteristics            INTEGER ::= 177
id-SFN                              INTEGER ::= 178
id-SIB-SegmentInformationItem        INTEGER ::= 179
id-SIB-SegmentInformationList        INTEGER ::= 180
id-ScramblingCodeChange             INTEGER ::= 181
id-Secondary-CCPCHListItem           INTEGER ::= 182
id-SecondaryCPICH-Information         INTEGER ::= 183
id-SecondarySCH-Information           INTEGER ::= 184
id-ShutdownTimer                    INTEGER ::= 185
id-Successful-RL-InformationResponse-RL-SetupFailFDDItem  INTEGER ::= 186
id-Successful-RL-InformationResponseItem  INTEGER ::= 187
id-Successful-RL-InformationResponseList  INTEGER ::= 188
id-Successful-RL-InformationResponseList-RL-SetupFailFDD  INTEGER ::= 189
id-SynchronisationMethod            INTEGER ::= 190
id-T-Cell                            INTEGER ::= 190±

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id-TDDChipOffset INTEGER ::= ~~192~~
id-TimeSlotConfigurationItem INTEGER ::= 191~~3~~
id-TimeSlotConfigurationList INTEGER ::= 19~~2~~4
id-TransmissionGapDistance INTEGER ::= 193~~5~~
id-TransmissionGapPeriod INTEGER ::= 19~~4~~6
id-TransmitGapLength INTEGER ::= 19~~5~~7
id-TransmitGapPositionMode INTEGER ::= 19~~6~~8
id-UARFCN INTEGER ::= 197~~9~~
id-UC-ID INTEGER ::= ~~198200~~
id-UL-CCTrCH-Information-RL-ReconfPrepTDDItem INTEGER ::= ~~199201~~
id-UL-CCTrCH-Information-RL-ReconfReqTDDItem INTEGER ::= 200~~2~~
id-UL-CCTrCH-Information-RL-SetupReqTDDItem INTEGER ::= 201~~3~~
id-UL-CCTrCH-InformationItem IE INTEGER ::= 202~~4~~
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD INTEGER ::= 203~~5~~
id-UL-CCTrCH-InformationList-RL-ReconfReqTDD INTEGER ::= 204~~6~~
id-UL-CCTrCH-InformationList-RL-SetupReqTDD INTEGER ::= 20~~5~~7
id-UL-CCTrCHInformation IE INTEGER ::= 20~~6~~8
id-UL-CCTrCHInformationList INTEGER ::= 207~~9~~
id-UL-DPCH-Information-RL-ReconfPrepFDD INTEGER ::= 208~~10~~
id-UL-DPCH-Information-RL-ReconfPrepTDDItem INTEGER ::= 209~~11~~
id-UL-DPCH-Information-RL-SetupReqTDDItem INTEGER ::= 210~~2~~
id-UL-DPCH-InformationItem-RL-ReconfReqFDD INTEGER ::= 211~~3~~
id-UL-DPCH-InformationItem-RL-SetupReqFDD INTEGER ::= 212~~4~~
id-UL-DPCH-InformationItem IE INTEGER ::= 213~~5~~
id-USCH-Information-ResourceStatIndItem INTEGER ::= 214~~6~~
id-USCH-InformationItem IE INTEGER ::= 21~~5~~7
id-USCH-ListItem-CTCHsetup-Req-TDD INTEGER ::= 216~~8~~
id-Unsuccessful-RL-InformationResponse IE INTEGER ::= 217~~9~~
id-Unsuccessful-RL-InformationResponse-RL-SetupFailFDDItem IE INTEGER ::= 218~~20~~
id-Unsuccessful-RL-InformationResponseItem IE INTEGER ::= 219~~21~~
id-Unsuccessful-RL-InformationResponseItem-RL-SetupFailTDD IE INTEGER ::= 220~~2~~
id-Unsuccessful-RL-InformationResponseList IE INTEGER ::= 221~~3~~
id-Unsuccessful-RL-InformationResponseList-RL-SetupFailFDD IE INTEGER ::= 222~~4~~

END

9.4 Message Transfer Syntax

NBAP shall use the ASN.1 Packed Encoding Rules (PER) Aligned Variant as transfer syntax as specified in ref. [11].

[Editor's note: The dating of reference [11] needs to be verified. It has been included from the ITU-T list of recommendations in force. The dating of the reference is FFS.]

9.5 Timers

10 Handling of unknown, unforeseen and erroneous protocol data

10.1 General

Protocol Error cases can be divided into two classes:

- Transfer Syntax error
- Abstract Syntax error

10.2 Transfer Syntax Error

A Transfer Syntax Error occurs when the receiver is not able to decode the received message i.e. the transfer syntax cannot be opened. If Transfer Syntax Error occurs, the receiver should initiate Error Indication procedure with appropriate cause value for the protocol error.

10.3 Abstract Syntax Error

10.3.1 General

In the NBAP messages there is criticality information set for individual IEs and/or sequences of IEs. This criticality information instructs the receiver how to act when receiving an IE that is not comprehended. An IE shall be regarded as not comprehended if the receiving node either cannot decode the IE or does not comprehend the function represented by the IE value. The case of the not comprehended IE is an Abstract Syntax Error.

If an Abstract Syntax Error occurs, the receiver shall read the remaining message and shall then for each detected Abstract Syntax Error act according to the Criticality Information for the IE or sequences of IEs due to which Abstract Syntax Error occurred in accordance with chapter 10.3.2.

The receiving node shall take different actions depending on the value of the Criticality Information. The three possible values of the Criticality Information are:

- Reject IE
- Ignore IE and Notify Sender
- Ignore IE

10.3.2 Handling of the Criticality Information at Reception

10.3.2.1 Procedure Code

The receiving node shall treat the different types of criticality information of the *Procedure Code* according to the following:

Reject IE:

- If a message is received with a *Procedure Code* 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 Code* 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 Code* marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the procedure.

10.3.2.2 IEs other than the Procedure Code

The receiving node shall treat the different types of criticality information of an IE other than the *Procedure Code* according to the following:

Reject IE:

- If a message *initiating* a procedure is received containing one or more IEs 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 using the message normally used to report unsuccessful outcome of the procedure.
- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing one or more IEs marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall initiate the Error Indication procedure.
- If a *response* message is received containing one or more IEs marked with "*Reject IE*", 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 marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall continue with the procedure using the understood IEs and report that one or more IEs have been ignored in the response message of the procedure.
- If a *response* message is received containing one or more IEs marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the IE and initiate the Error Indication procedure.

Ignore IE:

- If a message *initiating* a procedure is received containing one or more IEs marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall continue with the procedure using the understood IEs.

10.4 Logical Error Handling

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 as defined by the class of the elementary procedure, irrespective of the criticality of the IE's 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 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 ERROR INDICATION procedure shall be initiated with an appropriate cause value.

Class 3:

Where the logical error occurs in a request message of a class 3 procedure, and the procedure has a failure message, the failure message shall be sent with an appropriate cause value. Typical cause values are:

1. Semantic Error
2. Message not compatible with receiver state

Where the logical error is contained in a request message of a class 3 procedure, and the procedure does not have a failure message, the ERROR INDICATION procedure shall be initiated with an appropriate cause value.

Where the logical error exists in a response message of a class 3 procedure, local error handling shall be initiated.

Annex A (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
<p>Rapporteur for TS25.433 is:</p> <p>Nobutaka Ishikawa RAN-WG3</p> <p>Tel.: +81 468 40 3220 Fax : +81 468 40 3840 Email : nobu@wsp.yrp.nttdocomo.co.jp</p>					

History

Document history		

3GPP TSG-RAN Meeting #7
Madrid, Spain, 13 - 15 March 2000

Document R3-000024

e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.433 CR 003

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **TSG RAN #7**

list expected approval meeting # here

↑

for approval
for information

X

strategic
non-strategic

(for SMG
use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:

(at least one should be marked with an X)

(U)SIM

ME

UTRAN / Radio

Core Network

Source:

TSG-RAN WG3

Date:

24-28 Jan. 2000

Subject:

Insertion of missing mapping table; Functions to Elementary Procedures

Work item:

Category:

(only one category
shall be marked
with an X)

F Correction

A Corresponds to a correction in an earlier release

B Addition of feature

C Functional modification of feature

D Editorial modification

X

Release:

Phase 2

Release 96

Release 97

Release 98

Release 99

Release 00

X

Reason for change:

At the RAN WG3 meeting #8 in Abiko it was agreed to include not only the functions proposed for NBAP (R3-99D98) but also the table showing the mapping between Functions and Elementary procedures

Clauses affected:

7

Other specs affected:

Other 3G core specifications

→ List of CRs:

Other GSM core specifications

→ List of CRs:

MS test specifications

→ List of CRs:

BSS test specifications

→ List of CRs:

O&M specifications

→ List of CRs:

Other comments:

The table included in this CR has been aligned with the present content of NBAP, i.e. some functions proposed in Abiko does not exist any more and some elementary procedures have different names. The function Compressed Mode Control has been added in the same way as agreed for RNSAP.

7 Functions of NBAP

The NBAP protocol has 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 that both nodes has the same information on the configuration of the radio resources.
- Measurements on Common 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.
- ~~- Synchronisation Management.(TDD) This function allows the CRNC to manage the synchronisation of a TDD cell in a Node B.~~
- Radio Link Management. This function allows the CRNC to manage radio links using dedicated resources in a NodeB.
- 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 NodeB. The function also allows the NodeB 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 general error situations. This function allows reporting of general error situations, for which function specific error messages have not been defined.

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)
<u>Cell Configuration Management</u>	a) <u>Cell Setup</u> b) <u>Cell Reconfiguration</u> c) <u>Cell Deletion</u>
<u>Common Transport Channel Management</u>	a) <u>Common Transport Channel Setup</u> b) <u>Common Transport Channel Reconfiguration</u> c) <u>Common Transport Channel Deletion</u>
<u>System Information Management</u>	<u>System Information Update</u>
<u>Resource Event Management</u>	a) <u>Block Resource</u> b) <u>Unblock Resource</u> c) <u>Resource Status Indication</u>
<u>Configuration Alignment</u>	a) <u>Audit Required</u> b) <u>Audit</u>
<u>Measurements on Common Resources</u>	a) <u>Common Measurement Initiation</u> b) <u>Common Measurement Reporting</u> c) <u>Common Measurement Termination</u> d) <u>Common Measurement Failure</u>
<u>Radio Link Management.</u>	a) <u>RL Setup</u> b) <u>RL Addition</u> c) <u>RL Deletion</u> d) <u>Unsynchronised RL Reconfiguration</u> e) <u>Synchronised RL Reconfiguration Preparation</u> f) <u>Synchronised RL Reconfiguration Commit</u> g) <u>Synchronised RL Reconfiguration Cancellation</u>
<u>Radio Link Supervision.</u>	a) <u>RL Failure</u> b) <u>RL Restoration</u>
<u>Compressed Mode Control [FDD]</u>	a) <u>Compressed Mode Preparation</u> b) <u>Compressed Mode Commit</u> c) <u>Compressed Mode Cancellation</u>
<u>Measurements on Dedicated Resources</u>	a) <u>Measurement Request</u> b) <u>Measurement Reporting</u> c) <u>Measurement Termination</u> d) <u>Measurement Failure</u>
<u>DL Power Drifting Correction [FDD]</u>	<u>Downlink Power Control</u>
<u>Reporting of General Error Situations</u>	<u>Error Indication</u>

~~These functions are implemented by one or several NBAP elementary procedures described in the following section.~~

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.433 CR 004

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **TSG RAN #7**

list expected approval meeting # here
↑

for approval
for information

strategic
non-strategic (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: TSG-RAN WG3 **Date:** 24-28 Jan. 2000

Subject: Replacement of the Error Indication procedure with the procedure text agreed at RAN WG3 #9

Work item: _____

Category:	F Correction <input checked="" type="checkbox"/> A Corresponds to a correction in an earlier release <input type="checkbox"/> B Addition of feature <input type="checkbox"/> C Functional modification of feature <input type="checkbox"/> D Editorial modification <input type="checkbox"/>	Release:	Phase 2 <input type="checkbox"/> Release 96 <input type="checkbox"/> Release 97 <input type="checkbox"/> Release 98 <input type="checkbox"/> Release 99 <input checked="" type="checkbox"/> Release 00 <input type="checkbox"/>
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(only one category shall be marked with an X)

Reason for change: At the RAN WG3 meeting #9 in Paris it was agreed to change the procedure specification text of the Error Indication procedure in accordance with R3-99i60. This update is missing in the approved NBAP specification.

Clauses affected: 8.4

Other specs affected:	Other 3G core specifications <input type="checkbox"/> Other GSM core specifications <input type="checkbox"/> MS test specifications <input type="checkbox"/> BSS test specifications <input type="checkbox"/> O&M specifications <input type="checkbox"/>	→ List of CRs: → List of CRs: → List of CRs: → List of CRs: → List of CRs:	
------------------------------	---	--	--

Other comments: The figure has been included once per direction for editorial reasons.

8.4 Error Handling Procedures

8.4.1 Error Indication

8.4.1.1 General

~~The Error Indication procedure is initiated by a node to report detected errors in one incoming message, provided they cannot be reported by an appropriate failure message. This procedure is used by both NodeB and its CRNC to report detected errors or any other problems in one incoming message if they cannot be reported by any other procedure.~~

8.4.1.2 Successful Operation

~~When the conditions defined in chapter 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.~~

~~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~~

~~When NodeB or CRNC detect an erroneous message (or a message, which for some other reasons cannot be processed), it sends an ERROR INDICATION message with the most appropriate cause value.~~

~~The message contains as a transparent L3 information the erroneous message (coded), CRNC communication context ID (in UL), and NodeB communication context ID (in DL), if the NodeB is able to deduce it from the erroneous message.~~

~~Possible error cause can be:~~

- ~~— Unknown message ID: the message contains a message ID that is not known to the receiver~~
- ~~— Unknown Information element: the message contains an information element that is not known or cannot be interpreted by the receiver~~
- ~~— Procedural errors: the message is not compatible with the status of the receiver.~~
- ~~— Unknown failure reason: requested procedure failed to process by unknown reason~~

~~The message is sent using the Dedicated NBAP signalling connection of the incoming message, or using the Common NBAP if the incoming message was sent via Common NBAP.~~

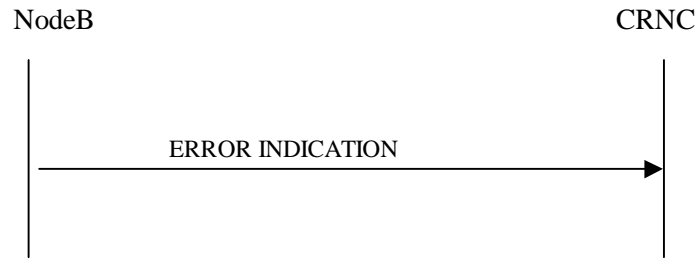


Figure 1: Error Indication procedure (Node B to CRNC): Successful Operation

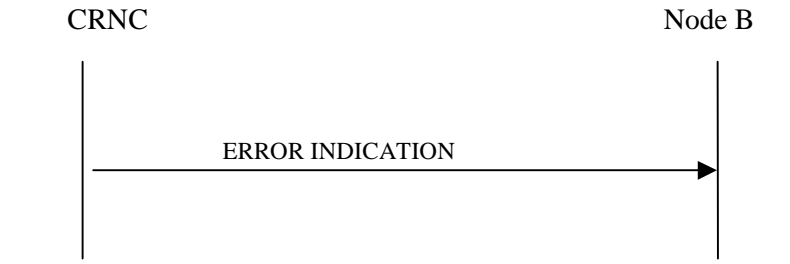


Figure 2: Error Indication procedure (CRNC to Node B): Successful Operation

8.4.1.3 Abnormal Conditions

=

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.433 CR 005

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **TSG RAN #7**

list expected approval meeting # here ↑

for approval
for information

strategic
non-strategic (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: TSG-RAN WG3 **Date:** 24-28 Jan. 2000

Subject: Missing Cause Values in the RL Failure procedure

Work item:

Category: F Correction **Release:** Phase 2
(only one category shall be marked with an X) A Corresponds to a correction in an earlier release Release 96
B Addition of feature Release 97
C Functional modification of feature Release 98
D Editorial modification Release 99
Release 00

Reason for change: The current version of NBAP does not include the typical cause values agreed for RL Failure during RAN WG3 #9.

Clauses affected: 8.2.12

Other specs affected: Other 3G core specifications → List of CRs:
Other GSM core specifications → List of CRs:
MS test specifications → List of CRs:
BSS test specifications → List of CRs:
O&M specifications → List of CRs:

Other comments:

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.

8.3.12.2 Successful Operation



Figure 1: Radio Link Failure

When Node B detects that one or more radio link is no longer available, it sends the RADIO LINK FAILURE INDICATION message to CRNC indicating the failed radio links with the most appropriate cause values in the *Cause IE*. ~~Possible cause values may be:~~

When the Radio Link Failure procedure is used to notify the non-achievement or loss of UL synchronisation, the message is sent when the UL synchronisation of the radio link is not achieved at the RL setup, or RL Addition, or it is lost during the active connection.

Typical cause values are:

Radio Network Layer Causes:

- Synchronisation Failure

Miscellaneous Causes:

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

CHANGE REQUEST

25.433
CR
007

Current Version: 3.0.0.

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: TSG RAN #7

list expected approval meeting # here ↑

For approval for information

X

strategic

 non-strategic

(for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: TSG-RAN WG3 **Date:** 24th-28th January

Subject: Scope of Transaction id (Update of R3-0000079)

Work item:

Category: <small>(only one category Shall be marked With an X)</small>	F Correction	<input checked="" type="checkbox"/>	Release: Phase 2	<input type="checkbox"/>	
	A Corresponds to a correction in an earlier release	<input type="checkbox"/>		Release 96	<input type="checkbox"/>
	B Addition of feature	<input type="checkbox"/>		Release 97	<input type="checkbox"/>
	C Functional modification of feature	<input type="checkbox"/>		Release 98	<input type="checkbox"/>
	D Editorial modification	<input type="checkbox"/>		Release 99	<input checked="" type="checkbox"/>
			Release 00	<input type="checkbox"/>	

Reason for change: Already during a longer period, the Transaction id is included in all messages on NBAP and RNSAP. However, up to now, the scope of this Transaction id has not been addressed yet. This contribution proposes a scope and range for the Transaction id.

1. Purpose

The Transaction id is assumed to have the following main purpose:

- it shall be sufficiently unique to link the response/failure message of a Class 1 procedure to the request message within the relevant context.

In addition the Transaction id could also be used for the following purpose:

- it should be sufficiently unique to link an ERROR_INDICATION message to the procedure that triggered the error.

2. Rationale

The protocol peer initiating the procedure will determine the value of the Transaction id. It is assumed that from the message type it is always clear who initiated the procedure. Therefore there should be no problem when different peers allocating the same Transaction id (no need for a "transaction flag").

W.r.t. the size of the Transaction id, common and dedicated procedures are considered separately:

2.1. Common procedures

For common procedures, almost no limitations exist concerning the parallelism of procedures signalled over the Node-B control port. The Transaction id only needs to be able to discriminate between procedures using the same procedure code and signalled over the same Node B control port. Large Node Bs might consist of many cells and many procedures might be ongoing in parallel.

2.2. Dedicated procedures

Currently almost no parallelism is supported for dedicated procedures. Therefore a Transaction is in principle not required. However, in order to enable parallelism in the future still it was decided to have a Transaction id in dedicated procedures.

Normally, the Transaction id can be much smaller in the case of dedicated procedures than in the case of common procedures. The Transaction id only needs to be able to discriminate uniquely between procedures using the same procedure code and initiated towards the same Node B/CRNC context.

3. PROPOSAL

In order to have the flexibility of both a small Transaction id not wasting much bits if only a small number of different Transaction ids needs to be supported, and also being able to support a large number of different Transaction ids for those cases that that is needed, it is proposed to have the Transaction id as a CHOICE between 7 and 15 bits. Given that the CHOICE will require 1 bit, the total IE will always be octet aligned.

If this contribution is accepted, a similar contribution for RNSAP will be submitted.

Clauses affected: 9.2.1.58, 9.2.1.16, 9.3.5.

Other specs
Affected:

Other 3G core specifications
Other GSM core specifications
MS test specifications
BSS test specifications
O&M specifications

	→ List of CRs:
	→ List of CRs:
	→ List of CRs:
	→ List of CRs:
	→ List of CRs:

Other
comments:



help.doc

<----- [double-click here for help and instructions on how to create a CR.](#)

9.2.1.16 Criticality diagnostics

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Criticality Diagnostics				
Procedure Code	O		INTEGER (0..255)	Procedure code is to be used if Criticality diagnostics is part of Error Indication procedure, and not within the response message of the same operation that caused the error
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 except when the procedure code is not understood.
Criticality Response	O		ENUMERATED (reject, ignore, notify)	This Criticality response IE is used for reporting the Criticality of the Triggering message
Transaction Id	O		INTEGER (0..255) Transaction ID	
Information Element Criticality Diagnostics		1 to <maxnoof errors>		
Criticality Response	M		ENUMERATED (reject, ignore, notify)	The Criticality response IE 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 IE

Range bound	Explanation
<i>maxnooferrors</i>	Maximum no. of IE errors allowed to be reported with a single message. The value for maxnooferrors is 256.

9.2.1.58 Transaction ID

The ~~T~~transaction ID is used to associate all the messages belonging to the same ~~pending~~ procedure ~~of the same NBAP procedure type (e.g. Radio Link Addition), i.e. the Request , Response , Confirm type of messages have the same Transaction ID. The messages belonging to different pending procedures have different Transaction IDs. 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			<u>CHOICE</u> INTEGER (0..127255) <u>or</u> INTEGER (0..32767)	Since the scope is not clear, the range of this parameter is to be considered a working assumption

```

UL-ScramblingCodeNumber ::= ENUMERATED {
short,
long
}

UplinkDeltaEb-No ::= ENUMERATED {
deltaEb-No-6dB,
...
}

UplinkDeltaEb-No-after ::= ENUMERATED {
deltaEb-No-after-6dB,
...
}

END

```

9.3.5 NBAP Common Data Type Definitions

```

-- *****
--
-- Common definitions
--
-- *****

NBAP-CommonDataTypes -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

Criticality      ::= ENUMERATED { reject, ignore, notify }

MessageDiscriminator ::= ENUMERATED { common, dedicated }

Presence        ::= ENUMERATED { optional, conditional, mandatory }

PrivateExtensionID ::= CHOICE {
    local          INTEGER (0..65535),
    global         OBJECT IDENTIFIER
}

ProcedureID     ::= SEQUENCE {
    procedureCode  INTEGER (0..255),
    ddMode        ENUMERATED { tdd, fdd, common }
}

ProtocolExtensionID ::= INTEGER (0..65535)

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

TransactionID   ::= CHOICE {

```

```
| ShortTransActionId INTEGER (0..127255),  
| LongTransActionId  INTEGER (0..32767)  
| }
```

END

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.433 CR 013

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **TSG RAN #7**
 list expected approval meeting # here ↑

for approval
 for information

strategic
 non-strategic (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
 (at least one should be marked with an X)

Source: TSG-RAN WG3 **Date:** 00.01.24

Subject: Repetition of compressed mode information elements.

Work item:

Category: F Correction **Release:** Phase 2
 A Corresponds to a correction in an earlier release Release 96
 B Addition of feature Release 97
 C Functional modification of feature Release 98
 D Editorial modification Release 99
 Release 00
 (only one category shall be marked with an X)

Reason for change: To introduce the support of parallel compressed mode patterns we shall repeat all IEs related to a compressed mode pattern in the message COMPRESSED MODE PREPARE (FDD only). We shall also add a new parameter *CFN Offset* that specify the activation time for each pattern which prevents that all patterns are activated at the same frame.

Clauses affected: 9.1.59, 9.2.1

Other specs affected: Other 3G core specifications → List of CRs:
 Other GSM core specifications → List of CRs:
 MS test specifications → List of CRs:
 BSS test specifications → List of CRs:
 O&M specifications → List of CRs:

Other comments:



<----- double-click here for help and instructions on how to create a CR.

9.1.59 COMPRESSED MODE PREPARE (FDD only)

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
NodeB communication context ID	M			
Transaction ID	M			
CM Pattern Information		1 to 8		Range defined ref. [4]
<u>CFN Offset</u>	<u>M</u>			
<u>TGP1</u>	M		Gap Period	Refer to [4]25.215
<u>TGP2</u>	O		Gap Period	Refer to [4]25.215
<u>TGL</u>	M			
<u>TGD</u>	M			
<u>PD</u>	M			
<u>UL/DL compressed mode selection</u>	M			
<u>Compressed mode method</u>	M			
<u>Gap Position Mode</u>	M			
<u>SN</u>	C-Flex		TimeSlot	
<u>Downlink Frame Type</u>	M			
<u>Scrambling Code Change</u>	C-SF/2			
<u>Power Control Mode</u>	M			
<u>Power Resume Mode</u>	M			
<u>UL delta Eb/No</u>	M			
<u>UL delta Eb/No after</u>	M			

9.2.1.x CFN Offset <new section>

Activation time for the compressed mode pattern.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
CFN Offset			Integer (0..255)	Number of frames between CFN and the CM pattern activation.

```

-- *****
--
-- COMPRESSED MODE PREPARE FDD
--
-- *****

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

CompressedModePrepareFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-CompressedModePattern-List      CRITICALITY ignore TYPE CompressedModePattern-List  PRESENCE mandatory } |
    ...
}

CompressedModePattern-List ::= SEQUENCE (SIZE (1..maxnoofCMpatterns)) OF
    ProtocolIE-Container {{CompressedModePattern-IEs }}

CompressedModePattern-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-CFNOffset          CRITICALITY ignore      TYPE CFNOffset          PRESENCE mandatory } |
    { ID id-NodeB-CommunicationContextID  CRITICALITY ignore      TYPE NodeB-CommunicationContextID  PRESENCE mandatory } |
    { ID id-TGP1                  CRITICALITY ignore      TYPE TGP1                  PRESENCE mandatory } |
    { ID id-TGP2                  CRITICALITY ignore      TYPE TGP2                  PRESENCE optional } |
    { ID id-TGL                    CRITICALITY ignore      TYPE TGL                    PRESENCE mandatory } |
    { ID id-TGD                    CRITICALITY ignore      TYPE TGD                    PRESENCE mandatory } |
    { ID id-UL-DL-CompressedModeSeletion  CRITICALITY ignore      TYPE UL-DL-CompressedModeSeletion  PRESENCE mandatory } |
    { ID id-CompressesModeMethod          CRITICALITY ignore      TYPE CompressesModeMethod          PRESENCE mandatory } |
    { ID id-GapPositionMode              CRITICALITY ignore      TYPE GapPositionMode              PRESENCE mandatory } |
    { ID id-SN                          CRITICALITY ignore      TYPE SN                          PRESENCE optional } |
    -- This IE is present if Gap position mode = 'flexible position'--
    { ID id-DL-FrameType                CRITICALITY ignore      TYPE DL-FrameType                PRESENCE mandatory } |
    { ID id-ScramblingCodeChange         CRITICALITY ignore      TYPE ScramblingCodeChange         PRESENCE optional } |
    -- This IE is present if Compressed mode method = 'SF/2' --
    { ID id-PowerControlMode             CRITICALITY ignore      TYPE PowerControlMode             PRESENCE mandatory } |
    { ID id-PowerResumeMode              CRITICALITY ignore      TYPE PowerResumeMode              PRESENCE mandatory } |
    { ID id-UL-DeltaEb-No                CRITICALITY ignore      TYPE UL-DeltaEb-No                PRESENCE mandatory } |
    { ID id-UL-DeltaEb-NoAfter           CRITICALITY ignore      TYPE UL-DeltaEb-NoAfter           PRESENCE mandatory } ,
    ...
}

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

```

```

-----
-- C
-----

Cause ::= ENUMERATED {
radioNetworkLayer      RadioNetworkLayerCause,
transportLayer         TransportLayerCause,
protocol               ProtocolCause,
misc                   MiscellaneousCause
...
}

CCTrCH-ID ::= INTEGER (1..15)

CellID-Length ::= ENUMERATED {
    short,
    medium,
    long
}

CFN ::= INTEGER (0..255)
CFNOffset ::= INTEGER (0..255)

ChipOffset ::= INTEGER (0..38399)

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

CodingRate ::= ENUMERATED {
    rate1-2,
    rate1-3
}

CommonMeasurementObjectType ::= ENUMERATED {
    cell,
    rach,
    ...
}

CommonMeasurementType ::= SEQUENCE {
    rssi                RSSI-Value,
    transmitted-carrier-power    TransmittedCarrierPowerValue,
    acknowledged-ra-tries    AcknowledgedRA-TriesValue,
    time-slot-iscp        TimeSlotISCP-Value,
    ...
}

CommonPhysicalChannelID ::= INTEGER (0..255)

CommonTransportChannelID ::= INTEGER (0..255)

CommunicationControlPortID ::= INTEGER (0..65535)

CompressedModeMethod ::= ENUMERATED {
    puncturing,
    sF-2,
}

```



```
gating,  
none  
}
```

```
ConfigurationGenerationID ::= INTEGER (0..255)
```

```
CRC-Size ::= ENUMERATED {  
size0,  
size12,  
size16,  
size24  
}
```

```
CRNC-CommunicationContextID ::= INTEGER (0..1048575)
```

```
CTFC ::= INTEGER (0..maxCTF-1)
```

9.3.7. Constant Definitions for NBAP

```

-- *****
--
-- Constant definitions
--
-- *****

NBAP-Constants -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

id-audit                               INTEGER ::= 0
id-auditRequired                       INTEGER ::= 1
id-blockResource                       INTEGER ::= 2
id-cellDeletion                        INTEGER ::= 3
id-cellReconfiguration                 INTEGER ::= 4
id-cellSetup                           INTEGER ::= 5
id-commonMeasurementFailure            INTEGER ::= 6
id-commonMeasurementInitiation         INTEGER ::= 7
id-commonMeasurementReport             INTEGER ::= 8
id-commonMeasurementTermination        INTEGER ::= 9
id-commonTransportChannelDeletion      INTEGER ::= 10
id-commonTransportChannelReconfiguration INTEGER ::= 11
id-commonTransportChannelSetup         INTEGER ::= 12
id-compressedModeControlCancellation   INTEGER ::= 13
id-compressedModeControlCommit         INTEGER ::= 14
id-compressedModeControlPreparation    INTEGER ::= 15
id-dedicatedMeasurementFailure         INTEGER ::= 16
id-dedicatedMeasurementInitiation      INTEGER ::= 17
id-dedicatedMeasurementReport         INTEGER ::= 18
id-dedicatedMeasurementTermination     INTEGER ::= 19
id-dlPowerControl                     INTEGER ::= 20
id-neighbourCellMeasurement            INTEGER ::= 21
id-radioLinkAddition                  INTEGER ::= 22
id-radioLinkDeletion                  INTEGER ::= 23
id-radioLinkFailure                   INTEGER ::= 24
id-radioLinkReconfigurationCommit      INTEGER ::= 25
id-radioLinkReconfigurationCancel      INTEGER ::= 26
id-radioLinkRestoration                INTEGER ::= 27
id-radioLinkSetup                     INTEGER ::= 28
id-resourceStatusIndication            INTEGER ::= 29
id-synchronisationAdjustment           INTEGER ::= 30
id-synchronisationFailure              INTEGER ::= 31
id-synchronisationRestart              INTEGER ::= 32
id-synchronisedRadioLinkReconfigurationPreparation INTEGER ::= 33
id-systemInformationUpdate             INTEGER ::= 34
id-unblockResource                    INTEGER ::= 35
id-unsynchronisedRadioLinkReconfiguration INTEGER ::= 36

-- *****
--
-- Extension constants
--
-- *****

maxPrivateExtensions                   INTEGER ::= 65535
maxProtocolExtensions                  INTEGER ::= 65535
maxProtocolIEs                         INTEGER ::= 65535

-- *****
--
-- Lists
--
-- *****

maxSF                                   INTEGER ::= 10
maxnoofCMpatterns                      INTEGER ::= 8
maxnoofDLCodes                         INTEGER ::= 10
maxnoofRLs                             INTEGER ::= 10
maxnoofDPCHs                           INTEGER ::= 10
maxnoofSCCPCHs                         INTEGER ::= 10
maxnoofPRACHs                          INTEGER ::= 10
maxnoofDCHs                            INTEGER ::= 10
maxnoofDSCHs                           INTEGER ::= 10

```

```

maxnoofFACHs                INTEGER ::= 10
maxnoofCCTrCHs              INTEGER ::= 10
maxnoofPCHs                 INTEGER ::= 10
maxnoofPUCSHs               INTEGER ::= 10
maxnoofTFCs                 INTEGER ::= 10
maxnoofUSCHs                INTEGER ::= 10
maxUCIDinNodeB              INTEGER ::= 10
maxCellinNodeB              INTEGER ::= 10
maxCCPinNodeB               INTEGER ::= 10
maxCTF-1                     INTEGER ::= 10
maxLocalCellinNodeB         INTEGER ::= 10
maxPCHinNodeB               INTEGER ::= 10
maxRACHCell                 INTEGER ::= 10
maxnoofFACHCell             INTEGER ::= 10
maxPCHCell                  INTEGER ::= 10
maxUSCHCell                 INTEGER ::= 10
maxAICHCell                 INTEGER ::= 10
maxMIBSEG                   INTEGER ::= 10
maxSIBSEG                   INTEGER ::= 10
maxnoofFDDNeighbours        INTEGER ::= 10
maxnoofTDDNeighbours        INTEGER ::= 10
maxTFcount                   INTEGER ::= 10
maxnoofTFCs                 INTEGER ::= 10
maxFACHCell                 INTEGER ::= 10
maxnoCCTrCH                 INTEGER ::= 10
maxnoCCTrCHs                INTEGER ::= 10
maxnoofCCTrCH               INTEGER ::= 10
maxnoofDPCH                 INTEGER ::= 10
maxnoofPUSHs                INTEGER ::= 10
maxnoofRL-1                 INTEGER ::= 10
maxnoofRL-2                 INTEGER ::= 10
maxRM                        INTEGER ::= 10

-- *****
--
-- IEs
--
-- *****

id-AICH-Information-ResourceStatIndItem    INTEGER ::= 0
id-AICH-ParametersList                    INTEGER ::= 1
id-AICH-ParametersListItem                 INTEGER ::= 2
id-AllowedSlotFormatInformationListItem-CTCHreconf-Req-FDD  INTEGER ::= 3
id-AllowedSlotFormatInformationListItem-CTCHsetup-Req-FDD  INTEGER ::= 4
id-BlockingPriorityIndicator                INTEGER ::= 5
id-CCTrCH-ParametersList                   INTEGER ::= 6
id-CCTrCH-ParametersListItem               INTEGER ::= 7
id-CFN                                     INTEGER ::= 8
id-CFNoffset                              INTEGER ::= 225
id-CompressedModePattern-List              INTEGER ::= 226
id-CRNC-CommunicationContextID              INTEGER ::= 9
id-CRNCCommunicationContextID              INTEGER ::= 10
id-Cause                                   INTEGER ::= 11
id-Cell-Information-ResourceStatIndItem     INTEGER ::= 12
id-Cell-InformationItem                    INTEGER ::= 13
id-Cell-InformationList                    INTEGER ::= 14
id-Cell-Parameter                         INTEGER ::= 15
id-Cell-ParametersItem                     INTEGER ::= 16
id-Cell-ParametersList                     INTEGER ::= 17
id-CellParameter                           INTEGER ::= 18
id-CommonMeasurementObjectType              INTEGER ::= 19
id-CommonMeasurementType                   INTEGER ::= 20
id-CommonPhysicalChannelID                 INTEGER ::= 21
id-CommonPhysicalChannelType-CTCHsetup-Req-FDD  INTEGER ::= 22
id-CommonPhysicalChannelType-CTCHsetup-Response  INTEGER ::= 23
id-CommunicationControlPort-InformationItem  INTEGER ::= 24
id-CommunicationControlPortID               INTEGER ::= 25
id-CommunicationControlPortInformation-ResourceStatIndItem  INTEGER ::= 26
id-CommunicationControlPortInformationList  INTEGER ::= 27
id-CompressesModeMethod                    INTEGER ::= 28
id-ConfigurationGenerationID                INTEGER ::= 29
id-DCH-Add-RL-ReconfPrepFDDItem            INTEGER ::= 30
id-DCH-Add-RL-ReconfPrepTDDItem           INTEGER ::= 31
id-DCH-Add-RL-ReconfReadyItem              INTEGER ::= 32
id-DCH-Add-RL-ReconfReqFDDItem             INTEGER ::= 33
id-DCH-Add-RL-ReconfReqTDDItem             INTEGER ::= 34
id-DCH-AddItem-RL-ReconfResp               INTEGER ::= 35
id-DCH-AddList-RL-ReconfPrepFDD            INTEGER ::= 36
id-DCH-AddList-RL-ReconfPrepTDD            INTEGER ::= 37
id-DCH-AddList-RL-ReconfReqFDD             INTEGER ::= 38
id-DCH-AddList-RL-ReconfReqTDD             INTEGER ::= 39
id-DCH-Delete-RL-ReconfPrepFDDItem         INTEGER ::= 40

```

id-DCH-Delete-RL-ReconfPrepTDDItem	INTEGER ::= 41
id-DCH-Delete-RL-ReconfReqFDDItem	INTEGER ::= 42
id-DCH-Delete-RL-ReconfReqTDDItem	INTEGER ::= 43
id-DCH-DeleteList-RL-ReconfPrepFDD	INTEGER ::= 44
id-DCH-DeleteList-RL-ReconfPrepTDD	INTEGER ::= 45
id-DCH-DeleteList-RL-ReconfReqFDD	INTEGER ::= 46
id-DCH-DeleteList-RL-ReconfReqTDD	INTEGER ::= 47
id-DCH-Information-RL-SetupReqFDDItem	INTEGER ::= 48
id-DCH-Information-RL-SetupReqTDDItem	INTEGER ::= 49
id-DCH-InformationList-RL-SetupReqFDD	INTEGER ::= 50
id-DCH-InformationList-RL-SetupReqTDD	INTEGER ::= 51
id-DCH-InformationResponse-RL-SetupFailFDDItem	INTEGER ::= 52
id-DCH-InformationResponse-RL-setupResTDDItem	INTEGER ::= 53
id-DCH-InformationResponseItem	INTEGER ::= 54
id-DCH-Modify-RL-ReconfPrepFDDItem	INTEGER ::= 55
id-DCH-Modify-RL-ReconfPrepTDDItem	INTEGER ::= 56
id-DCH-Modify-RL-ReconfReadyItem	INTEGER ::= 57
id-DCH-Modify-RL-ReconfReqFDDItem	INTEGER ::= 58
id-DCH-Modify-RL-ReconfReqTDDItem	INTEGER ::= 59
id-DCH-ModifyItem-RL-ReconfResp	INTEGER ::= 60
id-DCH-ModifyList-RL-ReconfPrepFDD	INTEGER ::= 61
id-DCH-ModifyList-RL-ReconfPrepTDD	INTEGER ::= 62
id-DCH-ModifyList-RL-ReconfReqFDD	INTEGER ::= 63
id-DCH-ModifyList-RL-ReconfReqTDD	INTEGER ::= 64
id-DL-CCTrCH-Information-RL-ReconfPrepTDDItem	INTEGER ::= 65
id-DL-CCTrCH-Information-RL-ReconfReqTDDItem	INTEGER ::= 66
id-DL-CCTrCH-Information-RL-SetupReqTDDItem	INTEGER ::= 67
id-DL-CCTrCH-InformationItem	INTEGER ::= 68
id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD	INTEGER ::= 69
id-DL-CCTrCH-InformationList-RL-ReconfReqTDD	INTEGER ::= 70
id-DL-CCTrCH-InformationList-RL-SetupReqTDD	INTEGER ::= 71
id-DL-CCTrCHInformationItem	INTEGER ::= 72
id-DL-CCTrCHInformationList	INTEGER ::= 73
id-DL-CodeInformation	INTEGER ::= 74
id-DL-CodeInformation-RL-ReconfPrepFDDItem	INTEGER ::= 75
id-DL-CodeInformation-RL-SetupReqFDDItem	INTEGER ::= 76
id-DL-DPCH-Information-RL-ReconfPrepFDD	INTEGER ::= 77
id-DL-DPCH-Information-RL-ReconfPrepTDDItem	INTEGER ::= 78
id-DL-DPCH-Information-RL-SetupReqTDDItem	INTEGER ::= 79
id-DL-DPCH-InformationItem	INTEGER ::= 80
id-DL-DPCH-InformationItem-RL-ReconfReqFDD	INTEGER ::= 81
id-DL-DPCH-InformationItem-RL-SetupReqFDD	INTEGER ::= 82
id-DL-FrameType	INTEGER ::= 83
id-DL-ReferencePowerInformationItem	INTEGER ::= 84
id-DSCH-AddItem-RL-ReconfPrepFDD	INTEGER ::= 85
id-DSCH-AddItem-RL-ReconfReqFDD	INTEGER ::= 86
id-DSCH-DeleteItem-RL-ReconfPrepFDD	INTEGER ::= 87
id-DSCH-DeleteItem-RL-ReconfReqFDD	INTEGER ::= 88
id-DSCH-ID	INTEGER ::= 89
id-DSCH-Information-RL-SetupReqFDDItem	INTEGER ::= 90
id-DSCH-InformationList-RL-SetupReqFDD	INTEGER ::= 91
id-DSCH-InformationResponse-RL-SetupFailFDDItem	INTEGER ::= 92
id-DSCH-InformationResponse-RL-setupResFDDItem	INTEGER ::= 93
id-DSCH-ModifyItem-RL-ReconfPrepFDD	INTEGER ::= 94
id-DSCH-ModifyItem-RL-ReconfReqFDD	INTEGER ::= 95
id-DedicatedMeasurementObjectType	INTEGER ::= 96
id-DedicatedMeasurementType	INTEGER ::= 97
id-FACH-Information-ResourceStatIndItem	INTEGER ::= 98
id-FACH-InformationItem	INTEGER ::= 99
id-FACH-ListItem	INTEGER ::= 100
id-FACH-ParametersList-CTCHreconf-Req-FDD	INTEGER ::= 101
id-FACH-ParametersList-CTCHreconf-Req-TTD	INTEGER ::= 102
id-FACH-ParametersListItem-CTCHreconf-Req-FDD	INTEGER ::= 103
id-FACH-ParametersListItem-CTCHreconf-Req-TTD	INTEGER ::= 104
id-FACH-ParametersListItem-CTCHsetup-Req-FDD	INTEGER ::= 105
id-FACH-ParametersListItem-CTCHsetup-Response	INTEGER ::= 106
id-GapStartingSlotNumber	INTEGER ::= 107
id-IndicationType	INTEGER ::= 108
id-Local-Cell-Information-ResourceStatIndItem	INTEGER ::= 109
id-Local-Cell-Information-ResourceStatIndItem	INTEGER ::= 110
id-LocalCell-ID	INTEGER ::= 111
id-LocalCell-InformationItem	INTEGER ::= 112
id-LocalCellInformationList	INTEGER ::= 113
id-MIB-SegmentInformationItem	INTEGER ::= 114
id-MIB-SegmentInformationList	INTEGER ::= 115
id-MaximumTransmissionPower	INTEGER ::= 116
id-MeasuredCellInfo	INTEGER ::= 117
id-MeasurementCharacteristics	INTEGER ::= 118
id-MeasurementID	INTEGER ::= 119
id-MeasurementType	INTEGER ::= 120
id-NeighbouringFDD-Cell-InformationItem	INTEGER ::= 121
id-NeighbouringTDD-Cell-InformationItem	INTEGER ::= 122
id-NodeB-CommunicationContextID	INTEGER ::= 123

id-PCCPCH-Information	INTEGER ::= 124
id-PCH-Information-ResourceStatIndItem	INTEGER ::= 125
id-PCH-InformationItem	INTEGER ::= 126
id-PCH-ListItem	INTEGER ::= 127
id-PCH-Parameters-CTCHreconf-Req-FDD	INTEGER ::= 128
id-PCH-ParametersList	INTEGER ::= 129
id-PCH-ParametersListItem	INTEGER ::= 130
id-PTCH-Parameters-CTCHreconf-Req-FDD	INTEGER ::= 131
id-PRACH-ParametersList	INTEGER ::= 132
id-PRACH-ParametersListItem	INTEGER ::= 133
id-PSCH-Information	INTEGER ::= 134
id-PSCHandPCCPCH-Information	INTEGER ::= 135
id-PUSCH-ListItem	INTEGER ::= 136
id-PatternDuration	INTEGER ::= 137
id-PowerControlMode	INTEGER ::= 138
id-PowerResumeMode	INTEGER ::= 139
id-PrimaryCCPCH-Information	INTEGER ::= 140
id-PrimaryCPICH-Information	INTEGER ::= 141
id-PrimarySCH-Information	INTEGER ::= 142
id-PrimaryScramblingCode	INTEGER ::= 143
id-ProcedureScopeType	INTEGER ::= 144
id-RACH-Information-ResourceStatIndItem	INTEGER ::= 145
id-RACH-InformationItem	INTEGER ::= 146
id-RL-ID	INTEGER ::= 147
id-RL-Information	INTEGER ::= 148
id-RL-Information-DMeasureReportItem	INTEGER ::= 149
id-RL-Information-DMeasureRequestItem	INTEGER ::= 150
id-RL-Information-DMeasureResponseItem	INTEGER ::= 151
id-RL-Information-RL-ReconfPrepFDDItem	INTEGER ::= 152
id-RL-Information-RL-SetupReqFDDItem	INTEGER ::= 153
id-RL-InformationItem	INTEGER ::= 154
id-RL-InformationItem-RL-SetupReqTDD	INTEGER ::= 155
id-RL-InformationList	INTEGER ::= 156
id-RL-InformationList-RL-ReconfReqFDD	INTEGER ::= 157
id-RL-InformationList-RL-SetupReqFDD	INTEGER ::= 158
id-RL-InformationResponse-RL-setupResFDDItem	INTEGER ::= 159
id-RL-InformationResponseItem-RL-ReconfResp	INTEGER ::= 160
id-RL-InformationResponseList-RL-ReconfReady	INTEGER ::= 161
id-RL-InformationResponseList-RL-ReconfReadyItem	INTEGER ::= 162
id-RL-InformationResponseList-RL-ReconfResp	INTEGER ::= 163
id-RL-InformationResponseList-RL-setupResFDD	INTEGER ::= 164
id-RL-InformationResponseList-RL-setupResTDD	INTEGER ::= 165
id-RL-ReconfigurationFailure-RL-ReconfFailItem	INTEGER ::= 166
id-RL-ReconfigurationFailureList-RL-ReconfFail	INTEGER ::= 167
id-RL-ResponseInformation	INTEGER ::= 168
id-RL-ResponseInformationItem	INTEGER ::= 169
id-RL-ResponseInformationList	INTEGER ::= 170
id-RL-informationItem	INTEGER ::= 171
id-RL-informationList	INTEGER ::= 172
id-RadioLinkInformation-RL-ReconfPrepFDDItem	INTEGER ::= 173
id-RadioLinkInformation-RL-ReconfPrepTDD	INTEGER ::= 174
id-RadioLinkInformation-RL-ReconfReqTDD	INTEGER ::= 175
id-RadioLinkInformationList-RL-ReconfPrepFDD	INTEGER ::= 176
id-ReportCharacteristics	INTEGER ::= 177
id-SFN	INTEGER ::= 178
id-SIB-SegmentInformationItem	INTEGER ::= 179
id-SIB-SegmentInformationList	INTEGER ::= 180
id-ScramblingCodeChange	INTEGER ::= 181
id-Secondary-CCPCHListItem	INTEGER ::= 182
id-SecondaryCPICH-Information	INTEGER ::= 183
id-SecondarySCH-Information	INTEGER ::= 184
id-ShutdownTimer	INTEGER ::= 185
id-Successful-RL-InformationResponse-RL-SetupFailFDDItem	INTEGER ::= 186
id-Successful-RL-InformationResponseItem	INTEGER ::= 187
id-Successful-RL-InformationResponseList	INTEGER ::= 188
id-Successful-RL-InformationResponseList-RL-SetupFailFDD	INTEGER ::= 189
id-SynchronisationMethod	INTEGER ::= 190
id-T-Cell	INTEGER ::= 191
id-TDDChipOffset	INTEGER ::= 192
id-TimeSlotConfigurationItem	INTEGER ::= 193
id-TimeSlotConfigurationList	INTEGER ::= 194
id-TransmissionGapDistance	INTEGER ::= 195
id-TransmissionGapPeriod	INTEGER ::= 196
id-TransmitGapLength	INTEGER ::= 197
id-TransmitGapPositionMode	INTEGER ::= 198
id-UARFCN	INTEGER ::= 199
id-UC-ID	INTEGER ::= 200
id-UL-CCTrCH-Information-RL-ReconfPrepTDDItem	INTEGER ::= 201
id-UL-CCTrCH-Information-RL-ReconfReqTDDItem	INTEGER ::= 202
id-UL-CCTrCH-Information-RL-SetupReqTDDItem	INTEGER ::= 203
id-UL-CCTrCH-InformationItemIE	INTEGER ::= 204
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD	INTEGER ::= 205
id-UL-CCTrCH-InformationList-RL-ReconfReqTDD	INTEGER ::= 206

```
id-UL-CCTrCH-InformationList-RL-SetupReqTDD          INTEGER ::= 207
id-UL-CCTrCHInformation                             INTEGER ::= 208
id-UL-CCTrCHInformationList                          INTEGER ::= 209
id-UL-DPCH-Information-RL-ReconfPrepFDD             INTEGER ::= 210
id-UL-DPCH-Information-RL-ReconfPrepTDDItem         INTEGER ::= 211
id-UL-DPCH-Information-RL-SetupReqTDDItem           INTEGER ::= 212
id-UL-DPCH-InformationItem-RL-ReconfReqFDD          INTEGER ::= 213
id-UL-DPCH-InformationItem-RL-SetupReqFDD           INTEGER ::= 214
id-UL-DPCH-InformationItemIE                        INTEGER ::= 215
id-USCH-Information-ResourceStatIndItem              INTEGER ::= 216
id-USCH-InformationItem                             INTEGER ::= 217
id-USCH-ListItem-CTCHsetup-Req-TDD                  INTEGER ::= 218
id-Unsuccessful-RL-InformationResponse               INTEGER ::= 219
id-Unsuccessful-RL-InformationResponse-RL-SetupFailFDDItem INTEGER ::= 220
id-Unsuccessful-RL-InformationResponseItem           INTEGER ::= 221
id-Unsuccessful-RL-InformationResponseItem-RL-SetupFailTDD INTEGER ::= 222
id-Unsuccessful-RL-InformationResponseList           INTEGER ::= 223
id-Unsuccessful-RL-InformationResponseList-RL-SetupFailFDD INTEGER ::= 224
```

END

<h2 style="margin: 0;">CHANGE REQUEST</h2>		<i>Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.</i>
25.433	CR 014	Current Version: 3.0.0
GSM (AA.BB) or 3G (AA.BBB) specification number ↑	↑ CR number as allocated by MCC support team	
For submission to: TSG RAN #7 <i>list expected approval meeting # here</i> ↑	for approval for information	strategic non-strategic (for SMG use only)
	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: TSG-RAN WG3 **Date:** 00.01.24

Subject: Changing Eb/N0 to SIR.

Work item: _____

Category:	F Correction <input type="checkbox"/> A Corresponds to a correction in an earlier release <input type="checkbox"/> B Addition of feature <input checked="" type="checkbox"/> C Functional modification of feature <input type="checkbox"/> D Editorial modification <input type="checkbox"/>	Release:	Phase 2 <input type="checkbox"/> Release 96 <input type="checkbox"/> Release 97 <input type="checkbox"/> Release 98 <input type="checkbox"/> Release 99 <input checked="" type="checkbox"/> Release 00 <input type="checkbox"/>
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(only one category shall be marked with an X)

Reason for change: To align with the TSG RAN WG1 specifications, se also R3-000009.

Clauses affected: 8.2.17; 8.3.2; 9.1.35; 9.1.41; 9.1.59; 9.2.2.47; 9.2.2.48; 9.2.2.50

Other specs affected:	Other 3G core specifications <input type="checkbox"/> Other GSM core specifications <input type="checkbox"/> MS test specifications <input type="checkbox"/> BSS test specifications <input type="checkbox"/> O&M specifications <input type="checkbox"/>	→ List of CRs: → List of CRs: → List of CRs: → List of CRs: → List of CRs:	
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Other comments: _____



<----- double-click here for help and instructions on how to create a CR.

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

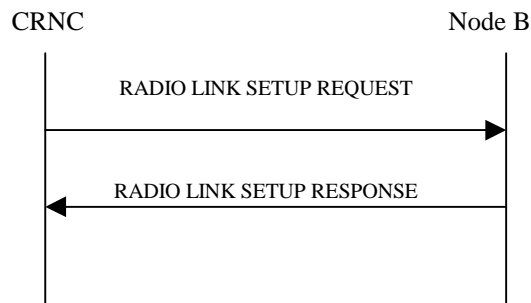


Figure 1: RL Setup procedure: Successful case

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 setup 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 setup of one radio link including one or more transport channels. The transport channels can be a mix of DCHs, DSCHs, and USCHs. The Radio Link Setup Request message shall include the required TFS and TFCS for the DCH, DSCH and USCH channels.]

[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 indicates, "may be combined with already existing RLs", then Node B shall decide for either of the alternatives. 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 NodeB shall choose which RL(s) to combine it with.

If the RADIO LINK SETUP REQUEST message includes the *DCH Combination Indicator* IE for a DCH to be added, the Node B shall

- Treat all DCHs with the same value of this IE as a set of co-ordinated DCHs and
- Include this DCH in the new configuration only if it can include all DCHs with the same value of the *DCH Combination Indicator* IE in the new configuration

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

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

The included *RLC Mode* IE may be used by the NodeB to optimise the power control.

[FDD] In FDD mode, the UL *Eb/No-SIR Target* IE included in the message shall be used by the Node B as initial UL *Eb/No-SIR* target for the UL *inner loop* power control.

The Node B shall start the DL transmission using the initial DL power specified in the message. The DL power can then vary accordingly to the fast power control, but shall always be kept within the maximum and minimum limit specified in the RL SETUP REQUEST message.

If the RLs are successfully setup, 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 NodeB 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 NodeB 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 – The NodeB 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 specify for only one of the coordinated DCHs.

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.

8.3.2.2 Successful Operation

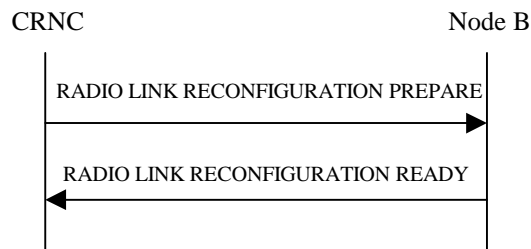


Figure 2: Synchronised Radio Link Reconfiguration procedure, Successful Case

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 DRNS 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.

DCH Modification:

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Frame Handling Priority* IE for a DCH to be modified, 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 RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Format Set (UL)* IE for a DCH to be modified, the Node B shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Format Set (DL)* IE for a DCH to be modified, the Node B shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *UL DCH FP Mode* IE for a DCH to be modified, the Node B shall apply the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *ToAWS* IE for a DCH to be modified, the Node B shall apply the new ToAWS in the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *ToAWE* IE for a DCH to be modified, the Node B shall apply the new ToAWE in the user plane for this DCH in the new configuration.

DCH Addition:

If the RADIO LINK RECONFIGURATION PREPARE message includes any DCH to be added to 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 and include these DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *DCH Combination Indicator* IE for a DCH to be added, the Node B shall.

1. treat all DCHs with the same value of this IE as a set of coordinated DCHs and
2. include this DCH in the new configuration only if it can include all DCHs with the same value of the *DCH Combination Indicator* IE in the new configuration

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 may use the included *RLC Mode* IE to optimise the power control.

The Node B shall use the included *UL DCH FP Mode* IE for a DCH to be added as the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

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

The Node B shall use the included *ToAWE* IE for a DCH to be added as the new Time of Arrival Window End Point in the user plane for 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 of all 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 the *Uplink Scrambling Code* IE, the Node B shall apply this Uplink Scrambling Code to the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes one or more *Uplink Channelisation Code* IEs, the Node B shall apply the new Uplink Channelisation Code(s) in the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes one or more *Downlink Channelisation Code* IEs, the Node B shall apply the new Downlink Channelisation Code(s) in the new configuration.]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes one or more *UL DPCH Information* IE groups, the Node B shall apply the new UL physical channel(s) setting in the new configuration.]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes one or more *DL DPCH Information* IE groups, the Node B shall apply the new physical channel(s) setting in the new configuration.]

The Node B shall use the *TFCS (UL)* IE when reserving resources for the uplink of the new configuration. The DRNS shall apply the new TFCS in the Uplink of [TDD – the CCTrCH of] the new configuration.

The Node B shall use the *TFCS (DL)* IE when reserving resources for the downlink of the new configuration. The DRNS shall apply the new TFCS in the Downlink of [TDD – the CCTrCH of] the new configuration.

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes on the *UL DPCCCH Structure* IE, group the Node B shall set the new Uplink DPCCCH Structure to the new configuration.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *UL SIR Target* IE, the Node B shall set the UL inner loop power control to the UL SIR target when the new configuration is being used.]

If the RADIO LINK RECONFIGURATION PREPARE 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 RADIO LINK RECONFIGURATION PREPARE 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.

SSDT Activation/Deactivation:

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *SSDT Indication* IE set to "SSDT Active in the UE", the Node B may activate SSDT using the *SSDT Cell Identity* IE and *SSDT Cell Identity Length* IE in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *SSDT Indication* IE set to "SSDT not Active in the UE", the Node B shall deactivate SSDT in the new configuration.]

DSCH Addition/Modification/Deletion:

[FDD] It is FFS how the Node B shall treat any included DSCH Information.

[TDD – The RADIO LINK RECONFIGURATION PREPARE message shall include DSCH information and USCH information for the DSCHs and USCHs to be added/modified/deleted. The NodeB shall use this information to add/modify/delete the indicated DSCH and USCH channels to/from the radio link, in the same way as the DCH info is used to add/modify/release DCHs. – It shall include in the RADIO LINK RECONFIGURATION READY message the Transport Layer Address and the Binding ID of the DCHs/DSCHs/USCHs being added or modified.]

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.

In case of a set of coordinated DCHs requiring a new transport bearer on Iub DCH-to-be-added group or DCH-to-be-modified group 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 group shall be included only for one of the combined RLs.

9.1.35 RADIO LINK SETUP REQUEST

9.1.35.1 FDD message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
CRNC Communication Context ID	M			
Transaction ID	M			
UL DPCH Information		1		
UL Scrambling Code	M			
Min UL Channelisation Code length	M			
Max Number of UL DPCHs	C – CodeLen			
puncture limit	M			For UL
Transport Format Combination Set	M			for UL
UL DPCH Slot Format	M			
UL Eb/No -SIR Target	M		Uplink Eb/No UL SIR	
Diversity mode	M			
D Field Length	C – FB			
SSDT cell ID Length	O			
S Field Length	O			
DL DPCH Information				
Transport Format Combination Set	M			For DL
DL DPCH Slot Format	M			
TFCI signalling mode	M			
TFCI presence	C- SlotFormat			
Multiplexing Position	M			
Power Offset Information		1		
PO1	M		Power Offset	Power offset for the TFCI bits
PO2	M		Power Offset	Power offset for the TPC bits
PO3	M		Power Offset	Power offset for the pilot bits
Delta TPC	M			
DCH Information		1 to <maxnoofDCHs>		
DCH ID	M			
DCH Combination Ind	O			
RLC mode	M			
Transport Format Set	M			For UL
Transport Format Set	M			For DL
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP mode	M			
ToAWS	M			
ToAWE	M			
RL ID	O			RL Supporting the DSCH

DSCH TFCS	O			
DSCH Information		0 to <maxnoofDSCHs >		
DSCH ID	M			
Transport Format Set	M			For DSCH
Frame handling Priority	M			
ToAWS	M			
ToAWE	M			
RL Information		1 to <maxnoofRLs>		
RL ID	M			
C-ID	M			
Frame Offset	M			
Chip Offset	M			
Propagation Delay	O			
Diversity Control Field	C – NotFirstRL			
DL Code Information		1 to <maxnoof- DLCodes		
DL Scrambling Code	M			
FDD DL Channelisation Code Number	M			
Initial DL transmission Power	M		DL Power	
Maximum DL power	M		DL Power	
Minimum DL power	M		DL Power	
SSDT Cell Identity	O			

Condition	Explanation
CodeLen	This IE is present only if "Min UL Channelisation Code length" equals to 4
FB	This IE is present only if Feed Back mode diversity is activated.
NotFirstRL	This IE is present only if the RL is not the first one in the RL Information.
SlotFormat	This IE is only present if the DL DPCH slot format is equal to any of the value 12 to 16.

Range bound	Explanation
MaxnoofDSCHs	Maximum no. of DSCHs for one UE.
MaxnoofDCHs	Maximum no. of DCHs for one UE.
MaxnoofRLs	Maximum no. of RLs for one UE.
MaxnoofDLCodes	Maximum no. of DL code information.

9.1.41 RADIO LINK RECONFIGURATION PREPARE

9.1.41.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description
Message Discriminator	M			
Message Type	M			
Node B Communication Context ID	M			
Transaction ID	M			
UL DPCH Information		0..1		
UL Scrambling code	O			
<u>UL SIR Target</u>	<u>O</u>		<u>UL SIR</u>	
Min UL Channelisation Code Length	O			
Max Number of UL DPDCHs	C – CodeLen			
Puncture Limit	O			For UL
TFCS	O			
UL DPCH Slot Format	O			
SSDT Cell Identity Length	O			
S-Field Length	O			
DL DPCH Information		0..1		
TFCS	O			
DL DPCH Slot Format	O			
TFCI Signalling Mode	O			
TFCI presence	C-Slot Format			
DTX Insertion Point	O			
DCHs to Modify		0..<maxnoof DCHs>		
DCH ID	M			
Transport Format Set	O			For the UL.
Transport Format Set	O			For the DL.
Frame Handling Priority	O			
UL FP Mode	O			
ToAWS	O			
ToAWE	O			
DCHs to Add		0..<maxnoof DCHs>		
DCH ID	M			
DCH Combination Ind	O			
RLC Mode	M			
Transport Format Set	M			For the UL.
Transport Format Set	M			For the DL.
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP Mode	M			
ToAWS	M			
ToAWE	M			
DCHs to Delete		0..<maxnoof DCHs>		
DCH ID	M			
DSCH to modify		0..1		
Transport Format Set	O			For the DL.
RL ID	O			

Frame Handling Priority	O			
ToAWS	O			
ToAWE	O			
DSCH to add		0..1		
Transport Format Set	M			For the DL.
RL ID	M			
Frame Handling Priority	M			
ToAWS	M			
ToAWE	M			
DSCH to Delete		0..1		
RL ID	M			
RL Information		0..<maxnoof RLs>		
RL ID	M			
DL Code Information		0..<maxnoof DLCodes<		
DL Scrambling Code	O			
FDD DL Channelisation Code Number	O			
Maximum DL Power	O		DL Power	
Minimum DL Power	O		DL Power	
SSDT Indication	O			
SSDT Cell Identity	C - SSDTIndON			

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.

Range Bound	Explanation
<i>MaxnoofDCHs</i>	Maximum number of DCHs for a UE.
<i>MaxnoofRLs</i>	Maximum number of RLs for a UE.
<i>MaxnoofDLCodes</i>	Maximum number of Downlink Channelisation Codes.

9.1.59 COMPRESSED MODE PREPARE (FDD only)

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
NodeB communication context ID	M			
Transaction ID	M			
TGP1	M		Gap Period	Refer to 25.215
TGP2	O		Gap Period	Refer to 25.215
TGL	M			
TGD	M			
PD	M			
UL/DL compressed mode selection	M			
Compressed mode method	M			
Gap Position Mode	M			
SN	C-Flex		TimeSlot	
Downlink Frame Type	M			
Scrambling Code Change	C-SF/2			
Power Control Mode	M			
Power Resume Mode	M			
UL delta E_b/N_oSIR	M			
UL delta E_b/N_oSIR after	M			

Condition	Explanation
Flex	This IE is present only if "Gap position Mode" equals to 'flexible'.
SF/2	This IE is present only if Compressed Mode Method equals to SF/2

9.2.2.47 UL delta E_b/N_o SIR

The delta in uplink E_b/N_o SIR that shall be added to the E_b/N_o SIR target used during compressed mode frames.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Uplink Delta E_b/N_o SIR			Enumerated (-6..+10dB)	Step 0.1 dB.

9.2.2.48 UL delta E_b/N_o SIR after

The delta in uplink E_b/N_o SIR target that shall be added to the E_b/N_o SIR target used one frame after the compressed mode frames.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Uplink Delta E_b/N_o SIR after			Enumerated (-6..+10dB)	Step 0.1 dB.

9.2.2.50 UL ~~E_b/N₀SIR~~

The UL Eb/No indicates a received UL ~~E_b/N₀SIR~~.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL E_b/N₀SIR			INTEGER (0..255)ENUMERATED (-8.2 .. 17.3)	Resolution is Step 0.1 dB; range 0-25.5 dB.

9.3.3 NBAP PDU Content Definitions

```

-- *****
--
-- PDU definitions for NBAP.
--
-- *****

NBAP-PDU-Contents -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS
    AICH-InformationList,
    AICH-Parameters,
    AICH-Power,
    AICH-TransmissionTiming,
    AddOrDeleteIndicator,
    AvailabilityStatus,
    BindingID,
    BlockingPriorityIndicator,
    BurstType,
    CCTrCH-ID,
    CFN,
    CN-CSDomainIdentifier,
    CN-PSDomainIdentifier,
    CRNC-CommunicationContextID,
    Cause,
    CellParameter,
    Cell-Parameter,
    ChipOffset,
    CommonMeasurementType,
    CommonPhysicalChannelID,
    CommonPhysicalChannelType,
    CommonTransportChannelID,
    CommonTransportChannelType,
    CommunicationControlPortID,
    CommunicationControlPortInformationList,
    CompressesModeMethod,
    ConfigurationGenerationID,
    DCH-CombinationIndication,
    DCH-Delete-RL-ReconfReqTDDItem,
    DCH-ID,
    DCH-InformationResponse-RL-setupResFDD,

```

DCH-Modify-RL-ReconfPrepTDDItem,
DL-CCTrCH-ID,
DL-CodeInformation,
DL-DPCH-InformationItem-RL-ReconfReqFDD,
DL-DPCH-SlotFormat,
DL-FrameType,
DL-Power,
DL-ReferencePower,
DL-ReferencePowerInformationItem,
DL-ScramblingCode,
DPCH-ID,
DPCH-Offset,
DSCH-ID,
DSCH-InformationResponse-RL-setupResFDD,
DSCH-ModifyList-RL-ReconfResp,
DSCH-SetupList-RL-ReconfResp,
DSCH-TransportFormatSet,
DTX-InsertionPoint,
DTX-InsertionPosition,
D-FieldLength,
DedicatedMeasurementType,
DedicatedMeasurementValue,
DeltaTPC,
DiversityControlField,
DiversityMode,
FACH-Power,
FDD-DL-ChannelisationCodeNumber,
FDD-SCCPCH-Offset,
FrameHandlingPriority,
FrameOffset,
GapStartingSlotNumber,
LocalCellID,
LocalCellInformationList,
LocalCell-ID,
Local-CellID,
MIB-SG-POS,
MIB-SG-REP,
MaxFACH-Power,
MaxNrOfUL-DPDCHs,
MaxNumberOfUL-DPDCHs,
MaximumDLPowerCapability,
MaximumDL-PowerCapability,
MaximumTransmissionPower,
MaximumUL-~~E_{bn}0SIR~~,
Maximum-DL-PowerCapability,
MeasuredCellInfo,
MeasurementCharacteristics,
MeasurementID,
MeasurementType,
MessagePartScramblingCode,
MidambleShift,
Midambleshift,
MinUL-ChannelisationCodeLength,

MinimumSpreadingFactor,
MinimumUL-~~EbN~~OSIR,
NodeB-CommunicationContextID,
NumberOfChannelElements,
Offset,
PCCPCH-Power,
PCCPCH-TimeSloti,
PCH-Power,
PICH-Information,
PICH-Power,
PSCH-Power,
PSCHandPCCPCH-Allocation,
PSCHandPCCPCH-TimeSlotK,
PUSCH,
PagingIndicatorLength,
PatternDuration,
PayloadCRC-PresenceIndicator,
PilotBitsUsedIndicator,
PowerControlMode,
PowerOffset,
PowerResumeMode,
PreambleScramblingCode,
PreambleSignatures,
PrimaryCPICH-Power,
PrimarySCH-Power,
PrimaryScramblingCode,
Primary-ScramblingCode,
PropagationDelay,
PunctureLimit,
RACH-SlotFormat,
RACH-SubChannelNumbers,
RLC-Mode,
RL-ID,
RL-Information,
RL-InformationItem,
RL-InformationItem-RL-SetupReqTDD,
RL-InformationList-DMeasureRequest,
RL-ReconfigurationFailure-RL-ReconfFailItem,
RadioLinkInformation-RL-ReconfReqTDD,
RepetitionLength,
RepetitionPeriod,
ReportCharacteristics,
ResourceOperationState,
ResourceOperationalState,
SAI,
SFN,
SIB-SG-POS,
SIB-SG-REP,
SSDT-CellIdentity,
SSDT-CellIdentityLength,
SSDT-Cell-IDLength,
SSDT-Indication,
SSDT-SupportIndicator,

```

STTD-Indicator,
S-CCPCH-Offset,
S-CCPCH-Power,
S-FieldLength,
ScramblingCode,
ScramblingCodeChange,
SecondaryCCPCH-SlotFormat,
SecondaryCPICH-Power,
SecondarySCH-Power,
ShutdownTimer,
SynchronisationMethod,
TDDChipOffset,
TDD-ChannelisationCode,
TFCI-Presence,
TFCI-SignallingMode,
TFCS,
TSTD-Indicator,
T-Cell,
TimeSlot,
TimeSlotDirection,
TimeSlotStatus,
ToAWE,
ToAWS,
TransmissionGapDistance,
TransmissionGapPeriod,
TransmitGapLength,
TransmitGapPositionMode,
TransportFormatCombinationSet,
TransportFormatSet,
TransportLayerAddress,
UARFCN,
C-ID,
UL-CCTrCHInformation,
UL-CCTrCH-ID,
UL-DPCCH-SlotFormat,
UL-FP-Mode,
UL-InterferenceLevel,
UL-PunctureLimit,
UL-ScramblingCode,
UplinkRBNoSIR
FROM NBAP-IEs

ProtocolExtensionContainer{},
PrivateExtensionContainer{},
ProtocolIE-Container{},
ProtocolIE-ContainerList{},
NBAP-PROTOCOL-IES,
NBAP-PROTOCOL-EXTENSION,
NBAP-PRIVATE-EXTENSION
FROM NBAP-Containers

id-AICH-Information-ResourceStatIndItem,
id-AICH-ParametersList,

```

id-AICH-ParametersListItem,
id-AllowedSlotFormatInformationListItem-CTCHreconf-Req-FDD,
id-AllowedSlotFormatInformationListItem-CTCHsetup-Req-FDD,
id-BlockingPriorityIndicator,
id-CCTrCH-ParametersList,
id-CCTrCH-ParametersListItem,
id-CFN,
id-CRNC-CommunicationContextID,
id-CRNCCommunicationContextID,
id-Cause,
id-Cell-Information-ResourceStatIndItem,
id-Cell-InformationItem,
id-Cell-InformationList,
id-Cell-Parameter,
id-Cell-ParametersItem,
id-Cell-ParametersList,
id-CellParameter,
id-CommonMeasurementObjectType,
id-CommonMeasurementType,
id-CommonPhysicalChannelID,
id-CommonPhysicalChannelType-CTCHsetup-Req-FDD,
id-CommonPhysicalChannelType-CTCHsetup-Response,
id-CommunicationControlPort-InformationItem,
id-CommunicationControlPortID,
id-CommunicationControlPortInformation-ResourceStatIndItem,
id-CommunicationControlPortInformationList,
id-CompressesModeMethod,
id-ConfigurationGenerationID,
id-DCH-Add-RL-ReconfPrepFDDItem,
id-DCH-Add-RL-ReconfPrepTDDItem,
id-DCH-Add-RL-ReconfReadyItem,
id-DCH-Add-RL-ReconfReqFDDItem,
id-DCH-Add-RL-ReconfReqTDDItem,
id-DCH-AddItem-RL-ReconfResp,
id-DCH-AddList-RL-ReconfPrepFDD,
id-DCH-AddList-RL-ReconfPrepTDD,
id-DCH-AddList-RL-ReconfReqFDD,
id-DCH-AddList-RL-ReconfReqTDD,
id-DCH-Delete-RL-ReconfPrepFDDItem,
id-DCH-Delete-RL-ReconfPrepTDDItem,
id-DCH-Delete-RL-ReconfReqFDDItem,
id-DCH-Delete-RL-ReconfReqTDDItem,
id-DCH-DeleteList-RL-ReconfPrepFDD,
id-DCH-DeleteList-RL-ReconfPrepTDD,
id-DCH-DeleteList-RL-ReconfReqFDD,
id-DCH-DeleteList-RL-ReconfReqTDD,
id-DCH-Information-RL-SetupReqFDDItem,
id-DCH-Information-RL-SetupReqTDDItem,
id-DCH-InformationList-RL-SetupReqFDD,
id-DCH-InformationList-RL-SetupReqTDD,
id-DCH-InformationResponse-RL-SetupFailFDDItem,
id-DCH-InformationResponse-RL-setupRestTDDItem,
id-DCH-InformationResponseItem,

id-DCH-Modify-RL-ReconfPrepFDDItem,
id-DCH-Modify-RL-ReconfPrepTDDItem,
id-DCH-Modify-RL-ReconfReadyItem,
id-DCH-Modify-RL-ReconfReqFDDItem,
id-DCH-Modify-RL-ReconfReqTDDItem,
id-DCH-ModifyItem-RL-ReconfResp,
id-DCH-ModifyList-RL-ReconfPrepFDD,
id-DCH-ModifyList-RL-ReconfPrepTDD,
id-DCH-ModifyList-RL-ReconfReqFDD,
id-DCH-ModifyList-RL-ReconfReqTDD,
id-DL-CCTrCH-Information-RL-ReconfPrepTDDItem,
id-DL-CCTrCH-Information-RL-ReconfReqTDDItem,
id-DL-CCTrCH-Information-RL-SetupReqTDDItem,
id-DL-CCTrCH-InformationItem,
id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD,
id-DL-CCTrCH-InformationList-RL-ReconfReqTDD,
id-DL-CCTrCH-InformationList-RL-SetupReqTDD,
id-DL-CCTrCHInformationItem,
id-DL-CCTrCHInformationList,
id-DL-CodeInformation,
id-DL-CodeInformation-RL-ReconfPrepFDDItem,
id-DL-CodeInformation-RL-SetupReqFDDItem,
id-DL-DPCH-Information-RL-ReconfPrepFDD,
id-DL-DPCH-Information-RL-ReconfPrepTDDItem,
id-DL-DPCH-Information-RL-SetupReqTDDItem,
id-DL-DPCH-InformationItem,
id-DL-DPCH-InformationItem-RL-ReconfReqFDD,
id-DL-DPCH-InformationItem-RL-SetupReqFDD,
id-DL-FrameType,
id-DL-ReferencePowerInformationItem,
id-DSCH-AddItem-RL-ReconfPrepFDD,
id-DSCH-AddItem-RL-ReconfReqFDD,
id-DSCH-DeleteItem-RL-ReconfPrepFDD,
id-DSCH-DeleteItem-RL-ReconfReqFDD,
id-DSCH-ID,
id-DSCH-Information-RL-SetupReqFDDItem,
id-DSCH-InformationList-RL-SetupReqFDD,
id-DSCH-InformationResponse-RL-SetupFailFDDItem,
id-DSCH-InformationResponse-RL-setupResFDDItem,
id-DSCH-ModifyItem-RL-ReconfPrepFDD,
id-DSCH-ModifyItem-RL-ReconfReqFDD,
id-DedicatedMeasurementObjectType,
id-DedicatedMeasurementType,
id-FACH-Information-ResourceStatIndItem,
id-FACH-InformationItem,
id-FACH-ListItem,
id-FACH-ParametersList-CTCHreconf-Req-FDD,
id-FACH-ParametersList-CTCHreconf-Req-TTD,
id-FACH-ParametersListItem-CTCHreconf-Req-FDD,
id-FACH-ParametersListItem-CTCHreconf-Req-TTD,
id-FACH-ParametersListItem-CTCHsetup-Req-FDD,
id-FACH-ParametersListItem-CTCHsetup-Response,
id-GapStartingSlotNumber,

id-IndicationType,
id-Local-Cell-Information-ResourceStatIndItem,
id-Local-CellInformation-ResourceStatIndItem,
id-LocalCell-ID,
id-LocalCell-InformationItem,
id-LocalCellInformationList,
id-MIB-SegmentInformationItem,
id-MIB-SegmentInformationList,
id-MaximumTransmissionPower,
id-MeasuredCellInfo,
id-MeasurementCharacteristics,
id-MeasurementID,
id-MeasurementType,
id-NeighbouringFDD-Cell-InformationItem,
id-NeighbouringTDD-Cell-InformationItem,
id-NodeB-CommunicationContextID,
id-PCCPCH-Information,
id-PCH-Information-ResourceStatIndItem,
id-PCH-InformationItem,
id-PCH-ListItem,
id-PCH-Parameters-CTCHreconf-Req-FDD,
id-PCH-ParametersList,
id-PCH-ParametersListItem,
id-PICH-Parameters-CTCHreconf-Req-FDD,
id-PRACH-ParametersList,
id-PRACH-ParametersListItem,
id-PSCH-Information,
id-PSCHandPCCPCH-Information,
id-PUSCH-ListItem,
id-PatternDuration,
id-PowerControlMode,
id-PowerResumeMode,
id-PrimaryCCPCH-Information,
id-PrimaryCPICH-Information,
id-PrimarySCH-Information,
id-PrimaryScramblingCode,
id-ProcedureScopeType,
id-RACH-Information-ResourceStatIndItem,
id-RACH-InformationItem,
id-RL-ID,
id-RL-Information,
id-RL-Information-DMeasureReportItem,
id-RL-Information-DMeasureRequestItem,
id-RL-Information-DMeasureResponseItem,
id-RL-Information-RL-ReconfPrepFDDItem,
id-RL-Information-RL-SetupReqFDDItem,
id-RL-InformationItem,
id-RL-InformationItem-RL-SetupReqTDD,
id-RL-InformationList,
id-RL-InformationList-RL-ReconfReqFDD,
id-RL-InformationList-RL-SetupReqFDD,
id-RL-InformationResponse-RL-setupResFDDItem,
id-RL-InformationResponseItem-RL-ReconfResp,

id-RL-InformationResponseList-RL-ReconfReady,
id-RL-InformationResponseList-RL-ReconfReadyItem,
id-RL-InformationResponseList-RL-ReconfResp,
id-RL-InformationResponseList-RL-setupResFDD,
id-RL-InformationResponseList-RL-setupResTDD,
id-RL-ReconfigurationFailure-RL-ReconfFailItem,
id-RL-ReconfigurationFailureList-RL-ReconfFail,
id-RL-ResponseInformation,
id-RL-ResponseInformationItem,
id-RL-ResponseInformationList,
id-RL-informationItem,
id-RL-informationList,
id-RadioLinkInformation-RL-ReconfPrepFDDItem,
id-RadioLinkInformation-RL-ReconfPrepTDD,
id-RadioLinkInformation-RL-ReconfReqTDD,
id-RadioLinkInformationList-RL-ReconfPrepFDD,
id-ReportCharacteristics,
id-SFN,
id-SIB-SegmentInformationItem,
id-SIB-SegmentInformationList,
id-ScramblingCodeChange,
id-Secondary-CCPCHListItem,
id-SecondaryCPICH-Information,
id-SecondarySCH-Information,
id-ShutdownTimer,
id-Successful-RL-InformationResponse-RL-SetupFailFDDItem,
id-Successful-RL-InformationResponseItem,
id-Successful-RL-InformationResponseList,
id-Successful-RL-InformationResponseList-RL-SetupFailFDD,
id-SynchronisationMethod,
id-T-Cell,
id-TDDChipOffset,
id-TimeSlotConfigurationItem,
id-TimeSlotConfigurationList,
id-TransmissionGapDistance,
id-TransmissionGapPeriod,
id-TransmitGapLength,
id-TransmitGapPositionMode,
id-UARFCN,
id-C-ID,
id-UL-CCTrCH-Information-RL-ReconfPrepTDDItem,
id-UL-CCTrCH-Information-RL-ReconfReqTDDItem,
id-UL-CCTrCH-Information-RL-SetupReqTDDItem,
id-UL-CCTrCH-InformationItemIE,
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD,
id-UL-CCTrCH-InformationList-RL-ReconfReqTDD,
id-UL-CCTrCH-InformationList-RL-SetupReqTDD,
id-UL-CCTrCHInformation,
id-UL-CCTrCHInformationList,
id-UL-DPCH-Information-RL-ReconfPrepFDD,
id-UL-DPCH-Information-RL-ReconfPrepTDDItem,
id-UL-DPCH-Information-RL-SetupReqTDDItem,
id-UL-DPCH-InformationItem-RL-ReconfReqFDD,

```

id-UL-DPCH-InformationItem-RL-SetupReqFDD,
id-UL-DPCH-InformationItemIE,
id-USCH-Information-ResourceStatIndItem,
id-USCH-InformationItem,
id-USCH-ListItem-CTCHsetup-Req-TDD,
id-Unsuccessful-RL-InformationResponse,
id-Unsuccessful-RL-InformationResponse-RL-SetupFailFDDItem,
id-Unsuccessful-RL-InformationResponseItem,
id-Unsuccessful-RL-InformationResponseItem-RL-SetupFailTDD,
id-Unsuccessful-RL-InformationResponseList,
id-Unsuccessful-RL-InformationResponseList-RL-SetupFailFDD,

```

```

maxAICHCell,
maxCCPinNodeB,
maxCellinNodeB,
maxFACHCell,
maxLocalCellinNodeB,
maxMIBSEG,
maxPCHCell,
maxPCHinNodeB,
maxRACHCell,
maxSF,
maxSIBSEG,
maxUCIDinNodeB,
maxUSCHCell,
maxnoCCTrCHs,
maxnoofCCTrCHs,
maxnoofDCHs,
maxnoofDLCodes,
maxnoofDPCHs,
maxnoofDSCHs,
maxnoofFACHCell,
maxnoofFACHs,
maxnoofFDDNeighbours,
maxnoofPCHs,
maxnoofPRACHs,
maxnoofPUSHs,
maxnoofRL-1,
maxnoofRL-2,
maxnoofRLs,
maxnoofSCCPCHs,
maxnoofTDDNeighbours,
maxnoofUSCHs

```

FROM NBAP-Constants;

CR Editors note: Some text has been removed.

```

-- *****
--
-- RADIO LINK SETUP REQUEST FDD
--
-- *****

```

```

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

RadioLinkSetupRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-CRNC-CommunicationContextID      CRITICALITY ignore TYPE CRNC-CommunicationContextID PRESENCE mandatory }|
    { ID id-UL-DPCH-InformationItem-RL-SetupReq-FDD CRITICALITY ignore TYPE UL-DPCH-InformationItem-RL-SetupReq-FDD PRESENCE mandatory }|
    { ID id-DL-DPCH-InformationItem-RL-SetupReq-FDD CRITICALITY ignore TYPE DL-DPCH-InformationItem-RL-SetupReq-FDD PRESENCE mandatory }|
    { ID id-DCH-InformationList-RL-SetupReq-FDD CRITICALITY ignore TYPE DCH-InformationList-RL-SetupReq-FDD PRESENCE mandatory }|
    { ID id-RL-ID                               CRITICALITY ignore TYPE RL-ID                               PRESENCE optional }|
    { ID id-DSCH-ID                               CRITICALITY ignore TYPE DSCH-ID                               PRESENCE optional }|
    { ID id-DSCH-InformationList-RL-SetupReq-FDD CRITICALITY ignore TYPE DSCH-InformationList-RL-SetupReq-FDD PRESENCE optional }|
    { ID id-RL-InformationList-RL-SetupReq-FDD CRITICALITY ignore TYPE RL-InformationList-RL-SetupReq-FDD PRESENCE mandatory },
    ...
}

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

UL-DPCH-InformationItem-RL-SetupReq-FDD ::= SEQUENCE {
    ul-ScramblingCode          UL-ScramblingCode,
    minUL-ChannelisationCodeLength MinUL-ChannelisationCodeLength,
    maxNumberOfUL-DPDCHs       MaxNumberOfUL-DPDCHs OPTIONAL
    -- This IE is present only if "Min UL Channelisation Code length" equals to 4 -- ,
    ul-PunctureLimit           UL-PunctureLimit,
    transportFormatCombinationSet TransportFormatCombinationSet,
    ul-DPCCH-SlotFormat         UL-DPCCH-SlotFormat,
    ul-EbNesIR-Target           UplinkEbNesIR,
    diversityMode               DiversityMode,
    d-FieldLength               D-FieldLength OPTIONAL
    -- This IE is present only if Feed Back mode diversity is activated -- ,
    sSDT-Cell-IDLength          SSDT-Cell-IDLength OPTIONAL,
    s-FieldLength               S-FieldLength OPTIONAL
}

DL-DPCH-InformationItem-RL-SetupReq-FDD ::= SEQUENCE {
    transportFormatCombinationSet TransportFormatCombinationSet,
    dl-DPCH-SlotFormat           DL-DPCH-SlotFormat,
    tFCI-SignallingMode          TFCI-SignallingMode,
    multiplexingPosition,         MultiplexingPosition,
    tFCI-Presence                 TFCI-Presence,
    powerOffsetInformationItem-RL-SetupReq-FDD
        PowerOffsetInformationItem-RL-SetupReq-FDD,
    deltaTPC                      DeltaTPC
}

PowerOffsetInformationItem-RL-SetupReq-FDD ::= SEQUENCE {
    p01          PowerOffset,
    p02          PowerOffset,
}

```

```

    p03                PowerOffset
}

DCH-InformationList-RL-SetupReq-FDD ::= SEQUENCE (SIZE (1..maxnoofDCHs)) OF
    ProtocolIE-Container{{DCH-Information-RL-SetupReq-FDDItemIE }}

DCH-Information-RL-SetupReq-FDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DCH-Information-RL-SetupReq-FDDItem CRITICALITY ignore TYPE DCH-Information-RL-SetupReq-FDDItem PRESENCE mandatory },
    ...
}

DCH-Information-RL-SetupReq-FDDItem ::= SEQUENCE {
    dCH-ID                DCH-ID,
    dCH-CombinationIndication DCH-CombinationIndication OPTIONAL,
    rLC-Mode                RLC-Mode,
    ul-TransportFormatSet    TransportFormatSet,
    dl-TransportFormatSet    TransportFormatSet,
    frameHandlingPriority    FrameHandlingPriority,
    payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
    ul-FP-Mode                UL-FP-Mode,
    toAWS                    ToAWS,
    toAWE                    ToAWE
}

DSCH-InformationList-RL-SetupReq-FDD ::= SEQUENCE (SIZE (1..maxnoofDSCHs)) OF
    ProtocolIE-Container{{DSCH-Information-RL-SetupReq-FDDItemIE }}

DSCH-Information-RL-SetupReq-FDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DSCH-Information-RL-SetupReq-FDDItem CRITICALITY ignore TYPE DSCH-Information-RL-SetupReq-FDDItem PRESENCE mandatory },
    ...
}

DSCH-Information-RL-SetupReq-FDDItem ::= SEQUENCE {
    dSCH-ID                DSCH-ID,
    dSCH-TransportFormatSet DSCH-TransportFormatSet,
    frameHandlingPriority    FrameHandlingPriority,
    toAWS                    ToAWS,
    toAWE                    ToAWE
}

RL-InformationList-RL-SetupReq-FDD ::= SEQUENCE (SIZE (1..maxnoofRLs)) OF
    ProtocolIE-Container{{RL-Information-RL-SetupReq-FDDItemIE }}

RL-Information-RL-SetupReq-FDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-SetupReq-FDDItem CRITICALITY ignore TYPE RL-Information-RL-SetupReq-FDDItem PRESENCE optional },
    ...
}

RL-Information-RL-SetupReq-FDDItem ::= SEQUENCE {
    rL-ID                RL-ID,
    c-ID                  C-ID,
    frameOffset            FrameOffset,
    chipOffset              ChipOffset,
}

```

```

propagationDelay      PropagationDelay,
diversityControlField DiversityControlField OPTIONAL,
-- This IE is present only if the RL is not the first one in the RL Information
dl-CodeInformationList-RL-SetupReqFDD      DL-CodeInformationList-RL-SetupReqFDD,
initialDL-transmissionPower DL-Power,
maximumDL-power      DL-Power,
minimumDL-power      DL-Power,
sSDT-CellIdentity    SSDT-CellIdentity OPTIONAL
}

DL-CodeInformationList-RL-SetupReqFDD ::= SEQUENCE (SIZE (1..maxnoofRLs)) OF
  ProtocolIE-Container{{DL-CodeInformation-RL-SetupReqFDDItemIE }}

DL-CodeInformation-RL-SetupReqFDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-DL-CodeInformation-RL-SetupReqFDDItem CRITICALITY ignore TYPE DL-CodeInformation-RL-SetupReqFDDItem PRESENCE optional },
  ...
}

DL-CodeInformation-RL-SetupReqFDDItem ::= SEQUENCE {
  dl-ScramblingCode      DL-ScramblingCode,
  fdd-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber
}

CR Editors note: Some text has been removed.

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

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

RadioLinkReconfigurationPrepareFDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-NodeB-CommunicationContextID CRITICALITY ignore TYPE NodeB-CommunicationContextID PRESENCE mandatory } |
  { ID id-UL-DPCH-Information-RL-ReconfPrepFDD CRITICALITY ignore TYPE UL-DPCH-Information-RL-ReconfPrepFDD PRESENCE optional } |
  { ID id-DL-DPCH-Information-RL-ReconfPrepFDD CRITICALITY ignore TYPE DL-DPCH-Information-RL-ReconfPrepFDD PRESENCE optional } |
  { ID id-DCH-ModifyList-RL-ReconfPrepFDD CRITICALITY ignore TYPE DCH-ModifyList-RL-ReconfPrepFDD PRESENCE optional } |
  { ID id-DCH-AddList-RL-ReconfPrepFDD CRITICALITY ignore TYPE DCH-AddList-RL-ReconfPrepFDD PRESENCE optional } |
  { ID id-DCH-DeleteList-RL-ReconfPrepFDD CRITICALITY ignore TYPE DCH-DeleteList-RL-ReconfPrepFDD PRESENCE optional } |
  { ID id-DSCH-ModifyItem-RL-ReconfPrepFDD CRITICALITY ignore TYPE DSCH-ModifyItem-RL-ReconfPrepFDD PRESENCE optional } |
  { ID id-DSCH-AddItem-RL-ReconfPrepFDD CRITICALITY ignore TYPE DSCH-AddItem-RL-ReconfPrepFDD PRESENCE optional } |
  { ID id-DSCH-DeleteItem-RL-ReconfPrepFDD CRITICALITY ignore TYPE DSCH-DeleteItem-RL-ReconfPrepFDD PRESENCE optional } |
  { ID id-RadioLinkInformationList-RL-ReconfPrepFDD CRITICALITY ignore TYPE RadioLinkInformationList-RL-ReconfPrepFDD PRESENCE optional }
},
...
}

```

```

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

UL-DPCH-Information-RL-ReconfPrepFDD ::= SEQUENCE {
    ul-ScramblingCode          UL-ScramblingCode          OPTIONAL,
    ul-SIR-Target              UplinkSIR                OPTIONAL,
    minUL-ChannelisationCodeLength  MinUL-ChannelisationCodeLength  OPTIONAL,
    maxNrOfUL-DPDCHs              MaxNrOfUL-DPDCHs          OPTIONAL
    -- This IE is present only if minUL-ChannelisationCodeLength equals to 4
    ul-PunctureLimit              UL-PunctureLimit          OPTIONAL,
    tFCS                           TFCS                      OPTIONAL,
    ul-DPCCH-SlotFormat            UL-DPCCH-SlotFormat      OPTIONAL,
    sSDT-CellIdentityLength        SSDT-CellIdentityLength  OPTIONAL,
    s-FieldLength                  S-FieldLength           OPTIONAL,
    -- The following information element is needed if there is a need to add Ies      with specific criticality.
}

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,
    dTX-InsertionPoint            DTX-InsertionPoint      OPTIONAL,
    ...
}

DCH-ModifyList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxnoofDCHs)) OF
    ProtocolIE-Container {{DCH-Modify-RL-ReconfPrepFDDItemIE }}

DCH-Modify-RL-ReconfPrepFDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DCH-Modify-RL-ReconfPrepFDDItem CRITICALITY ignore      TYPE DCH-Modify-RL-ReconfPrepFDDItem  PRESENCE optional  },
    ...
}

DCH-Modify-RL-ReconfPrepFDDItem ::= SEQUENCE {
    dCH-ID                          DCH-ID,
    ul-TransportFormatSet            TransportFormatSet      OPTIONAL,
    dl-TransportFormatSet            TransportFormatSet      OPTIONAL,
    frameHandlingPriority            FrameHandlingPriority    OPTIONAL,
    ul-FP-Mode                       UL-FP-Mode              OPTIONAL,
    toAWS                             ToAWS                   OPTIONAL,
    toAWE                             ToAWE                   OPTIONAL
}

DCH-AddList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxnoofDCHs)) OF
    ProtocolIE-Container {{DCH-Add-RL-ReconfPrepFDDItemIE }}

DCH-Add-RL-ReconfPrepFDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DCH-Add-RL-ReconfPrepFDDItem      CRITICALITY ignore      TYPE DCH-Add-RL-ReconfPrepFDDItem  PRESENCE optional  },
    ...
}

```



```

DCH-Add-RL-ReconfPrepFDDItem ::= SEQUENCE {
    dCH-ID                DCH-ID,
    dCH-CombinationIndication  DCH-CombinationIndication  OPTIONAL,
    rLC-Mode              RLC-Mode,
    ul-TransportFormatSet  TransportFormatSet,
    dl-TransportFormatSet  TransportFormatSet,
    frameHandlingPriority  FrameHandlingPriority,
    payloadCRC-PresenceIndicator  PayloadCRC-PresenceIndicator,
    ul-FP-Mode            UL-FP-Mode,
    toAWS                 ToAWS,
    toAWE                  ToAWE
}

DCH-DeleteList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxnoofDCHs)) OF
    ProtocolIE-Container {{DCH-Delete-RL-ReconfPrepFDDItemIE }}

DCH-Delete-RL-ReconfPrepFDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DCH-Delete-RL-ReconfPrepFDDItem CRITICALITY ignore      TYPE DCH-Delete-RL-ReconfPrepFDDItem  PRESENCE optional  },
    ...
}

DCH-Delete-RL-ReconfPrepFDDItem ::= SEQUENCE {
    dCH-ID                DCH-ID
}

DSCH-ModifyItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dl-TransportFormatSet  TransportFormatSet  OPTIONAL,
    rL-ID                  RL-ID              OPTIONAL,
    frameHandlingPriority  FrameHandlingPriority  OPTIONAL,
    toAWS                  ToAWS              OPTIONAL,
    toAWE                  ToAWE              OPTIONAL
}

DSCH-AddItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dl-TransportFormatSet  TransportFormatSet,
    rL-ID                  RL-ID,
    frameHandlingPriority  FrameHandlingPriority,
    toAWS                  ToAWS,
    toAWE                  ToAWE
}

DSCH-DeleteItem-RL-ReconfPrepFDD ::= SEQUENCE {
    rL-ID                  RL-ID
}

RadioLinkInformationList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxnoofRLs)) OF
    ProtocolIE-Container {{RadioLinkInformation-RL-ReconfPrepFDDItemIE}}

RadioLinkInformation-RL-ReconfPrepFDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-RadioLinkInformation-RL-ReconfPrepFDDItem  CRITICALITY  ignore      TYPE  RadioLinkInformation-RL-ReconfPrepFDDItemPRESENCE
    mandatory},
    ...
}

```

```

}

RadioLinkInformation-RL-ReconfPrepFDDItem ::= SEQUENCE {
    rL-ID                RL-ID,
    dl-CodeInformationList-RL-ReconfPrepFDD                DL-CodeInformationList-RL-ReconfPrepFDD    OPTIONAL,
    maxDL-Power          DL-Power                OPTIONAL,
    minDL-Power          DL-Power                OPTIONAL,
    sSDT-Indication      SSDT-Indication        OPTIONAL,
    sSDT-CellIdentity    SSDT-CellIdentity      OPTIONAL
-- The IE may be present if the SSDT Indication is set to SSDT Active in the UE
}

DL-CodeInformationList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxnoofDLCodes)) OF
    ProtocolIE-Container {{DL-CodeInformation-RL-ReconfPrepFDDItemIE }}

DL-CodeInformation-RL-ReconfPrepFDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DL-CodeInformation-RL-ReconfPrepFDDItem CRITICALITY ignore  TYPE DL-CodeInformation-RL-ReconfPrepFDDItem  PRESENCE optional },
    ...
}

DL-CodeInformation-RL-ReconfPrepFDDItem ::= SEQUENCE {
    scramblingCode      ScramblingCode        OPTIONAL,
    fdd-DL-ChannelisationCodeNumber    FDD-DL-ChannelisationCodeNumber OPTIONAL
}

CR Editors note: Some text has been removed.

-- *****
--
-- COMPRESSED MODE PREPARE FDD
--
-- *****

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

CompressedModePrepareFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-NodeB-CommunicationContextID          CRITICALITY ignore          TYPE NodeB-CommunicationContextID PRESENCE mandatory } |
    { ID id-TGP1                                CRITICALITY ignore          TYPE TGP1 PRESENCE mandatory } |
    { ID id-TGP2                                CRITICALITY ignore          TYPE TGP2 PRESENCE optional } |
    { ID id-TGL                                  CRITICALITY ignore          TYPE TGL PRESENCE mandatory } |
    { ID id-TGD                                  CRITICALITY ignore          TYPE TGD PRESENCE mandatory } |
    { ID id-UL-DL-CompressedModeSeletion         CRITICALITY ignore          TYPE UL-DL-CompressedModeSeletion PRESENCE mandatory } |
    { ID id-CompresesModeMethod                  CRITICALITY ignore          TYPE CompresesModeMethod PRESENCE mandatory } |
    { ID id-GapPositionMode                      CRITICALITY ignore          TYPE GapPositionMode PRESENCE mandatory } |
    { ID id-SN                                   CRITICALITY ignore          TYPE SN PRESENCE optional } |
    -- This IE is present if Gap position mode = 'flexible position'--
    { ID id-DL-FrameType                         CRITICALITY ignore          TYPE DL-FrameType PRESENCE mandatory } |
    { ID id-ScramblingCodeChange                 CRITICALITY ignore          TYPE ScramblingCodeChange PRESENCE optional } |
    -- This IE is present if Compressed mode method = 'SF/2' --

```

```
{ ID id-PowerControlMode      CRITICALITY ignore      TYPE PowerControlMode      PRESENCE mandatory } |
{ ID id-PowerResumeMode       CRITICALITY ignore      TYPE PowerResumeMode       PRESENCE mandatory } |
{ ID id-UL-DeltaEb-NoSIR    CRITICALITY ignore      TYPE UL-DeltaEb-NoSIR    PRESENCE mandatory } |
{ ID id-UL-DeltaEb-NoSIRAfter  CRITICALITY ignore      TYPE UL-DeltaEb-NoSIRAfter  PRESENCE mandatory },
...
}

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

9.3.4 NBAP Information Elements

```

--*****
--
-- Information Element Definitions
--
--*****

```

CR Editors note: Some text has been removed.

```

-----
-- U
-----

```

```

UARFCN ::= INTEGER (174 .. 474)

```

```

UL-DL-CompressedModeSelection ::= ENUMERATED {
ul-only,
dl-only,
both-UandDL
}

```

```

UL-DPCH-SlotFormat ::= INTEGER (0..5)

```

```

UL-EbNSIR ::= INTEGER (0..255)
-- Resolution is 0.1 dB, range 0-25.5 dB ---According to mapping in 25.427

```

```

UL-FP-Mode ::= ENUMERATED {
normal,
silent
}

```

```

-- unit dBm, step 0.1dBm
UL-InterferenceLevel ::= INTEGER (-128..60)

```

```

UL-PunctureLimit ::= INTEGER (0..100)

```

```

UL-ScramblingCode ::= SEQUENCE {
    uL-ScramblingCodeNumber    UL-ScramblingCodeNumber,
    uL-ScramblingCodeLength    UL-ScramblingCodeLength
}

```

```

-- 2^24
UL-ScramblingCodeLength ::= INTEGER (0..16777215)

```

```

UL-ScramblingCodeNumber ::= ENUMERATED {
short,
long
}

```

```
UplinkDeltaEb-NeSIR ::= ENUMERATED {  
  deltaEb-NeSIR-6dB,  
  ...  
}  
  
UplinkDeltaEb-NeSIR-after ::= ENUMERATED {  
  deltaEb-NeSIR-after-6dB,  
  ...  
}  
  
END
```

<h2 style="margin: 0;">CHANGE REQUEST</h2>		<small>Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.</small>
25.433	CR 015	Current Version: 3.0.0
<small>GSM (AA.BB) or 3G (AA.BBB) specification number ↑</small>	<small>↑ CR number as allocated by MCC support team</small>	
For submission to: TSG RAN #7 <small>list expected approval meeting # here ↑</small>	for approval for information <input checked="" type="checkbox"/>	strategic <input type="checkbox"/> non-strategic <input type="checkbox"/> <small>(for SMG use only)</small>

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: TSG-RAN WG3 **Date:** January 2000

Subject: TPC Step Size defined for TDD

Work item: _____

Category:	F Correction <input checked="" type="checkbox"/> A Corresponds to a correction in an earlier release <input type="checkbox"/> B Addition of feature <input type="checkbox"/> C Functional modification of feature <input type="checkbox"/> D Editorial modification <input type="checkbox"/>	Release:	Phase 2 <input type="checkbox"/> Release 96 <input type="checkbox"/> Release 97 <input type="checkbox"/> Release 98 <input type="checkbox"/> Release 99 <input checked="" type="checkbox"/> Release 00 <input type="checkbox"/>
------------------	--	-----------------	--

(only one category shall be marked with an X)

Reason for change: Definition of TPC Step size for TDD messages as per the WG1 specifications

Clauses affected: _____

Other specs affected:	Other 3G core specifications <input type="checkbox"/> → List of CRs: Other GSM core specifications <input type="checkbox"/> → List of CRs: MS test specifications <input type="checkbox"/> → List of CRs: BSS test specifications <input type="checkbox"/> → List of CRs: O&M specifications <input type="checkbox"/> → List of CRs:	
------------------------------	--	--

Other comments: _____

9.1.35 RADIO LINK SETUP REQUEST

9.1.35.1 FDD message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
CRNC Communication Context ID	M			
Transaction ID	M			
UL DPCH Information		1		
UL Scrambling Code	M			
Min UL Channelisation Code length	M			
Max Number of UL DPCHs	C – CodeLen			
puncture limit	M			For UL
Transport Format Combination Set	M			for UL
UL DPCH Slot Format	M			
UL Eb/No Target	M		Uplink Eb/No	
Diversity mode	M			
D Field Length	C – FB			
SSDT cell ID Length	O			
S Field Length	O			
DL DPCH Information				
Transport Format Combination Set	M			For DL
DL DPCH Slot Format	M			
TFCI signalling mode	M			
TFCI presence	C- SlotFormat			
Multiplexing Position	M			
Power Offset Information		1		
PO1	M		Power Offset	Power offset for the TFCI bits
PO2	M		Power Offset	Power offset for the TPC bits
PO3	M		Power Offset	Power offset for the pilot bits
Delta TPC FDD TPC DL Step Size	M			
DCH Information		1 to <maxnoofDCHs>		
DCH ID	M			
DCH Combination Ind	O			
RLC mode	M			
Transport Format Set	M			For UL
Transport Format Set	M			For DL
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP mode	M			
ToAWS	M			
ToAWE	M			
RL ID	O			RL Supporting the DSCH
DSCH TFCS	O			

DSCH Information		0 to <maxnoofDSCHs >		
DSCH ID	M			
Transport Format Set	M			For DSCH
Frame handling Priority	M			
ToAWS	M			
ToAWE	M			
RL Information		1 to <maxnoofRLs>		
RL ID	M			
C-ID	M			
Frame Offset	M			
Chip Offset	M			
Propagation Delay	O			
Diversity Control Field	C – NotFirstRL			
DL Code Information		1 to <maxnoof- DLCodes		
DL Scrambling Code	M			
FDD DL Channelisation Code Number	M			
Initial DL transmission Power	M		DL Power	
Maximum DL power	M		DL Power	
Minimum DL power	M		DL Power	
SSTD Cell Identity	O			

Condition	Explanation
CodeLen	This IE is present only if "Min UL Channelisation Code length" equals to 4
FB	This IE is present only if Feed Back mode diversity is activated.
NotFirstRL	This IE is present only if the RL is not the first one in the RL Information.
SlotFormat	This IE is only present if the DL DPCH slot format is equal to any of the value 12 to 16.

Range bound	Explanation
MaxnoofDSCHs	Maximum no. of DSCHs for one UE.
MaxnoofDCHs	Maximum no. of DCHs for one UE.
MaxnoofRLs	Maximum no. of RLs for one UE.
MaxnoofDLCodes	Maximum no. of DL code information.

9.1.35.2 TDD message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
CRNC Communication Context ID	M			
Transaction ID	M			
UL CCTrCH Information		0 to <maxno CCTrCH>		
CCTrCH ID	M			
Transport Format Combination Set	M			
TFCI Coding	M			
Puncture Limit	M			
UL DPCH Information		0 to <maxnoOfDPCH>		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
DL CCTrCH Information		0 to <maxno CCTrCH>		
CCTrCH ID	M			
Transport Format Combination Set	M			
TFCI Coding	M			
Puncture Limit	M			
TDD TPC DL Step Size	M			
DL DPCH information		0 to <maxnoOfDPCH>		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
DCH Information		1 to <maxnoofDCHs>		
DCH ID	M			
RLC mode	M			
CCTrCH ID	M			UL CCTrCH in which the DCH is mapped
CCTrCH ID	M			DL CCTrCH in which the DCH is mapped
DCH Combination Ind	O			
Transport Format Set	M			For UL
Transport Format Set	M			For DL

Frame Handling Priority	O			
Payload CRC Presence Indicator	M			
UL FP mode	M			
ToAWS	M			
ToAWE	M			
DSCH Information		0 to <MaxnoofDSCHs >		
DSCH ID	M			
CCTrCH ID	M			DL CCTrCH in which the DSCH is mapped
Transport Format Set	M			For DSCH
Frame handling Priority	M			
ToAWS	M			
ToAWE	M			
USCH Information		0 to <MaxnoofUSCHs >		
USCH ID	M			
CCTrCH ID	M			UL CCTrCH in which the USCH is mapped
Transport Format Set	M			For USCH
RL Information		1		
RL ID	M			
C-ID	M			
Frame TDD Physical Channel Offset	M			
Initial DL transmission Power	M		DL Power	
Maximum DL power	M		DL Power	
Minimum DL power	M		DL Power	

Range bound	Explanation
MaxnoofDCHs	Maximum no. of DCHs for one UE.
maxnoOfDPCH	Maximum number of DPCH in one CCTrCH
maxnoCCTrCH	no. of CCTrCH for one UE.
MaxnoofDSCHs	Maximum number of DSCH for one UE
MaxnoofUSCHs	Maximum number of USCH for one UE

9.2.2.13 FDD S-CCPCH 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.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
FDD S-CCPCH Offset			INTEGER(0..149)	0: 0 chip 1: 256 chip 2: 512 chip .. 149: 38144 chip [TS 25.211]

9.2.2.14 FDD TPC DL step size

[This parameter indicates step size for the DL power adjustment.](#)

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE type and reference</u>	<u>Semantics description</u>
FDD TPC Downlink step size			ENUMERATED (0.5, 1)	

9.2.2.159.2.2.14 Gap Period

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Gap Period			INTEGER(0..255)	Frames

9.2.2.169.2.2.15 Gap Position Mode

The gap position can be fixed or adjustable, as defined in TS 25.212.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Gap Position Mode			ENUMERATED (Fixed, Flexible)	

9.2.2.179.2.2.16 Maximum Number of UL DPDCHs

This parameter is an UE Radio Access Capability parameter which is needed in rate matching algorithm.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Max Number of UL DPDCHs			INTEGER (1..6)	

9.2.2.189.2.2.17 Minimum UL Channelisation Code Length

Minimum UL channelisation code length (spreading factor) of a DPDCH which is supported by UE. 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)	

9.2.2.199.2.2.18 Pattern Duration (PD)

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PD			INTEGER(0..2047, ...)	Frames

9.2.2.209.2.2.19 PICH Mode

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

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

9.2.2.219.2.2.20 Pilot Bits Used Indicator

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Pilot Bits Used Indicator			ENUMERATED(Pilot Bits Used, Pilot Bits not Used)	

9.2.2.229.2.2.21 Power Control Mode

Power Control Mode specifies the uplink power mode applied during recovery period after each transmission gap in compressed mode. PCM can take 2 values (0 or 1). The different power control modes are described in TS 25.214.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Power Control Mode			ENUMERATED(0, 1,..)	

9.2.2.239.2.2.22 Power Offset

This IE defines a power offset respect the Downlink transmission power of a DPCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Power Offset			INTEGER(0..24)	Step 0.25 dB, range 0-6 dB

9.2.2.249-2.2.23 Power Resume Mode

Power Resume Mode selects the uplink power control method to calculate the initial transmit power after the gap. PRM can take two values (0 or 1) and is described in TS 25.214.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Power Resume Mode			ENUMERATED (0, 1,..)	Described in TS 25.214

9.2.2.259-2.2.24 Preamble Signature

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Preamble Signatures			BIT STRING (16)	Bit 0=P0 Bit 1=P1 .. Bit 15=P15 [25.213]

9.2.2.269-2.2.25 Primary Scrambling code

The Primary scrambling code to be used in the cell.

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

9.2.2.279-2.2.26 Primary CPICH Power

Primary CPICH power is the power that shall be used for transmitting the P-CPICH in a cell.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Primary CPICH power			Enumerated (-15, .., 40)	Unit dBm Granularity 0.1 dB

9.2.2.289-2.2.27 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, ...

9.2.2.299-2.2.28 RACH Slot Format

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
RACH Slot Format			ENUMERATED(0..3)	See 25.211.

9.2.2.309.2.2.29 RACH sub Channel numbers

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
RACH Sub Channel Numbers			BIT STRING (15)	Bit 0=Sub Channel Number 0 Bit 1=Sub Channel Number 1 ... Bit 14=Sub Channel Number 14

9.2.2.319.2.2.30 Scrambling code change

This parameter indicates whether the alternative scrambling code is used for compressed mode method 'SF/2'.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Scrambling Code Change			ENUMERATED (Change, No change)	

9.2.2.329.2.2.31 Scrambling Code Word Number

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Scrambling Code Word Number			INTEGER (0..255)	

9.2.2.339.2.2.32 Secondary CCPCH Slot Format

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Secondary CCPCH Slot Format			INTEGER(0..8)	

9.2.2.349.2.2.33 S-Field Length

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
S Field Length			ENUMERATED (1, 2)	

9.2.2.359.2.2.34 SSID Cell Identity

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SSID Cell Identity			ENUMERATED (a, b.., h)	

9.2.2.369.2.2.35 SSID Cell ID Length

The SSID Cell ID Length parameter shows the length of the SSID Cell ID.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Cell ID Length			ENUMERATED (Short, Medium, Long)	

9.2.2.379.2.2.36 SSDD Support Indicator

The SSDD Support Indicator indicates whether a RL supports SSDD or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SSDD Support Indicator			ENUMERATED (SSDD Supported, SSDD not supported).	

9.2.2.389.2.2.37 SSDD Indication

The SSDD Indication indicates whether SSDD is in use by the UE or not.

Information Element/Group name	Presence	Range	IE type and reference	Semantics description
SSDD Indication			ENUMERATED (SSDD Active in the UE, SSDD not Active in the UE)	

9.2.2.399.2.2.38 STTD Indicator

Indicates if STTD shall be active or not.

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

9.2.2.409.2.2.39 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.

Information Element/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 [TS 25.402]

9.2.2.419.2.2.40 TFCI signalling mode

This parameter indicates if the normal or split mode is used for the TFCI.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TFCI signalling mode			ENUMERATED (Normal, Split)	

9.2.2.429.2.2.41 TGD

Transmission Gap Distance is the duration of transmission between two consecutive transmission gaps within a transmission gap period, expressed in number of frames. In case there is only one transmission gap in the transmission gap period, this parameter shall be set to zero.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TGD			INTEGER(0..255)	Frames

9.2.2.439.2.2.42 TGL

Transmission Gap Length is the duration of no transmission, expressed in number of slots.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TGL			INTEGER (3,4,7,10,14)	Slot

9.2.2.43 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
TPC Downlink step size			ENUMERATED (0.5, 1)	

9.2.3.19 TDD S-CCPCH Offset

The Secondary CCPCH offset is defined as the time offset towards the Primary CCPCH in the cell.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
TDD S-CCPCH Offset			INTEGER(0.. 63)	

9.2.3.20 TDD TPC DL step size

This parameter indicates step size for the DL power adjustment.

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE type and reference</u>	<u>Semantics description</u>
<u>TDD TPC Downlink step size</u>			<u>ENUMERATED (1, 2, 3)</u>	

9.2.3.219.2.3.20 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.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
TFCI Coding			Enumerated (4, 8, 16, 32)	

9.2.3.229.2.3.21 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)	

9.2.3.239.2.3.22 Time Slot Direction

This parameter indicates whether the TS in the cell is used in Uplink or Downlink direction.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Time Slot Direction			Enumerated (UL, DL)	

9.2.3.249.2.3.23 Time Slot Status

This parameter indicates whether the TS in the cell is active or not.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Time Slot Status			Enumerated (active, notActive)	

9.2.3.259.2.3.24 Transmission Diversity Applied

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

9.2.3.269.2.3.25 USCH ID

The USCH ID uniquely identifies a USCH within a Node B Communication Context.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
USCH ID			INTEGER (0..255)	

9.3.3 NBAP PDU Content Definitions

```

-- *****
--
-- PDU definitions for NBAP.
--
-- *****

NBAP-PDU-Contents -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS
    AICH-InformationList,
    AICH-Parameters,
    AICH-Power,
    AICH-TransmissionTiming,
    AddOrDeleteIndicator,
    AvailabilityStatus,
    BindingID,
    BlockingPriorityIndicator,
    BurstType,
    CCTrCH-ID,
    CFN,
    CN-CSDomainIdentifier,
    CN-PSDomainIdentifier,
    CRNC-CommunicationContextID,
    Cause,
    CellParameter,
    Cell-Parameter,
    ChipOffset,
    CommonMeasurementType,
    CommonPhysicalChannelID,
    CommonPhysicalChannelType,
    CommonTransportChannelID,
    CommonTransportChannelType,
    CommunicationControlPortID,
    CommunicationControlPortInformationList,
    CompressesModeMethod,
    ConfigurationGenerationID,
    DCH-CombinationIndication,
    DCH-Delete-RL-ReconfReqTDDItem,

```

DCH-ID,
DCH-InformationResponse-RL-setupResFDD,
DCH-Modify-RL-ReconfPrepTDDItem,
DL-CCTrCH-ID,
DL-CodeInformation,
DL-DPCH-InformationItem-RL-ReconfReqFDD,
DL-DPCH-SlotFormat,
DL-FrameType,
DL-Power,
DL-ReferencePower,
DL-ReferencePowerInformationItem,
DL-ScramblingCode,
DPCH-ID,
DPCH-Offset,
DSCH-ID,
DSCH-InformationResponse-RL-setupResFDD,
DSCH-ModifyList-RL-ReconfResp,
DSCH-SetupList-RL-ReconfResp,
DSCH-TransportFormatSet,
DTX-InsertionPoint,
DTX-InsertionPosition,
D-FieldLength,
DedicatedMeasurementType,
DedicatedMeasurementValue,
~~BetaTPC,~~
DiversityControlField,
DiversityMode,
FACH-Power,
FDD-DL-ChannelisationCodeNumber,
FDD-SCCPCH-Offset,
FDD-TPC-DownlinkStepSize
FrameHandlingPriority,
FrameOffset,
GapStartingSlotNumber,
LocalCellID,
LocalCellInformationList,
LocalCell-ID,
Local-CellID,
MIB-SG-POS,
MIB-SG-REP,
MaxFACH-Power,
MaxNrOfUL-DPDCHs,
MaxNumberOfUL-DPDCHs,
MaximumDLPowerCapability,
MaximumDL-PowerCapability,
MaximumTransmissionPower,
MaximumUL-EbN0,
Maximum-DL-PowerCapability,
MeasuredCellInfo,
MeasurementCharacteristics,
MeasurementID,

MeasurementType,
MessagePartScramblingCode,
MidambleShift,
Midambleshift,
MinUL-ChannelisationCodeLength,
MinimumSpreadingFactor,
MinimumUL-EbN0,
NodeB-CommunicationContextID,
NumberOfChannelElements,
Offset,
PCCPCH-Power,
PCCPCH-TimeSloti,
PCH-Power,
PICH-Information,
PICH-Power,
PSCH-Power,
PSCHandPCCPCH-Allocation,
PSCHandPCCPCH-TimeSlotK,
PUSCH,
PagingIndicatorLength,
PatternDuration,
PayloadCRC-PresenceIndicator,
PilotBitsUsedIndicator,
PowerControlMode,
PowerOffset,
PowerResumeMode,
PreambleScramblingCode,
PreambleSignatures,
PrimaryCPICH-Power,
PrimarySCH-Power,
PrimaryScramblingCode,
Primary-ScramblingCode,
PropagationDelay,
PunctureLimit,
RACH-SlotFormat,
RACH-SubChannelNumbers,
RLC-Mode,
RL-ID,
RL-Information,
RL-InformationItem,
RL-InformationItem-RL-SetupReqTDD,
RL-InformationList-DMeasureRequest,
RL-ReconfigurationFailure-RL-ReconfFailItem,
RadioLinkInformation-RL-ReconfReqTDD,
RepetitionLength,
RepetitionPeriod,
ReportCharacteristics,
ResourceOperationState,
ResourceOperationalState,
SAI,
SFN,

SIB-SG-POS,
SIB-SG-REP,
SSDT-CellIdentity,
SSDT-CellIdentityLength,
SSDT-Cell-IDLength,
SSDT-Indication,
SSDT-SupportIndicator,
STTD-Indicator,
S-CCPCH-Offset,
S-CCPCH-Power,
S-FieldLength,
ScramblingCode,
ScramblingCodeChange,
SecondaryCCPCH-SlotFormat,
SecondaryCPICH-Power,
SecondarySCH-Power,
ShutdownTimer,
SynchronisationMethod,
TDDChipOffset,
TDD-ChannelisationCode,
TDD-TPC-DownlinkStepSize
TFCI-Presence,
TFCI-SignallingMode,
TFCS,
TSTD-Indicator,
T-Cell,
TimeSlot,
TimeSlotDirection,
TimeSlotStatus,
ToAWE,
ToAWS,
TransmissionGapDistance,
TransmissionGapPeriod,
TransmitGapLength,
TransmitGapPositionMode,
TransportFormatCombinationSet,
TransportFormatSet,
TransportLayerAddress,
UARFCN,
C-ID,
UL-CCTrCHInformation,
UL-CCTrCH-ID,
UL-DPCCH-SlotFormat,
UL-FP-Mode,
UL-InterferenceLevel,
UL-PunctureLimit,
UL-ScramblingCode,
UplinkEbNo

```

-- *****
--
-- 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 ignore TYPE CRNC-CommunicationContextID      PRESENCE mandatory }|
    { ID id-UL-DPCH-InformationItem-RL-SetupReq-FDD CRITICALITY ignore TYPE UL-DPCH-InformationItem-RL-SetupReq-FDD PRESENCE mandatory }|
    { ID id-DL-DPCH-InformationItem-RL-SetupReq-FDD CRITICALITY ignore TYPE DL-DPCH-InformationItem-RL-SetupReq-FDD PRESENCE mandatory }|
    { ID id-DCH-InformationList-RL-SetupReq-FDD CRITICALITY ignore TYPE DCH-InformationList-RL-SetupReq-FDD PRESENCE mandatory }|
    { ID id-RL-ID                             CRITICALITY ignore TYPE RL-ID                             PRESENCE optional }|
    { ID id-DSCH-ID                             CRITICALITY ignore TYPE DSCH-ID                             PRESENCE optional }|
    { ID id-DSCH-InformationList-RL-SetupReq-FDD CRITICALITY ignore TYPE DSCH-InformationList-RL-SetupReq-FDD PRESENCE optional }|
    { ID id-RL-InformationList-RL-SetupReq-FDD CRITICALITY ignore TYPE RL-InformationList-RL-SetupReq-FDD PRESENCE mandatory }|
    ...
}

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

UL-DPCH-InformationItem-RL-SetupReq-FDD ::= SEQUENCE {
    ul-ScramblingCode          UL-ScramblingCode,
    minUL-ChannelisationCodeLength MinUL-ChannelisationCodeLength,
    maxNumberOfUL-DPDCHs       MaxNumberOfUL-DPDCHs          OPTIONAL
    -- This IE is present only if "Min UL Channelisation Code length" equals to 4 -- ,
    ul-PunctureLimit           UL-PunctureLimit,
    transportFormatCombinationSet TransportFormatCombinationSet,
    ul-DPCCH-SlotFormat         UL-DPCCH-SlotFormat,
    ul-EbNo-Target              UplinkEbNo,
    diversityMode                DiversityMode,
    d-FieldLength               D-FieldLength          OPTIONAL
    -- This IE is present only if Feed Back mode diversity is activated -- ,
    sSDT-Cell-IDLength          SSdT-Cell-IDLength     OPTIONAL,
    s-FieldLength               S-FieldLength          OPTIONAL
}

DL-DPCH-InformationItem-RL-SetupReq-FDD ::= SEQUENCE {
    transportFormatCombinationSet TransportFormatCombinationSet,
    dl-DPCH-SlotFormat           DL-DPCH-SlotFormat,
    tFCI-SignallingMode          TFCI-SignallingMode,
    multiplexingPosition,         MultiplexingPosition,
}

```

```

tFCI-Presence          TFCI-Presence,
powerOffsetInformationItem-RL-SetupReq-FDD
    PowerOffsetInformationItem-RL-SetupReq-FDD,
| DeltaTPCFDD-TPC-DownlinkStepSize          FDD-TPC-DownlinkStepSizeDeltaTPC
}

PowerOffsetInformationItem-RL-SetupReq-FDD ::= SEQUENCE {
    p01          PowerOffset,
    p02          PowerOffset,
    p03          PowerOffset
}

DCH-InformationList-RL-SetupReq-FDD ::= SEQUENCE (SIZE (1..maxnoofDCHs)) OF
    ProtocolIE-Container{{DCH-Information-RL-SetupReq-FDDItemIE }}

DCH-Information-RL-SetupReq-FDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DCH-Information-RL-SetupReq-FDDItem CRITICALITY ignore TYPE DCH-Information-RL-SetupReq-FDDItem PRESENCE mandatory },
    ...
}

DCH-Information-RL-SetupReq-FDDItem ::= SEQUENCE {
    dCH-ID          DCH-ID,
    dCH-CombinationIndication DCH-CombinationIndication OPTIONAL,
    rLC-Mode        RLC-Mode,
    ul-TransportFormatSet TransportFormatSet,
    dl-TransportFormatSet TransportFormatSet,
    frameHandlingPriority FrameHandlingPriority,
    payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
    ul-FP-Mode      UL-FP-Mode,
    toAWS           ToAWS,
    toAWE           ToAWE
}

DSCH-InformationList-RL-SetupReq-FDD ::= SEQUENCE (SIZE (1..maxnoofDSCHs)) OF
    ProtocolIE-Container{{DSCH-Information-RL-SetupReq-FDDItemIE }}

DSCH-Information-RL-SetupReq-FDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DSCH-Information-RL-SetupReq-FDDItem CRITICALITY ignore TYPE DSCH-Information-RL-SetupReq-FDDItem PRESENCE mandatory },
    ...
}

DSCH-Information-RL-SetupReq-FDDItem ::= SEQUENCE {
    dSCH-ID          DSCH-ID,
    dSCH-TransportFormatSet DSCH-TransportFormatSet,
    frameHandlingPriority FrameHandlingPriority,
    toAWS           ToAWS,
    toAWE           ToAWE
}

RL-InformationList-RL-SetupReq-FDD ::= SEQUENCE (SIZE (1..maxnoofRLs)) OF
    ProtocolIE-Container{{RL-Information-RL-SetupReq-FDDItemIE }}

```



```

RL-Information-RL-SetupReq-FDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-SetupReq-FDDItem CRITICALITY ignore TYPE RL-Information-RL-SetupReq-FDDItem PRESENCE optional },
  ...
}

RL-Information-RL-SetupReq-FDDItem ::= SEQUENCE {
  rL-ID RL-ID,
  c-ID C-ID,
  frameOffset FrameOffset,
  chipOffset ChipOffset,
  propagationDelay PropagationDelay,
  diversityControlField DiversityControlField OPTIONAL,
  -- This IE is present only if the RL is not the first one in the RL Information
  dl-CodeInformationList-RL-SetupReqFDD DL-CodeInformationList-RL-SetupReqFDD,
  initialDL-transmissionPower DL-Power,
  maximumDL-power DL-Power,
  minimumDL-power DL-Power,
  sSDT-CellIdentity SSdT-CellIdentity OPTIONAL
}

DL-CodeInformationList-RL-SetupReqFDD ::= SEQUENCE (SIZE (1..maxnoofRLs)) OF
  ProtocolIE-Container{{DL-CodeInformation-RL-SetupReqFDDItemIE }}

DL-CodeInformation-RL-SetupReqFDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-DL-CodeInformation-RL-SetupReqFDDItem CRITICALITY ignore TYPE DL-CodeInformation-RL-SetupReqFDDItem PRESENCE optional },
  ...
}

DL-CodeInformation-RL-SetupReqFDDItem ::= SEQUENCE {
  dl-ScramblingCode DL-ScramblingCode,
  fdd-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber
}

-- *****
--
-- 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 ignore TYPE CRNC-CommunicationContextID PRESENCE mandatory }|
  { ID id-UL-CCTrCH-InformationList-RL-SetupReqTDD CRITICALITY ignore TYPE UL-CCTrCH-InformationList-RL-SetupReqTDD PRESENCE optional }|
  { ID id-DL-CCTrCH-InformationList-RL-SetupReqTDD CRITICALITY ignore TYPE DL-CCTrCH-InformationList-RL-SetupReqTDD PRESENCE optional }|
  { ID id-DCH-InformationList-RL-SetupReqTDD CRITICALITY ignore TYPE DCH-InformationList-RL-SetupReqTDD PRESENCE optional }|
}

```

```

{ID id-DSCH-InformationList-RL-SetupReqTDD CRITICALITY ignore TYPE DSCH-InformationList-RL-SetupReqTDD PRESENCE optional }|
{ID id-USCH-InformationList-RL-SetupReqTDD CRITICALITY ignore TYPE USCH-InformationList-RL-SetupReqTDD PRESENCE optional }|
  { ID id-RL-InformationItem-RL-SetupReqTDD CRITICALITY ignore TYPE RL-InformationItem-RL-SetupReqTDD PRESENCE mandatory },
  ...
}

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

UL-CCTrCH-InformationList-RL-SetupReqTDD ::= SEQUENCE (SIZE(1..maxnoofCCTrCHs)) OF
  ProtocolIE-Container{{UL-CCTrCH-Information-RL-SetupReqTDDItemIE }}

UL-CCTrCH-Information-RL-SetupReqTDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-Information-RL-SetupReqTDDItem CRITICALITY ignore TYPE UL-CCTrCH-Information-RL-SetupReqTDDItem PRESENCE mandatory },
  ...
}

UL-CCTrCH-Information-RL-SetupReqTDDItem ::= SEQUENCE {
  cCTrCH-ID CCTrCH-ID,
  transportFormatCombinationSet TransportFormatCombinationSet,
  tFCI-Coding TFCI-Coding,
  puncturing-Limit Puncturing-Limit,
  ul-DPCH-InformationList-RL-SetupReqTDD UL-DPCH-InformationList-RL-SetupReqTDD OPTIONAL
}

UL-DPCH-InformationList-RL-SetupReqTDD ::= SEQUENCE (SIZE (1..maxnoofDPCHs)) OF
  ProtocolIE-Container{{UL-DPCH-Information-RL-SetupReqTDDItemIE }}

UL-DPCH-Information-RL-SetupReqTDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-UL-DPCH-Information-RL-SetupReqTDDItem CRITICALITY ignore TYPE UL-DPCH-Information-RL-SetupReqTDDItem PRESENCE mandatory },
  ...
}

UL-DPCH-Information-RL-SetupReqTDDItem ::= SEQUENCE {
  dPCH-ID DPCH-ID,
  tdd-ChannelisationCode TDD-ChannelisationCode,
  burstType BurstType,
  midambleShift MidambleShift,
  timeSlot TimeSlot,
  tdd-PhysicalChannelOffset TDD-PhysicalChannelOffset,
  repetitionPeriod RepetitionPeriod,
  repetitionLength RepetitionLength,
  tFCI-Presence TFCI-Presence
}

DL-CCTrCH-InformationList-RL-SetupReqTDD ::= SEQUENCE (SIZE (1..maxnoCCTrCHs)) OF
  ProtocolIE-Container{{DL-CCTrCH-Information-RL-SetupReqTDDItemIE }}

```

```

DL-CCTrCH-Information-RL-SetupReqTDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-Information-RL-SetupReqTDDItem CRITICALITY ignore TYPE DL-CCTrCH-Information-RL-SetupReqTDDItem PRESENCE mandatory },
  ...
}

DL-CCTrCH-Information-RL-SetupReqTDDItem ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  transportFormatCombinationSet  TransportFormatCombinationSet,
  tFCI-Coding        TFCI-Coding,
  puncturing-Limit   Puncturing-Limit,
  TDD-TPC-DownlinkStepSize      TDD-TPC-DownlinkStepSize
  dl-DPCH-InformationList-RL-SetupReqTDD          DL-DPCH-InformationList-RL-SetupReqTDD  OPTIONAL
}

DL-DPCH-InformationList-RL-SetupReqTDD ::= SEQUENCE (SIZE (1..maxnoofDPCHs)) OF
  ProtocolIE-Container{{DL-DPCH-Information-RL-SetupReqTDDItemIE }}

DL-DPCH-Information-RL-SetupReqTDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-DL-DPCH-Information-RL-SetupReqTDDItem CRITICALITY ignore TYPE DL-DPCH-Information-RL-SetupReqTDDItem PRESENCE mandatory },
  ...
}

DL-DPCH-Information-RL-SetupReqTDDItem ::= SEQUENCE {
  dPCH-ID          DPCH-ID,
  tdd-ChannelisationCode  TDD-ChannelisationCode,
  burstType            BurstType,
  midambleShift        MidambleShift,
  timeSlot             TimeSlot,
  tdd-PhysicalChannelOffset  TDD-PhysicalChannelOffset,
  repetitionPeriod     RepetitionPeriod,
  repetitionLength     RepetitionLength,
  tFCI-Presence        TFCI-Presence
}

DCH-InformationList-RL-SetupReqTDD ::= SEQUENCE (SIZE (1..maxnoofDPCHs)) OF
  ProtocolIE-Container{{DCH-Information-RL-SetupReqTDDItemIE }}

DCH-Information-RL-SetupReqTDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-DCH-Information-RL-SetupReqTDDItem CRITICALITY ignore TYPE DCH-Information-RL-SetupReqTDDItem PRESENCE mandatory },
  ...
}

DCH-Information-RL-SetupReqTDDItem ::= SEQUENCE {
  ul-CCTrCH-ID          UL-CCTrCH-ID,
  dl-CCTrCH-ID          DL-CCTrCH-ID,
  dCH-CombinationIndication  DCH-CombinationIndication  OPTIONAL,
  ul-TransportFormatSet      TransportFormatSet,
  dl-TransportFormatSet      TransportFormatSet,
  frameHandlingPriority       FrameHandlingPriority,
  payloadCRC-PresenceIndicator  PayloadCRC-PresenceIndicator,
}

```

```

    ul-FP-Mode          UL-FP-Mode,
    toAWE               ToAWE,
    toAWS               ToAWS
}

DSCH-InformationList-RL-SetupReqTDD ::= SEQUENCE (SIZE (1..maxnoofDSCHs)) OF
    ProtocolIE-Container{{DSCH-Information-RL-SetupReqTDDItemIE}}

DSCH-Information-RL-SetupReqTDDItemIE NBAP-PROTOCOL-IES ::= {
    {ID id-DCH-Information-RL-SetupReqTDDItem   CRITICALITY ignore   TYPE      DSCH-Information-RL-SetupReqTDDItem PRESENCE mandatory}
    ...
}

DSCH-Information-RL-SetupReqTDDItem ::= SEQUENCE {
    dSCH-ID             DSCH-ID,
    cCTrCH-ID          CCTrCH-ID,
    transportFormatSet TransportFormatSet,
    frameHandlingPriority FrameHandlingPriority,
    toAWE               ToAWE,
    toAWS               ToAWS
}

USCH-InformationList-RL-SetupReqTDD ::= SEQUENCE (SIZE (1..maxnoofUSCHs)) OF
    ProtocolIE-Container{{USCH-Information-RL-SetupReqTDDItemIE}}

USCH-Information-RL-SetupReqTDDItemIE NBAP-PROTOCOL-IES ::= {
    {ID id-USCH-Information-RL-SetupReqTDDItem   CRITICALITY ignore   TYPE      USCH-Information-RL-SetupReqTDDItem PRESENCE mandatory}
    ...
}

USCH-Information-RL-SetupReqTDDItem ::= SEQUENCE {
    uSCH-ID             USCH-ID,
    cCTrCH-ID          CCTrCH-ID,
    transportFormatSet TransportFormatSet
}

RL-Information-RL-SetupReqTDD ::= SEQUENCE {
    rL-ID              RL-ID,
    c-ID              C-ID,
    tdd-PhysicalChannelOffset TDD-PhysicalChannelOffset,
    initialDL-transmissionPower DL-Power,
    maximumDL-power      DL-Power,
    minimumDL-power      DL-Power
}

```

9.3.4 NBAP Information Elements

```

--*****
--
-- Information Element Definitions
--
--*****

NBAP-IEs
DEFINITIONS AUTOMATIC TAGS ::=
BEGIN

IMPORTS
    maxTFcount,
    maxnoofTFCS,
    maxCTF-1,
    maxRM,

FROM NBAP-Constants;

DTX-InsertionPoint ::= INTEGER
DedicatedMeasurementValue ::= INTEGER
DeltaTPC ::= INTEGER

-----
-- A
-----

-- to do
AcknowledgedRA-TriesValue ::= TBD

AddOrDeleteIndicator ::= ENUMERATED {
    add,
    delete
}

AICH-TransmissionTiming ::= ENUMERATED {
    timing0,
    timing1
}

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

```

```
degraded,  
not-installed,  
log-full,  
...  
}  
  
--to do  
AveragingDuration ::= TBD  
  
-----  
-- B  
-----  
  
BCCH-ModificationTime ::= INTEGER (0| 2| 4| .. | 4095)  
  
BindingID ::= OCTET STRING (SIZE (4))  
  
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.  
  
BurstType ::= ENUMERATED {  
type1,  
type2  
}  
  
-----  
-- C  
-----  
  
Cause ::= ENUMERATED {  
radioNetworkLayer      RadioNetworkLayerCause,  
transportLayer         TransportLayerCause,  
protocol               ProtocolCause,  
misc                   MiscellaneousCause  
...  
}  
  
CCTrCH-ID ::= INTEGER (1..15)  
  
CellID-Length ::= ENUMERATED {  
short,  
medium,  
long  
}
```

```
CFN ::= INTEGER (0..255)

ChipOffset ::= INTEGER (0..38399)

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

CodingRate ::= ENUMERATED {
    rate1-2,
    rate1-3
}

CommonMeasurementObjectType ::= ENUMERATED {
    cell,
    rach,
    ...
}

CommonMeasurementType ::= SEQUENCE {
    rssi                RSSI-Value,
    transmitted-carrier-power    TransmittedCarrierPowerValue,
    acknowledged-ra-tries    AcknowledgedRA-TriesValue,
    time-slot-iscp        TimeSlotISCP-Value,
    ...
}

CommonPhysicalChannelID ::= INTEGER (0..255)

CommonTransportChannelID ::= INTEGER (0..255)

CommunicationControlPortID ::= INTEGER (0..65535)

CompressedModeMethod ::= ENUMERATED {
    puncturing,
    sF-2,
    gating,
    none
}

ConfigurationGenerationID ::= INTEGER (0..255)

CRC-Size ::= ENUMERATED {
    size0,
    size12,
    size16,
    size24
}

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

CTFC ::= INTEGER (0..maxCTF-1)
```

```
-----  
-- D  
-----  
  
DCH-CombinationInd ::= INTEGER (0..255)  
  
DCH-ID ::= INTEGER (0..255)  
  
DedicatedMeasurementObjectType1 ::= ENUMERATED {  
    cell,  
    rach,  
    ...  
}  
  
DedicatedMeasurementObjectType2 ::= SEQUENCE {  
    sir-value          SIR-Value          OPTIONAL,  
    sir-error-value   SIR-ErrorValue     OPTIONAL,  
    transmitted-code-power TransmittedCodePowerValue OPTIONAL,  
    time-slot-iscp    TimeSlotISCP-Value OPTIONAL,  
    ...  
}  
  
DedicatedMeasurementObjectType3 ::= ENUMERATED {  
    rl,  
    all-rl,  
    ...  
}  
  
-- Reference: 25.215 and 25.225  
DedicatedMeasurementType ::= ENUMERATED {  
    sir,  
    sir-error,  
    transmitted-code-power,  
    timeslot-iscp,  
    ...  
}  
  
D-FieldLength ::= ENUMERATED {  
    d-length1,  
    d-length2  
}  
  
DiversityControlField ::= ENUMERATED {  
    may,  
    must,  
    must-not  
}  
  
DiversityIndication ::= ENUMERATED {
```



```
combined,
not-combined
}

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

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

DL-FrameType ::= ENUMERATED {
typeA,
typeB
}

-- -35..15 is transformed into 0..50. 0.1 steps gives 0..500
-- Power0 indicates -35dB, Power1 indicates -34.9dB, ..., Power500 indicates 15dB
DL-Power ::= ENUMERATED {
power0,
power1,
...
}

-- 0= Primary scrambling code of the cell, 1..15= Secondary scrambling code --
DL-ScramblingCode ::= INTEGER (0..15)

DPCH-ID ::= INTEGER (0..15)

DPCH-Offset ::= INTEGER (0..255)

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

-- to do
-- the parameter need to be defined. It may correspond to the DL TFS defined for DCH
DSCH-TransportFormatSet ::= TBD

-- to do
-- the parameter need to be defined. It may correspond to the DL TFS defined for DCH
DSCH-TransportFormatCombinationSet ::= TBD

DTX-InsertionPosition ::= ENUMERATED {
fixed,
flexible
}

DynamicTransportFormatInformation ::= SEQUENCE (SIZE (1..maxTFcount)) OF
SEQUENCE {
numberOfTransportBlocks      NumberOfTransportBlocks,
```

```

transportBlockSize      TransportBlockSize  OPTIONAL
-- This IE is only present if Number of Transport Blocks is greater than 0 --,
mode-dynamicTFS         Mode-DynamicTFS
    ...
}

-----
-- E
-----

EventA ::= SEQUENCE {
    measurementThreshold      MeasurementThreshold,
    measurementHysteresisTime MeasurementHysteresisTime  OPTIONAL
}

EventB ::= SEQUENCE {
    measurementThreshold      MeasurementThreshold,
    measurementHysteresisTime MeasurementHysteresisTime  OPTIONAL
}

EventC ::= SEQUENCE {
    measurementIncreaseThreshold MeasurementIncreaseThreshold,
    measurementChangeTime      MeasurementChangeTime
}

EventD ::= SEQUENCE {
    measurementDecreaseThreshold MeasurementDecreaseThreshold,
    measurementChangeTime      MeasurementChangeTime
}

EventE ::= SEQUENCE {
    measurementThreshold1      MeasurementThreshold1,
    measurementThreshold2      MeasurementThreshold2  OPTIONAL,
    measurementHysteresisTime  MeasurementHysteresisTime  OPTIONAL,
    reportPeriodicity          ReportPeriodicity  OPTIONAL
}

EventF ::= SEQUENCE {
    measurementThreshold1      MeasurementThreshold1,
    measurementThreshold2      MeasurementThreshold2  OPTIONAL,
    measurementHysteresisTime  MeasurementHysteresisTime  OPTIONAL,
    reportPeriodicity          ReportPeriodicity  OPTIONAL
}

-----
-- F
-----

-- The maximum value is equal to the DL spreading factor □ --
FDD-DL-ChannalisationCodeNumber ::= INTEGER(0.. 255)

```

```
-- 0: 0 chip, 1: 256 chip, 2: 512 chip, .. ,149: 38144 chip [TS 25.211] --  
FDD-S-CCPCH-Offset ::= INTEGER (0.. 149)
```

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

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

```
-----  
-- G  
-----
```

```
GapPeriod ::= INTEGER(0..255)
```

```
Gap Position Mode ::= ENUMERATED {  
fixed,  
flexible  
}
```

```
-----  
-- H  
-----
```

```
-----  
-- I  
-----
```

```
-- to do  
IB-SG ::= BIT STRING
```

```
IB-SG-POS ::= INTEGER (0..4095)
```

```
IB-SG-REP ::= INTEGER {rep(16), rep(32), rep(64), rep(128), rep(256), rep(512), rep(1024), rep(2048)}
```

```
IB-Type :: Enumerated {  
MIB,  
SIB1,  
SIB2,  
SIB12  
}
```

```
IndicationType ::= ENUMERATED {  
noFailure,  
serviceImpacting,  
cellControl,
```

```
...
}

-----
-- J
-----

-----
-- L
-----

LocalCell-ID ::= INTEGER (0..268435455)

-----
-- M
-----
-- dBm, granularity 1 dBm
-- dl-power0 indicates 0 dBm
MaximumDL-PowerCapability ::= ENUMERATED{
dl-power0,
dl-power1,
dl-power2,
...
}

-- Unit dBm, 0 to 50, Granularity 1 dB
MaximumTransmissionPower ::= ENUMERATED {
power0,
power1,
power2,
...
}

MaxNumberOfUL-DPDCHs ::= INTEGER (1..6)

MaxPRACH-MidambleShifts ::= ENUMERATED {
shift4,
shift8
}

-- 10ms to 1min, Step10ms
MeasurementChangeTime ::= ENUMERATED {
time10ms,
time20ms,
time30ms,
...
}

MeasurementCharacteristics ::= SEQUENCE {
    measurementFrequency      MeasurementFrequency,
```

```
    averagingDuration      AveragingDuration
}

-- to do
MeasurementDecreaseThreshold ::= TBD

-- to do
MeasurementFrequency ::= TBD

-- to do
MeasurementIncreaseThreshold ::= TBD

-- to do
-- 10ms to 1min, Step10ms --
MeasurementHysteresisTime ::= ENUMERATED {
time10ms,
time20ms,
time30ms,
...
}

MeasurementID ::= INTEGER (0..1048575)

-- to do
MeasurementThreshold ::= TBD

-- to do
MeasurementThreshold1 ::= TBD

-- to do
MeasurementThreshold2 ::= TBD

MeasurementType ::= ENUMERATED {
sCH,
syncRACH-access
}

MessageDiscriminator ::= ENUMERATED {
common,
dedicated
}

MidambleShift ::= INTEGER (0..15)

MinimumSpreadingFactor ::= ENUMERATED {
sF4,
sF16,
sF32,
sF64,
sF128,
sF256,
```

```

sF512
}

MinUL-ChannelisationCodeLength ::= ENUMERATED {
code-length4,
code-length8,
code-length16,
code-length32,
code-length64,
code-length128,
code-length256
}

MiscellaneousCause ::= ENUMERATED {
control-processing-overload,
hardware-failure,
oam-intervention,
not-enough-user-plane-processing-resources,
unspecified
}

Mode-DynamicTFS ::= CHOICE {
tdd-mode-dynamic    TransmissionTimeInterval-Dynamic,
...
}

Mode-SemiStaticTFS ::= CHOICE {
tdd-mode-semistatic TransmissionTimeInterval-SemiStatic,
...
}

-----
-- N
-----

-- to do
NumberOfChannelElements ::= TBD

NodeB-CommunicationContextID ::= INTEGER (0..1048576)

NumberOfTransportBlocks ::= INTEGER (0..4095)

-----
-- O
-----

-----
-- P
-----

PagingIndicatorLength ::= ENUMERATED {

```

```
ind-length2,
ind-length4,
ind-length8
}

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

PD ::= INTEGER(0..2047)

PICH-Mode ::= ENUMERATED {
noofPI18,
noofPI36,
noofPI72,
noofPI144
}

PilotBitsUsedIndicator ::= ENUMERATED {
pilot-bits-used,
pilot-bits-not-used
}

PowerControlMode ::= ENUMERATED {
pcm0,
pcm1,
...
}

-- Chips. Step size is 3 chips. 0=0 chips, 1=3 chips .. --
--** TODO. -15..40 is transformed to 0..55. 0.1 steps gives 0..550 **
PowerOffset ::= INTEGER (0..24)

PowerResumeMode ::= ENUMERATED {
prm0,
prm1,
...
}

PRACH-Midamble ::= ENUMERATED {
inverted,
direct
}

PreambleScramblingCode ::= INTEGER (0..4095)

-- Bit 0=P0, Bit 1=P1, .. ,Bit 15=P15 [25.213] --
PreambleSignatures ::= BIT STRING (SIZE (16))
```

```

-- Unit dBm, -15 to 40, Granularity 0.1 dB
-- cpich-power1 indicates 5 dB
PrimaryCPICH-Power ::= ENUMERATED {
cpich-power1,
cpich-power2,
...
}

PrimaryScramblingCode ::= INTEGER (0..511)

PropagationDelay ::= INTEGER (0..255)

ProtocolCause ::= ENUMERATED
transaction-not-allowed,
transfer-syntax-error,
abstract-syntax-error -reject,
abstract-syntax-error-ignore-and-notify,
message-not-compatible-with-receiver-state,
semantic-error,
unspecified
}

-- PCCPCH Power unit dBm
-- PCCPCH Power step 0.1dBm
PCCPCH-power ::= INTEGER (-15..40)

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

PSCH-Power ::= INTEGER (0..511)

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

-----
-- R
-----

-- SF
RACH-SlotFormat ::= ENUMERATED {
format256,
format128,
format64,
format32
}

-- Bit 0=Sub Channel Number 0, Bit 1=Sub Channel Number 1, ..., Bit 14=Sub Channel Number 14 --
RACH-SubChannelNumbers ::= BIT STRING (SIZE (15))

RadioNetworkLayerCause ::= Enumerated {
unknown-C-ID,
cell-not-available,
power-level-not-supported,

```



```

ul-scramblingcode-already-in-use,
dl-radio-resources-not-available,
ul-radio-resources-not-available,
rl-Already-ActivatedorAllocated,
nodeB-Resources-Unavailable,
insufficient-physical-channel-resources,
measurement-not-supported-for-the-object,
macrodiversity-combining-not-possible,
reconfiguration-not-allowed,
requested-configuration-not-supported,
synchronization-failure,
unspecified
}

RateMatchingAttribute ::= INTEGER (1..maxRM)

RepetitionLength ::= ENUMERATED {
length1,
length2,
length4,
length8
}

ReportCharacteristicsType ::= CHOICE {
    onDemand          NULL,
    periodic          ReportPeriodicity,
    event-a           EventA,
    event-b           EventB,
    event-c           EventC,
    event-d           EventD,
    event-e           EventE,
    event-f           EventF
}

-- 10ms to 1min, step 10ms or
-- 1min to 1hour, step 1min
ReportPeriodicity ::= CHOICE {
    msec              INTEGER (1..1000),
    min               INTEGER (1..60)
}

ResourceOperationalState ::= ENUMERATED {
enabled,
disabled
}

RLC-Mode ::= ENUMERATED {
acknowledgedMode,
unacknowledgedMode,
transparentMode
}

```

```

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

RNC-ID ::= INTEGER (0..4095)

-- -30..-100 step 0.1
-- rssi1 indicates -30
RSSI-Value ::= ENUMERATED {
rssi1,
rssi2,
...
}
-----
-- S
-----

ScramblingCodeChange ::= ENUMERATED {
change,
no-change
}

Scrambling Code Word Number ::= INTEGER (0..255)

SecondaryCCPCH-SlotFormat ::= INTEGER(0..8)

SegmentType ::= ENUMERATED {
first,
subsequent,
last,
complete
}

SemiStaticTransportFormatInformation ::= SEQUENCE {
transmissionTimeInterval      TransmissionTimeInterval,
typeOfChannelCoding           TypeOfChannelCoding,
codingRate                    CodingRate      OPTIONAL
-- This IE is only present if IE Type of channel coding is Convolutional or Turbo --,
rateMatchingAttribute         RateMatchingAttribute,
cRC-Size                      CRC-Size,
mode-semistatic               Mode-SemiStatic
}

S-FieldLength ::= ENUMERATED {
s-length1,
s-length2
}

SIB-DeletionIndicator ::= ENUMERATED {
noDeletion,
deletion
}

```

```
SIB-Originator ::= ENUMERATED {
nodeB,
cRNC
}

--** TODO. -10..10 is transformed to 0..10. 0.1 steps gives 0..200 **
-- sir-error-value1 indicates □0 dB
SIR-ErrorValue ::= ENUMERATED {
sir-error-value1,
sir-error-value2,
...
}

--** TODO. -10..20 is transformed to 0..30. 0.1 steps gives 0..300 **
-- sir-value1 indicates □0 dB
SIR-Value ::= ENUMERATED {
sir-value1,
sir-value2,
...
}

SSDT-CellIdentity ::= ENUMERATED {a, b, c, d, e, f, g, h}

SSDT-Indication ::= ENUMERATED {
    ssdtActiveInTheUE,
    ssdtNotActiveInTheUE
}

STTD-Indicator ::= ENUMERATED {
    active,
    inactive
}

SSDT-SupportIndicator ::= ENUMERATED {
sSDT-not-supported,
sSDT-Supported
}

ShutdownTimer ::= INTEGER (1..3600)

SynchronisationMethod ::= ENUMERATED {
external-reference,
locked-toMaster-cell,
one-time-synchronisation
}

-----
-- T
-----
```

```
T-Cell ::= ENUMERATED {
    chip-0,
    chip-256,
    chip-512,
    chip-768,
    chip-1024,
    chip-1280,
    chip-1536,
    chip-1892,
    chip-2048,
    chip-2304
}

TDD-ChannelisationCode ::= ENUMERATED {
    channelisationCode1-1,
    channelisationCode2-1,
    channelisationCode2-2,
    channelisationCode4-1,
    channelisationCode4-2,
    ...
}

-- the ChipOffset is -19200 to + 19199
TDD-ChipOffset ::= INTEGER (-19200..19199)

TransmissionTimeInterval-Dynamic ::= SEQUENCE (SIZE (1..maxTTIcount)) OF
    ENUMERATED {tti10, tti20, tti40, tti80}
}

TransmissionTimeInterval-SemiStatic ::= ENUMERATED {
    frameRelated,
    timeSlotRelated
}

TDD-S-CCPCH-Offset ::= INTEGER (0..63)

TDD-TPC-DownlinkStepSize ::= ENUMERATED {
    step-size1,
    step-size2,
    step-size3
}

TFCI-Presence ::= ENUMERATED {
    present,
    not-present
}

TFCI-SignallingMode ::= ENUMERATED {
    normal,
    split
}
```

```

}

TFCS ::= SEQUENCE (SIZE (1..maxnoofTFCS)) OF
  SEQUENCE {
    cTFC          CTFC
  }

TFS ::= SEQUENCE {
  dynamicTransportFormatInformation
  semiStaticTransportFormatInformation
}

TGD ::= INTEGER (0..255)

TGL ::= INTEGER (3,4,7,10,14)

TimeSlot ::= INTEGER (0..14)

TimeSlotDirection ::= ENUMERATED {
  ul,
  dl
}

-- to do
TimeSlotISCP-Value ::= TBD

TimeSlotStatus ::= ENUMERATED {
  active,
  not-active
}

ToAWE ::= INTEGER (0..2559) -- msec. --
ToAWS ::= INTEGER (0..1279) -- msec. --

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

Transmit Diversity Indicator ::= ENUMERATED {
  active,
  Inactive
}

```

```

DynamicTransportFormatInformation,
SemiStaticTransportFormatInformation

```

CHANGE REQUEST		Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.
25.433	CR 017	Current Version: 3.0.0
GSM (AA.BB) or 3G (AA.BBB) specification number ↑	↑ CR number as allocated by MCC support team	
For submission to: TSG RAN #7 <small>list expected approval meeting # here ↑</small>	for approval for information <input checked="" type="checkbox"/>	strategic <input type="checkbox"/> non-strategic <input type="checkbox"/> <small>(for SMG use only)</small>

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: TSG-RAN WG3 **Date:** 2000-01-24 - 28

Subject: Simplified Audit procedure

Work item:

Category:	F Correction <input type="checkbox"/> A Corresponds to a correction in an earlier release <input type="checkbox"/> B Addition of feature <input type="checkbox"/> C Functional modification of feature <input checked="" type="checkbox"/> D Editorial modification <input type="checkbox"/>	Release:	Phase 2 <input type="checkbox"/> Release 96 <input type="checkbox"/> Release 97 <input type="checkbox"/> Release 98 <input type="checkbox"/> Release 99 <input checked="" type="checkbox"/> Release 00 <input type="checkbox"/>
------------------	--	-----------------	--

(only one category shall be marked with an X)

Reason for change: This CR makes the Audit procedure simpler. That will lead to a simpler implementation of Node B, while the implementation of the RNC will be slightly more complex. This CR proposes to change the Audit procedure to be a purely informative procedure. The reason for this is that the Audit procedure today has two actions

- 1) inform the CRNC about Cells that have the same CG-ID (Configuration Generation ID), and
- 2) in the case that a cell (C-ID) exist in Node B that is not sent in the AUDIT REQUEST message Node B shall delete that cell.

Made purely informative, the Audit procedure only has the action of informing the CRNC about the configuration and status information of configured logical resources. Benefits of an purely informative Audit procedure are:

- 1) the implementation of Node B gets simpler,
- 2) the CRNC gets larger freedom of handling inconsistencies,
- 3) the responsibility of deleting the transport bearers will be clearer, and
- 4) the Audit procedure only have one action to perform.

Clauses affected: 8.2.7, 9.1.15, 9.1.16 and 9.3.3

Other specs affected:	Other 3G core specifications <input type="checkbox"/> Other GSM core specifications <input type="checkbox"/> MS test specifications <input type="checkbox"/> BSS test specifications <input type="checkbox"/> O&M specifications <input type="checkbox"/>	→ List of CRs: → List of CRs: → List of CRs: → List of CRs: → List of CRs:	
------------------------------	---	--	--

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

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. ~~Additionally, the~~ The audit may cause the CRNC ~~and Node B~~ to re-sync the Node B to the status of logical resources known by the CRNC, ~~and to the status information from that~~ the Node B can support.

8.2.7.2 Successful Operation

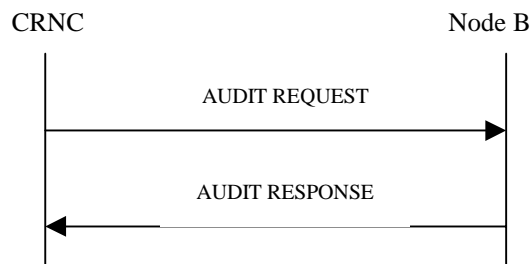


Figure 10: Audit procedure, Successful case

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

~~The configuration returned by the Node B in the AUDIT RESPONSE shall be the configuration existing upon reception of the AUDIT REQUEST. Upon reception by the Node B, with each pair of *C-ID IE Configuration Generation ID IE* that is present in the message, the Node B compares the stored Configuration Generation ID for the corresponding cell.~~

~~For each cell where the *Configuration Generation ID IE* value does not match the stored Configuration Generation ID value, the Node B shall not take any action.~~

~~For each cell where the *Configuration Generation ID IE* value matches the stored Configuration Generation ID value, the Node B shall include the *Cell Information IE* group for that cell in the AUDIT RESPONSE message.~~

~~The following condition applies to the *Primary SCH Information IE* group, *Secondary SCH Information IE* group, *Primary CCPCH Information IE* group, *Secondary CCPCH Information IE* group, *Primary CPICH Information IE* group, *Secondary CPICH Information IE* group, *BCH Information IE* group, *PCH Information IE* group, *PICH Information IE* group, *FACH Information IE* group, *RACH Information IE* group, and *AICH Information IE* group. The Node B shall include the IE group within the *Cell Information IE* group, if that resource is present in the Node B for that cell.~~

~~The Node B shall include in the AUDIT RESPONSE message a *Communication Control Port Information IE* group for each communication control port present in the Node B.~~

~~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 include in the AUDIT RESPONSE message a *Local Cell Information IE* group for each local cell present in the Node B. The Node B shall include the *Number Of Channel Elements IE* if the value is known by the Node B. The Node B shall include the *Maximum DL Power Capability IE* if the value is known by the Node B.

The Node B shall include in the AUDIT RESPONSE message a *Cell Information IE* group for each cell in the Node B and information about all common transport channels and all common physical channels for each cell. Node B shall also include in the AUDIT RESPONSE message, a *Communication Control Port Information IE* group for each communication control port in the Node B.

~~For each cell existing in the Node B but not indicated in the AUDIT REQUEST message, the associated cell configuration information shall be removed from the Node B including any related common physical channels and common transport channels. For each cell not existing in the Node B but indicated in the AUDIT REQUEST message, the Node B shall not take any action.~~

~~Upon reception by the CRNC of the AUDIT RESPONSE message, the CRNC compares the received list of C-ID with the expected list of C-IDs.~~

~~For each missing cell, a configuration error has occurred and recovery actions should be taken by the CRNC.~~

8.2.7.3 Unsuccessful Operation

-

8.2.7.4 Abnormal Conditions

-

9.1.15 AUDIT REQUEST

Information Element	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Transaction ID	M			
Cell parameters		0.. <maxCellinNodeB>		
C-ID	M			
Configuration Generation Id	M			

Range bound	Explanation
MaxCellinNodeB	Maximum number of cell that can be configured in Node-B

9.1.16 AUDIT RESPONSE

Information Element	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Transaction ID	M			
Cell Information		0.. <maxUCIDinNodeB>		
C-ID	M			
Configuration Generation ID	M			
Resource Operational State	M			
Availability Status	M			
Local Cell ID	M			The local cell that the cell is configured on
Maximum DL Power Capability	FFS			
Minimum Spreading Factor	FFS			

Primary SCH Information		0..1		
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
Secondary SCH Information		0..1		
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
Primary CPICH Information		0..1		
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
Secondary CPICH Information		0..<maxSCPIC HCell>		
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
Primary CCPCH Information		0..1		
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
BCH Information		0..1		
Common Transport Channel ID	M			
Resource Operational State	M			
Availability Status	M			
Secondary CCPCH Information		0..<maxSCCP CHCell>		
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
PCH Information		0..<maxPCHC ell >		
Common Transport Channel ID	M			
Resource Operational State	M			
Availability Status	M			
PICH Information		0..1		
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
FACH Information		0..<maxFACH Cell>		
Common Transport Channel ID	M			

Resource Operational State	M			
Availability Status	M			
PRACH Information		<i>0..<maxPRACHCell></i>		
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
RACH Information		<i>0..<maxRACHCell></i>		
Common Transport Channel ID	M			
Resource Operational State	M			
Availability Status	M			
AICH Information		<i>0..<maxRACHCell></i>		
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
SCH Information		<i>0..1</i>		
Common Transport Channel ID	M			
Resource Operational State	M			
Availability Status	M			
PSCH Information		<i>0..1</i>		
Common Physical Channel ID	M			
Resource Operational State	M			
Availability Status	M			
Communication Control Port Information		<i>0..<maxCCPinNodeB></i>		
Communication Control Port ID	M			
Resource Operational State	M			
Availability Status	M			
Local Cell Information		<i>0..<maxLocalCellinNodeB></i>		
Local Cell ID	M			
Number of Channel Elements	O			
Maximum DL Power Capability	O			
Criticality diagnostics	O			

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
maxLocalCellinNodeB	Maximum number of Local Cells that can exist in the Node B
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
maxRACHCell	Maximum number of RACHes that can be defined in a Cell
maxPCHCell	Maximum number of PCHes that can be defined in a Cell
maxPICHCell	Maximum number of PICHes that can be defined in a Cell

9.3.3 NBAP PDU Content Definitions

```

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

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

AuditRequest-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-Cell-ParametersList-Audit-Req CRITICALITY ignore TYPE Cell-ParametersList-Audit-Req PRESENCE optional },
  ...
}

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

Cell-ParametersList-Audit-Req ::= SEQUENCE (SIZE (1..maxCellinNodeB)) OF
  ProtocolIE-Container {{Cell-ParametersItemIE-Audit-Req}}

Cell-ParametersItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-Cell-ParametersItem-Audit-Req CRITICALITY ignore TYPE Cell-ParametersItem-Audit-Req PRESENCE mandatory },
  ...
}

Cell-ParametersItem-Audit-Req ::= SEQUENCE {
  e-ID C-ID,
  configurationGenerationID ConfigurationGenerationID
}

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

AuditResponse ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{AuditResponse-IEs}},

```

```

    protocolExtensions          ProtocolExtensionContainer {{AuditResponse-Extensions}}          OPTIONAL,
    ...
}

AuditResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-Cell-InformationList-Audit-Res          CRITICALITY ignore  TYPE Cell-InformationList-Audit-Res          PRESENCE optional }|
    { ID id-CommunicationControlPort-InformationList-Audit-Res          CRITICALITY ignore          TYPE CommunicationControlPort-
InformationList-Audit-Res          PRESENCE          optional
}|
    { ID id-Cell-InformationList-Audit-Res          CRITICALITY ignore  TYPE Cell-InformationList-Audit-Res          PRESENCE optional }|
    { ID id-CriticalityDiagnostic          CRITICALITY ignore          TYPE CriticalityDiagnostic          PRESENCE optional
    },
    ...
}

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

Cell-InformationList-Audit-Res ::= SEQUENCE (SIZE (1..maxUCIDinNodeB)) OF
    ProtocolIE-Container {{Cell-InformationItemIE-Audit-Res }}

Cell-InformationItemIE-Audit-Res NBAP-PROTOCOL-IES ::= {
    { ID id-Cell-InformationItem-Audit-Res          CRITICALITY ignore  TYPE Cell-InformationItem-Audit-Res          PRESENCE          optional    },
    ...
}

Cell-InformationItem-Audit-Res ::= SEQUENCE {
    c-ID          C-ID,
    configurationGenerationID          ConfigurationGenerationID,
    resourceOperationState          ResourceOperationState,
    availabilityStatus          AvailabilityStatus,
    localCellID          LocalCellID,
    maximumDLPowerCapability          MaximumDLPowerCapability,
    -- to do
    minimumSpreadingFactor          MinimumSpreadingFactor,
    -- to do
    primary-SCH-Information          P-SCH-Information-Audit-Res          OPTIONAL,
    secondary-SCH-Information          S-SCH-Information-Audit-Res          OPTIONAL,
    primary-CPICH-Information          P-CPICH-Information-Audit-Res          OPTIONAL,
    secondary-CPICH-Information          S-CPICH-Information-Audit-Res          OPTIONAL,
    primary-CCPCH-Information          P-CCPCH-Information-Audit-Res          OPTIONAL,
    bCH-Information          BCH-Information-Audit-Res          OPTIONAL,
    secondary-CCPCH-Information          S-CCPCH-Information-Audit-Res          OPTIONAL,
    pCH-InformationList          PCH-InformationList-Audit-Res          OPTIONAL,
    pICH-Information          PICH-Information-Audit-Res          OPTIONAL,
    fACH-InformationList          FACH-InformationList-Audit-Res          OPTIONAL,
    pRACH-InformationList          PRACH-InformationList-Audit-Res          OPTIONAL,
    rACH-InformationList          RACH-InformationList-Audit-Res          OPTIONAL,

```

```

aICH-InformationList      AICH-InformationList-Audit-Res  OPTIONAL,
sCH-InformationList      SCH-InformationList-Audit-Res  OPTIONAL,
pSCH-InformationList     PSCH-InformationList-Audit-Res  OPTIONAL,
communicationControlPortInformation  CommunicationControlPortInformation-Audit-Res  OPTIONAL,
local-CellInformation    Local-CellInformation-Audit-Res  OPTIONAL
}

P-SCH-Information-Audit-Res ::= SEQUENCE {
    commonTransportChannelID  CommonTransportChannelID,
    resourceOperationState    ResourceOperationState,
    availabilityStatus        AvailabilityStatus
}

S-SCH-Information-Audit-Res ::= SEQUENCE {
    commonPhysicalChannelID  CommonPhysicalChannelID,
    resourceOperationState    ResourceOperationState,
    availabilityStatus        AvailabilityStatus
}

P-CPICH-Information-Audit-Res ::= SEQUENCE {
    commonPhysicalChannelID  CommonPhysicalChannelID,
    resourceOperationState    ResourceOperationState,
    availabilityStatus        AvailabilityStatus
}

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

S-CPICH-InformationItemIE-Audit-Res NBAP-PROTOCOL-IES ::= {
    { ID id-S-CPICH-InformationItem-Audit-Res      CRITICALITY ignore  TYPE S-CPICH-InformationItem-Audit-Res  PRESENCE mandatory
    },
    ...
}

S-CPICH-InformationItem-Audit-Res ::= SEQUENCE {
    commonTransportChannelID  CommonTransportChannelID,
    resourceOperationState    ResourceOperationState,
    availabilityStatus        AvailabilityStatus
}

P-CCPCH-Information-Audit-Res ::= SEQUENCE {
    commonPhysicalChannelID  CommonPhysicalChannelID,
    resourceOperationState    ResourceOperationState,
    availabilityStatus        AvailabilityStatus
}

BCH-Information-Audit-Res ::= SEQUENCE {
    commonTransportChannelID  CommonTransportChannelID,
    resourceOperationState    ResourceOperationState,
    availabilityStatus        AvailabilityStatus
}

```



```

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

S-CCPCH-InformationItemIE-Audit-Res NBAP-PROTOCOL-IES ::= {
  { ID id-S-CCPCH-InformationItem-Audit-Res      CRITICALITY ignore  TYPE S-CCPCH-InformationItem-Audit-Res  PRESENCE mandatory
  },
  ...
}

S-CCPCH-InformationItem-Audit-Res ::= SEQUENCE {
  commonPhysicalChannelID      CommonPhysicalChannelID,
  resourceOperationState      ResourceOperationState,
  availabilityStatus          AvailabilityStatus
}

PCH-InformationList-Audit-Res ::= SEQUENCE (SIZE (1..maxPCHCell)) OF
  ProtocolIE-Container {{PCH-InformationItemIE-Audit-Res }}

PCH-InformationItemIE-Audit-Res NBAP-PROTOCOL-IES ::= {
  { ID id-PCH-InformationItem-Audit-Res      CRITICALITY ignore  TYPE PCH-InformationItem-Audit-Res  PRESENCE mandatory
  },
  ...
}

PCH-InformationItem-Audit-Res ::= SEQUENCE {
  commonTransportChannelID      CommonTransportChannelID,
  resourceOperationState      ResourceOperationState,
  availabilityStatus          AvailabilityStatus
}

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

FACH-InformationItemIE-Audit-Res NBAP-PROTOCOL-IES ::= {
  { ID id-FACH-InformationItem-Audit-Res      CRITICALITY ignore  TYPE FACH-InformationItem-Audit-Res  PRESENCE mandatory      },
  ...
}

FACH-InformationItem-Audit-Res ::= SEQUENCE {
  commonPhysicalChannelID      CommonPhysicalChannelID,
  resourceOperationState      ResourceOperationState,
  availabilityStatus          AvailabilityStatus
}

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

PRACH-InformationItemIE-Audit-Res NBAP-PROTOCOL-IES ::= {
  { ID id-PRACH-InformationItem-Audit-Res      CRITICALITY ignore  TYPE PRACH-InformationItem-Audit-Res  PRESENCE mandatory      },
  ...
}

```

```

}

PRACH-InformationItem-Audit-Res ::= SEQUENCE {
    commonPhysicalChannelID    CommonPhysicalChannelID,
    resourceOperationState     ResourceOperationState,
    availabilityStatus         AvailabilityStatus
}

RACH-InformationList-Audit-Res ::= SEQUENCE (SIZE (1..maxRACHCell)) OF
    ProtocolIE-Container {{RACH-InformationItemIE-Audit-Res}}

RACH-InformationItemIE-Audit-Res NBAP-PROTOCOL-IES ::= {
    { ID id-RACH-InformationItem-Audit-Res    CRITICALITY ignore    TYPE RACH-InformationItem-Audit-Res PRESENCE mandatory    },
    ...
}

RACH-InformationItem-Audit-Res ::= SEQUENCE {
    commonTransportChannelID    CommonTransportChannelID,
    resourceOperationState     ResourceOperationState,
    availabilityStatus         AvailabilityStatus
}

AICH-InformationList-Audit-Res ::= SEQUENCE (SIZE (1..maxRACHCell)) OF
    ProtocolIE-Container {{RACH-InformationItemIE-Audit-Res}}

AICH-InformationItemIE-Audit-Res NBAP-PROTOCOL-IES ::= {
    { ID id-RACH-InformationItem-Audit-Res    CRITICALITY ignore    TYPE RACH-InformationItem-Audit-Res PRESENCE mandatory    },
    ...
}

AICH-InformationItem-Audit-Res ::= SEQUENCE {
    CommonPhysicalChannelID    CommonPhysicalChannelID,
    resourceOperationState     ResourceOperationState,
    availabilityStatus         AvailabilityStatus
}

SCH-InformationItem-Audit-Res ::= SEQUENCE {
    commonPhysicalChannelID    CommonPhysicalChannelID,
    resourceOperationState     ResourceOperationState,
    availabilityStatus         AvailabilityStatus
}

RACH-InformationItem-Audit-Res ::= SEQUENCE {
    commonPhysicalChannelID    CommonPhysicalChannelID,
    resourceOperationState     ResourceOperationState,
    availabilityStatus         AvailabilityStatus
}

CommunicationControlPort-InformationList-Audit-Res ::=SEQUENCE (SIZE (1..maxCCPinNodeB)) OF
    ProtocolIE-Container {{CommunicationControlPort-InformationItemIE }}

```

```

CommunicationControlPort-InformationItemIE-Audit-Res NBAP-PROTOCOL-IES ::= {
  {ID id-CommunicationControlPort-InformationItem-Audit-Res CRITICALITY ignore
  Audit-Res PRESENCE mandatory
  },
}

CommunicationControlPort-InformationItem-Audit-Res ::= SEQUENCE {
  communicationControlPortID CommunicationControlPortID,
  resourceOperationalState ResourceOperationalState,
  availabilityStatus AvailabilityStatus
}

LocalCell-InformationList-Audit-Res ::=SEQUENCE (SIZE (1..maxLocalCellinNodeB)) OF
  ProtocolIE-Container {{LocalCell-InformationItemIE-Audit-Res}}

LocalCell-InformationItemIE-Audit-Res NBAP-PROTOCOL-IES ::= {
  { ID id-LocalCell-InformationItem-Audit-Res CRITICALITY ignore TYPE LocalCell-InformationItem-Audit-Res PRESENCE mandatory },
  ...
}

LocalCell-InformationItem-Audit-Res ::= SEQUENCE {
  localCellID LocalCellID,
  numberOfChannelElements NumberOfChannelElements OPTIONAL,
  maximumDLPowerCapability MaximumDLPowerCapability OPTIONAL
}

```


9.1.63 COMPRESSED MODE CANCEL (FDD only)

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
NodeB communication context ID	M			
Transaction ID	M			

9.1.64 ERROR INDICATION

Information Element	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Message Discriminator	M			
Transaction Id	M			
Cause	C_ifalone			
CRNC Communication Context Id	C_ifUL			
Node B Communication Context Id	C_ifDL			
Criticality diagnostics	C_ifalone			

Condition	Explanation
C_ifDL	This IE is only present when message is transmitted by <u>the CRNC on a signalling bearer corresponding to a communication control port.</u>
C_ifUL	This IE is only present when message is transmitted by <u>the Node B on a signalling bearer corresponding to a communication control port.</u>
C_ifalone	At least either of Cause IE or Criticality Diagnostics IE shall be present.

```

-- *****
--
-- ERROR INDICATION
--
-- *****

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

ErrorIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-Cause          CRITICALITY ignore      TYPE Cause          PRESENCE mandatory } |
    { ID id-CRNC-CommunicationContextID  CRITICALITY ignore      TYPE CRNC-CommunicationContextID  PRESENCE optional } |
    -- This IE is only present when message is transmitted by RNC a Node B on a signalling bearer corresponding to a communication control port --
    { ID id-NodeB-CommunicationContextID  CRITICALITY ignore      TYPE NodeB-CommunicationContextID  PRESENCE optional } |
    -- This IE is only present when message is transmitted by NodeB a CRNC on a signalling bearer corresponding to a communication control port --
    { ID id-CriticalityDiagnostic  CRITICALITY ignore      TYPE L3-CriticalityDiagnostic  PRESENCE optional },
    -- At least either or Cause IE or Criticality Diagnostic IE shall be present--
    ...
}

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

END

```


8.2.12.2 Successful operation

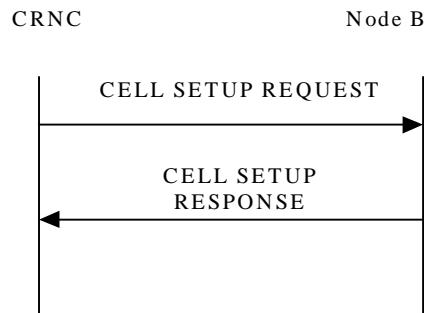


Figure 1: Cell Setup Successful case

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 ~~the~~ *Secondary CPICH Information IE* group 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.

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

[FDD- When the cell is successfully configured CPICH(s), Primary SCH, Secondary SCH, Primary CCPCH and BCH exist.][TDD- When the cell is successfully configured PSCH, SCH, Primary CCPCH and BCH exist and the switching-points for the TDD frame structure are defined.]

8.2.13.2 Successful operation

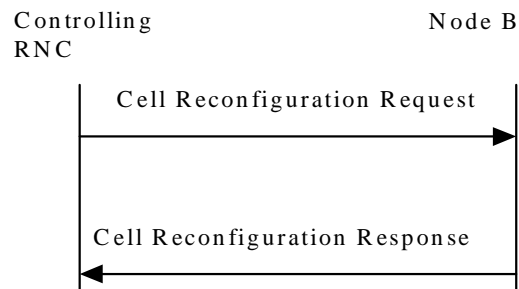


Figure 8: Cell Reconfiguration Successful case

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 group 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 group 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 group the Node B shall reconfigure Primary CPICH power in the cell according to the *Primary CPICH Power* IE value. NodeB 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 ~~the~~ *Secondary CPICH Information* IE groups, the Node B shall reconfigure the power for each ~~Secondary CPICH power~~ in the cell according to their Secondary CPICH Power IE value.

[TDD If the CELL RECONFIGURATION REQUEST message includes the *PSCH Information* IE group the Node B shall reconfigure PSCH power in the cell according to the *PSCH Power* IE value

[FDD If the CELL RECONFIGURATION REQUEST message includes the *Primary CCPCH Information* IE group 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 group the Node B shall reconfigure P-CCPCH power in the cell according to the *P-CCPCH Power* IE value. NodeB 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 group the Node B shall reconfigure switching-point structure in the cell according to the *Timeslot* IE value.]

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.

9.1.23 CELL SETUP REQUEST

9.1.23.1 FDD Message

Information Element	Presence	Range	IE type and Reference	Semantics description
Message discriminator	M			
Message Type	M			
Transaction ID	M			
Local Cell Id	M			
C-Id	M			
Configuration Generation Id	M			
T Cell	M			
UARFCN	M			Indicates UL/DL Frequency
Maximum transmission power	M			
Primary scrambling code	M			
Primary SCH Information		1		
Common Physical Channel ID	M			
Primary SCH Power	M		DL Power	
TSTD Indicator	M			
Secondary SCH Information		1		
Common Physical Channel ID	M			
Secondary SCH power	M		DL Power	
TSTD Indicator	M			
Primary CPICH Information		1		
Common Physical Channel ID	M			
P-CPICH power	M			
Transmit Diversity Indicator	M			
Secondary CPICH Information		0..<maxSCPICHCell> 4		
Common Physical Channel ID	M			
DL Scrambling code	M			
FDD DL Channelisation Code Number	M			
S-CPICH Power	M		DL Power	
Transmit Diversity Indicator	M			
Primary CCPCH Information		1		
Common Physical Channel ID	M			
BCH Information		1		
Common Transport Channel ID	M			
BCH Power	M		DL Power	
STTD Indicator	M			

Range bound	Explanation
<u>maxSCPICHCell</u>	<u>Maximum number of Secondary CPICH that can be defined in a Cell.</u>

9.1.26 CELL RECONFIGURATION REQUEST

9.1.26.1 FDD Message

Information Element	Presence	Range	IE type and reference	Semantics description
Message discriminator	M			
Message Type	M			
Transaction ID	M			
C-ID	M			
Configuration Generation Id	M			
Maximum transmission power	O			
Primary SCH Information		0,1		
Common Physical Channel ID	M			
Primary SCH power	M		DL Power	
Secondary SCH Information		0,1		
Common Physical Channel ID	M			
Secondary SCH power	M		DL Power	
Primary CPICH Information		0,1		
Common Physical Channel ID	M			
Primary CPICH power	M			
Secondary CPICH Information		0..<maxSCPICHCell> 4		
Common Physical Channel ID	M			
Secondary CPICH Power	M		DL Power	
Primary CCPCH Information		0,1		
BCH Information		1		
Common Transport Channel ID	M			
BCH Power	M		DL Power	

Range bound	Explanation
<u>maxSCPICHCell</u>	<u>Maximum number of Secondary CPICH that can be defined in a Cell.</u>

9.3.3 NBAP PDU Content Definitions

FROM NBAP-Containers

id-AICH-Information-ResourceStatIndItem,
id-AICH-ParametersList,
id-AICH-ParametersListItem,
id-AllowedSlotFormatInformationListItem-CTCHreconf-Req-FDD,
id-AllowedSlotFormatInformationListItem-CTCHsetup-Req-FDD,
id-BlockingPriorityIndicator,
id-CCTrCH-ParametersList,
id-CCTrCH-ParametersListItem,
id-CFN,
id-CRNC-CommunicationContextID,
id-CRNCommunicationContextID,
id-Cause,
id-Cell-Information-ResourceStatIndItem,
id-Cell-InformationItem,
id-Cell-InformationList,
id-Cell-Parameter,
id-Cell-ParametersItem,
id-Cell-ParametersList,
id-CellParameter,
id-CommonMeasurementObjectType,
id-CommonMeasurementType,
id-CommonPhysicalChannelID,
id-CommonPhysicalChannelType-CTCHsetup-Req-FDD,
id-CommonPhysicalChannelType-CTCHsetup-Response,
id-CommunicationControlPort-InformationItem,
id-CommunicationControlPortID,
id-CommunicationControlPortInformation-ResourceStatIndItem,
id-CommunicationControlPortInformationList,
id-CompressesModeMethod,
id-ConfigurationGenerationID,
id-DCH-Add-RL-ReconfPrepFDDItem,
id-DCH-Add-RL-ReconfPrepTDDItem,
id-DCH-Add-RL-ReconfReadyItem,
id-DCH-Add-RL-ReconfReqFDDItem,
id-DCH-Add-RL-ReconfReqTDDItem,
id-DCH-AddItem-RL-ReconfResp,
id-DCH-AddList-RL-ReconfPrepFDD,
id-DCH-AddList-RL-ReconfPrepTDD,
id-DCH-AddList-RL-ReconfReqFDD,
id-DCH-AddList-RL-ReconfReqTDD,
id-DCH-Delete-RL-ReconfPrepFDDItem,
id-DCH-Delete-RL-ReconfPrepTDDItem,
id-DCH-Delete-RL-ReconfReqFDDItem,
id-DCH-Delete-RL-ReconfReqTDDItem,

id-DCH-DeleteList-RL-ReconfPrepFDD,
id-DCH-DeleteList-RL-ReconfPrepTDD,
id-DCH-DeleteList-RL-ReconfReqFDD,
id-DCH-DeleteList-RL-ReconfReqTDD,
id-DCH-Information-RL-SetupReqFDDItem,
id-DCH-Information-RL-SetupReqTDDItem,
id-DCH-InformationList-RL-SetupReqFDD,
id-DCH-InformationList-RL-SetupReqTDD,
id-DCH-InformationResponse-RL-SetupFailFDDItem,
id-DCH-InformationResponse-RL-setupResTDDItem,
id-DCH-InformationResponseItem,
id-DCH-Modify-RL-ReconfPrepFDDItem,
id-DCH-Modify-RL-ReconfPrepTDDItem,
id-DCH-Modify-RL-ReconfReadyItem,
id-DCH-Modify-RL-ReconfReqFDDItem,
id-DCH-Modify-RL-ReconfReqTDDItem,
id-DCH-ModifyItem-RL-ReconfResp,
id-DCH-ModifyList-RL-ReconfPrepFDD,
id-DCH-ModifyList-RL-ReconfPrepTDD,
id-DCH-ModifyList-RL-ReconfReqFDD,
id-DCH-ModifyList-RL-ReconfReqTDD,
id-DL-CCTrCH-Information-RL-ReconfPrepTDDItem,
id-DL-CCTrCH-Information-RL-ReconfReqTDDItem,
id-DL-CCTrCH-Information-RL-SetupReqTDDItem,
id-DL-CCTrCH-InformationItem,
id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD,
id-DL-CCTrCH-InformationList-RL-ReconfReqTDD,
id-DL-CCTrCH-InformationList-RL-SetupReqTDD,
id-DL-CCTrCHInformationItem,
id-DL-CCTrCHInformationList,
id-DL-CodeInformation,
id-DL-CodeInformation-RL-ReconfPrepFDDItem,
id-DL-CodeInformation-RL-SetupReqFDDItem,
id-DL-DPCH-Information-RL-ReconfPrepFDD,
id-DL-DPCH-Information-RL-ReconfPrepTDDItem,
id-DL-DPCH-Information-RL-SetupReqTDDItem,
id-DL-DPCH-InformationItem,
id-DL-DPCH-InformationItem-RL-ReconfReqFDD,
id-DL-DPCH-InformationItem-RL-SetupReqFDD,
id-DL-FrameType,
id-DL-ReferencePowerInformationItem,
id-DSCH-AddItem-RL-ReconfPrepFDD,
id-DSCH-AddItem-RL-ReconfReqFDD,
id-DSCH-DeleteItem-RL-ReconfPrepFDD,
id-DSCH-DeleteItem-RL-ReconfReqFDD,
id-DSCH-ID,
id-DSCH-Information-RL-SetupReqFDDItem,
id-DSCH-InformationList-RL-SetupReqFDD,
id-DSCH-InformationResponse-RL-SetupFailFDDItem,
id-DSCH-InformationResponse-RL-setupResFDDItem,
id-DSCH-ModifyItem-RL-ReconfPrepFDD,

id-DSCH-ModifyItem-RL-ReconfReqFDD,
id-DedicatedMeasurementObjectType,
id-DedicatedMeasurementType,
id-FACH-Information-ResourceStatIndItem,
id-FACH-InformationItem,
id-FACH-ListItem,
id-FACH-ParametersList-CTCHreconf-Req-FDD,
id-FACH-ParametersList-CTCHreconf-Req-TTD,
id-FACH-ParametersListItem-CTCHreconf-Req-FDD,
id-FACH-ParametersListItem-CTCHreconf-Req-TTD,
id-FACH-ParametersListItem-CTCHsetup-Req-FDD,
id-FACH-ParametersListItem-CTCHsetup-Response,
id-GapStartingSlotNumber,
id-IndicationType,
id-Local-Cell-Information-ResourceStatIndItem,
id-Local-CellInformation-ResourceStatIndItem,
id-LocalCell-ID,
id-LocalCell-InformationItem,
id-LocalCellInformationList,
id-MIB-SegmentInformationItem,
id-MIB-SegmentInformationList,
id-MaximumTransmissionPower,
id-MeasuredCellInfo,
id-MeasurementCharacteristics,
id-MeasurementID,
id-MeasurementType,
id-NeighbouringFDD-Cell-InformationItem,
id-NeighbouringTDD-Cell-InformationItem,
id-NodeB-CommunicationContextID,
id-PCCPCH-Information,
id-PCH-Information-ResourceStatIndItem,
id-PCH-InformationItem,
id-PCH-ListItem,
id-PCH-Parameters-CTCHreconf-Req-FDD,
id-PCH-ParametersList,
id-PCH-ParametersListItem,
id-PICH-Parameters-CTCHreconf-Req-FDD,
id-PRACH-ParametersList,
id-PRACH-ParametersListItem,
id-PSCH-Information,
id-PSCHandPCCPCH-Information,
id-PUSCH-ListItem,
id-PatternDuration,
id-PowerControlMode,
id-PowerResumeMode,
id-PrimaryCCPCH-Information,
id-PrimaryCPICH-Information,
id-PrimarySCH-Information,
id-PrimaryScramblingCode,
id-ProcedureScopeType,
id-RACH-Information-ResourceStatIndItem,

id-RACH-InformationItem,
 id-RL-ID,
 id-RL-Information,
 id-RL-Information-DMeasureReportItem,
 id-RL-Information-DMeasureRequestItem,
 id-RL-Information-DMeasureResponseItem,
 id-RL-Information-RL-ReconfPrepFDDItem,
 id-RL-Information-RL-SetupReqFDDItem,
 id-RL-InformationItem,
 id-RL-InformationItem-RL-SetupReqTDD,
 id-RL-InformationList,
 id-RL-InformationList-RL-ReconfReqFDD,
 id-RL-InformationList-RL-SetupReqFDD,
 id-RL-InformationResponse-RL-setupResFDDItem,
 id-RL-InformationResponseItem-RL-ReconfResp,
 id-RL-InformationResponseList-RL-ReconfReady,
 id-RL-InformationResponseList-RL-ReconfReadyItem,
 id-RL-InformationResponseList-RL-ReconfResp,
 id-RL-InformationResponseList-RL-setupResFDD,
 id-RL-InformationResponseList-RL-setupResTDD,
 id-RL-ReconfigurationFailure-RL-ReconfFailItem,
 id-RL-ReconfigurationFailureList-RL-ReconfFail,
 id-RL-ResponseInformation,
 id-RL-ResponseInformationItem,
 id-RL-ResponseInformationList,
 id-RL-informationItem,
 id-RL-informationList,
 id-RadioLinkInformation-RL-ReconfPrepFDDItem,
 id-RadioLinkInformation-RL-ReconfPrepTDD,
 id-RadioLinkInformation-RL-ReconfReqTDD,
 id-RadioLinkInformationList-RL-ReconfPrepFDD,
 id-ReportCharacteristics,
 id-SFN,
 id-SIB-SegmentInformationItem,
 id-SIB-SegmentInformationList,
 id-ScramblingCodeChange,
 id-Secondary-CCPCHListItem,
~~id-SecondaryCPICH-InformationList-Cellreconf-Req~~
~~id-SecondaryCPICH-Information,~~
~~id-SecondaryCPICH-InformationList-Cellsetup-Req~~
 id-SecondarySCH-Information,
 id-ShutdownTimer,
 id-Successful-RL-InformationResponse-RL-SetupFailFDDItem,
 id-Successful-RL-InformationResponseItem,
 id-Successful-RL-InformationResponseList,
 id-Successful-RL-InformationResponseList-RL-SetupFailFDD,
 id-SynchronisationMethod,
 id-T-Cell,
 id-TDDChipOffset,
 id-TimeSlotConfigurationItem,
 id-TimeSlotConfigurationList,

id-TransmissionGapDistance,
id-TransmissionGapPeriod,
id-TransmitGapLength,
id-TransmitGapPositionMode,
id-UARFCN,
id-C-ID,
id-UL-CCTrCH-Information-RL-ReconfPrepTDDItem,
id-UL-CCTrCH-Information-RL-ReconfReqTDDItem,
id-UL-CCTrCH-Information-RL-SetupReqTDDItem,
id-UL-CCTrCH-InformationItemIE,
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD,
id-UL-CCTrCH-InformationList-RL-ReconfReqTDD,
id-UL-CCTrCH-InformationList-RL-SetupReqTDD,
id-UL-CCTrCHInformation,
id-UL-CCTrCHInformationList,
id-UL-DPCH-Information-RL-ReconfPrepFDD,
id-UL-DPCH-Information-RL-ReconfPrepTDDItem,
id-UL-DPCH-Information-RL-SetupReqTDDItem,
id-UL-DPCH-InformationItem-RL-ReconfReqFDD,
id-UL-DPCH-InformationItem-RL-SetupReqFDD,
id-UL-DPCH-InformationItemIE,
id-USCH-Information-ResourceStatIndItem,
id-USCH-InformationItem,
id-USCH-ListItem-CTCHsetup-Req-TDD,
id-Unsuccessful-RL-InformationResponse,
id-Unsuccessful-RL-InformationResponse-RL-SetupFailFDDItem,
id-Unsuccessful-RL-InformationResponseItem,
id-Unsuccessful-RL-InformationResponseItem-RL-SetupFailTDD,
id-Unsuccessful-RL-InformationResponseList,
id-Unsuccessful-RL-InformationResponseList-RL-SetupFailFDD,


```

-- *****
--
-- CELL SETUP REQUEST FDD
--
-- *****

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

CellSetupRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-LocalCell-ID          CRITICALITY ignore TYPE LocalCell-ID          PRESENCE mandatory }|
    { ID id-C-ID                  CRITICALITY ignore TYPE C-ID                  PRESENCE mandatory }|
    { ID id-ConfigurationGenerationID CRITICALITY ignore TYPE ConfigurationGenerationID PRESENCE mandatory }|
    { ID id-T-Cell                CRITICALITY ignore TYPE T-Cell                PRESENCE mandatory }|
    { ID id-UARFCN                CRITICALITY ignore TYPE UARFCN                PRESENCE mandatory }|
    { ID id-MaximumTransmissionPower CRITICALITY ignore TYPE MaximumTransmissionPower PRESENCE mandatory }|
    { ID id-PrimaryScramblingCode   CRITICALITY ignore TYPE PrimaryScramblingCode   PRESENCE mandatory }|
    { ID id-PrimarySCH-Information-Cellsetup-Req CRITICALITY ignore TYPE PrimarySCH-Information-Cellsetup-Req PRESENCE mandatory }|
    { ID id-SecondarySCH-Information-Cellsetup-Req CRITICALITY ignore TYPE SecondarySCH-Information-Cellsetup-Req PRESENCE mandatory }|
    { ID id-PrimaryCPICH-Information-Cellsetup-Req CRITICALITY ignore TYPE PrimaryCPICH-Information-Cellsetup-Req PRESENCE mandatory }|
    { ID id-SecondaryCPICH-InformationList-Cellsetup-Req CRITICALITY ignore TYPE SecondaryCPICH-Information-Cellsetup-Req PRESENCE optional }|
}

{ ID id-PrimaryCCPCH-Information-Cellsetup-Req CRITICALITY ignore TYPE PrimaryCCPCH-Information-Cellsetup-Req PRESENCE mandatory },
...
}

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

PrimarySCH-Information-Cellsetup-Req ::= SEQUENCE {
    commonPhysicalChannelID CommonPhysicalChannelID,
    primarySCH-Power         DL-Power,
    tSTD-Indicator           TSTD-Indicator
}

SecondarySCH-Information-Cellsetup-Req ::= SEQUENCE {
    commonPhysicalChannelID CommonPhysicalChannelID,
    secondarySCH-Power       DL-Power,
    transmitDiversityIndication TransmitDiversityIndication
}

PrimaryCPICH-Information-Cellsetup-Req ::= SEQUENCE {

```

```

    commonPhysicalChannelID    CommonPhysicalChannelID,
    primaryCPICH-Power         DL-Power,
    sTTD-Indicator             STTD-Indicator
}

SecondaryCPICH-InformationList-Cellsetup-Req ::= SEQUENCE (SIZE (1.. maxSCPICHCell)) OF
SEQUENCE {
    commonPhysicalChannelID    CommonPhysicalChannelID,
    dl-ScramblingCode          DL-ScramblingCode,
    secondaryCPICH-Power       DL-Power,
    transmitDiversityIndication TransmitDiversityIndication
}

PrimaryCCPCH-Information-Cellsetup-Req ::= SEQUENCE {
    commonPhysicalChannelID    CommonPhysicalChannelID,
    bCH-information-Cellsetup-Req BCH-Information-PrimCCPCH-Cellsetup-Req,
    sTTD-Indicator             STTD-Indicator
}

BCH-Information-PrimCCPCH-Cellsetup-Req ::= SEQUENCE {
    commonTransportChannelID    CommonTransportChannelID,
    bCH-Power                   DL-Power
}

```

```
-- *****
--
-- 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 ignore TYPE C-ID          PRESENCE mandatory }|
    { ID id-ConfigurationGenerationID CRITICALITY ignore TYPE ConfigurationGenerationID PRESENCE mandatory }|
    { ID id-MaximumTransmissionPower CRITICALITY ignore TYPE MaximumTransmissionPower PRESENCE optional }|
    { ID id-PrimarySCH-Information-Cellreconf-Req CRITICALITY ignore TYPE PrimarySCH-Information-Cellreconf-Req PRESENCE optional }|
    { ID id-SecondarySCH-Information-Cellreconf-Req CRITICALITY ignore TYPE SecondarySCH-Information-Cellreconf-Req PRESENCE optional }|
    { ID id-PrimaryCPICH-Information-Cellreconf-Req CRITICALITY ignore TYPE PrimaryCPICH-Information-Cellreconf-Req PRESENCE optional }|
    { ID id-SecondaryCPICH-InformationList-Cellreconf-Req CRITICALITY ignore TYPE SecondaryCPICH-InformationList-Cellreconf-Req PRESENCE optional }|
    { ID id-PrimaryCCPCH-Information-Cellreconf-Req CRITICALITY ignore TYPE PrimaryCCPCH-Information-Cellreconf-Req PRESENCE optional },
    ...
}
```

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

```
PrimarySCH-Information-Cellreconf-Req ::= SEQUENCE {
    commonPhysicalChannelID CommonPhysicalChannelID,
    primarySCH-Power         DL-Power
}
```

```
SecondarySCH-Information-Cellreconf-Req ::= SEQUENCE {
    commonPhysicalChannelID CommonPhysicalChannelID,
    secondarySCH-Power       DL-Power
}
```

```
PrimaryCPICH-Information-Cellreconf-Req ::= SEQUENCE {
    commonPhysicalChannelID CommonPhysicalChannelID,
    primaryCPICH-Power       DL-Power
}
```

```
SecondaryCPICH-InformationList-Cellreconf-Req ::= SEQUENCE (SIZE (1.. maxSCPICHCell)) OF
SEQUENCE {
    commonPhysicalChannelID CommonPhysicalChannelID, secondaryCPICH-Power DL-Power
}
```

```
PrimaryCCPCH-Information-Cellreconf-Req ::= SEQUENCE {  
    bCH-information          BCH-information-Cellreconf-Req  
}
```

```
BCH-Information-Cellreconf-Req ::= SEQUENCE {  
    commonTransportChannelID    CommonTransportChannelID,  
    bCH-Power                   DL-Power  
}
```

9.3.7 Constant Definitions for NBAP

```

-- *****
--
-- IEs
--
-- *****

id-AICH-Information-ResourceStatIndItem          INTEGER ::= 0
id-AICH-ParametersList                          INTEGER ::= 1
id-AICH-ParametersListItem                      INTEGER ::= 2
id-AllowedSlotFormatInformationListItem-CTCHreconf-Req-FDD  INTEGER ::= 3
id-AllowedSlotFormatInformationListItem-CTCHsetup-Req-FDD  INTEGER ::= 4
id-BlockingPriorityIndicator                    INTEGER ::= 5
id-CCTrCH-ParametersList                       INTEGER ::= 6
id-CCTrCH-ParametersListItem                   INTEGER ::= 7
id-CFN                                          INTEGER ::= 8
id-CRNC-CommunicationContextID                  INTEGER ::= 9
id-CRNCommunicationContextID                    INTEGER ::= 10
id-Cause                                        INTEGER ::= 11
id-Cell-Information-ResourceStatIndItem         INTEGER ::= 12
id-Cell-InformationItem                         INTEGER ::= 13
id-Cell-InformationList                        INTEGER ::= 14
id-Cell-Parameter                              INTEGER ::= 15
id-Cell-ParametersItem                         INTEGER ::= 16
id-Cell-ParametersList                         INTEGER ::= 17
id-CellParameter                              INTEGER ::= 18
id-CommonMeasurementObjectType                  INTEGER ::= 19
id-CommonMeasurementType                       INTEGER ::= 20
id-CommonPhysicalChannelID                     INTEGER ::= 21
id-CommonPhysicalChannelType-CTCHsetup-Req-FDD  INTEGER ::= 22
id-CommonPhysicalChannelType-CTCHsetup-Response  INTEGER ::= 23
id-CommunicationControlPort-InformationItem     INTEGER ::= 24
id-CommunicationControlPortID                  INTEGER ::= 25
id-CommunicationControlPortInformation-ResourceStatIndItem  INTEGER ::= 26
id-CommunicationControlPortInformationList      INTEGER ::= 27
id-CompressesModeMethod                       INTEGER ::= 28
id-ConfigurationGenerationID                   INTEGER ::= 29
id-DCH-Add-RL-ReconfPrepFDDItem                INTEGER ::= 30
id-DCH-Add-RL-ReconfPrepTDDItem                INTEGER ::= 31
id-DCH-Add-RL-ReconfReadyItem                  INTEGER ::= 32
id-DCH-Add-RL-ReconfReqFDDItem                 INTEGER ::= 33
id-DCH-Add-RL-ReconfReqTDDItem                 INTEGER ::= 34
id-DCH-AddItem-RL-ReconfResp                    INTEGER ::= 35
id-DCH-AddList-RL-ReconfPrepFDD                 INTEGER ::= 36
id-DCH-AddList-RL-ReconfPrepTDD                 INTEGER ::= 37
id-DCH-AddList-RL-ReconfReqFDD                  INTEGER ::= 38
id-DCH-AddList-RL-ReconfReqTDD                  INTEGER ::= 39

```

id-DCH-Delete-RL-ReconfPrepFDDItem	INTEGER ::= 40
id-DCH-Delete-RL-ReconfPrepTDDItem	INTEGER ::= 41
id-DCH-Delete-RL-ReconfReqFDDItem	INTEGER ::= 42
id-DCH-Delete-RL-ReconfReqTDDItem	INTEGER ::= 43
id-DCH-DeleteList-RL-ReconfPrepFDD	INTEGER ::= 44
id-DCH-DeleteList-RL-ReconfPrepTDD	INTEGER ::= 45
id-DCH-DeleteList-RL-ReconfReqFDD	INTEGER ::= 46
id-DCH-DeleteList-RL-ReconfReqTDD	INTEGER ::= 47
id-DCH-Information-RL-SetupReqFDDItem	INTEGER ::= 48
id-DCH-Information-RL-SetupReqTDDItem	INTEGER ::= 49
id-DCH-InformationList-RL-SetupReqFDD	INTEGER ::= 50
id-DCH-InformationList-RL-SetupReqTDD	INTEGER ::= 51
id-DCH-InformationResponse-RL-SetupFailFDDItem	INTEGER ::= 52
id-DCH-InformationResponse-RL-setupRestTDDItem	INTEGER ::= 53
id-DCH-InformationResponseItem	INTEGER ::= 54
id-DCH-Modify-RL-ReconfPrepFDDItem	INTEGER ::= 55
id-DCH-Modify-RL-ReconfPrepTDDItem	INTEGER ::= 56
id-DCH-Modify-RL-ReconfReadyItem	INTEGER ::= 57
id-DCH-Modify-RL-ReconfReqFDDItem	INTEGER ::= 58
id-DCH-Modify-RL-ReconfReqTDDItem	INTEGER ::= 59
id-DCH-ModifyItem-RL-ReconfResp	INTEGER ::= 60
id-DCH-ModifyList-RL-ReconfPrepFDD	INTEGER ::= 61
id-DCH-ModifyList-RL-ReconfPrepTDD	INTEGER ::= 62
id-DCH-ModifyList-RL-ReconfReqFDD	INTEGER ::= 63
id-DCH-ModifyList-RL-ReconfReqTDD	INTEGER ::= 64
id-DL-CCTrCH-Information-RL-ReconfPrepTDDItem	INTEGER ::= 65
id-DL-CCTrCH-Information-RL-ReconfReqTDDItem	INTEGER ::= 66
id-DL-CCTrCH-Information-RL-SetupReqTDDItem	INTEGER ::= 67
id-DL-CCTrCH-InformationItem	INTEGER ::= 68
id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD	INTEGER ::= 69
id-DL-CCTrCH-InformationList-RL-ReconfReqTDD	INTEGER ::= 70
id-DL-CCTrCH-InformationList-RL-SetupReqTDD	INTEGER ::= 71
id-DL-CCTrCHInformationItem	INTEGER ::= 72
id-DL-CCTrCHInformationList	INTEGER ::= 73
id-DL-CodeInformation	INTEGER ::= 74
id-DL-CodeInformation-RL-ReconfPrepFDDItem	INTEGER ::= 75
id-DL-CodeInformation-RL-SetupReqFDDItem	INTEGER ::= 76
id-DL-DPCH-Information-RL-ReconfPrepFDD	INTEGER ::= 77
id-DL-DPCH-Information-RL-ReconfPrepTDDItem	INTEGER ::= 78
id-DL-DPCH-Information-RL-SetupReqTDDItem	INTEGER ::= 79
id-DL-DPCH-InformationItem	INTEGER ::= 80
id-DL-DPCH-InformationItem-RL-ReconfReqFDD	INTEGER ::= 81
id-DL-DPCH-InformationItem-RL-SetupReqFDD	INTEGER ::= 82
id-DL-FrameType	INTEGER ::= 83
id-DL-ReferencePowerInformationItem	INTEGER ::= 84
id-DSCH-AddItem-RL-ReconfPrepFDD	INTEGER ::= 85
id-DSCH-AddItem-RL-ReconfReqFDD	INTEGER ::= 86
id-DSCH-DeleteItem-RL-ReconfPrepFDD	INTEGER ::= 87
id-DSCH-DeleteItem-RL-ReconfReqFDD	INTEGER ::= 88
id-DSCH-ID	INTEGER ::= 89
id-DSCH-Information-RL-SetupReqFDDItem	INTEGER ::= 90

id-DSCH-InformationList-RL-SetupReqFDD	INTEGER ::= 91
id-DSCH-InformationResponse-RL-SetupFailFDDItem	INTEGER ::= 92
id-DSCH-InformationResponse-RL-setupResFDDItem	INTEGER ::= 93
id-DSCH-ModifyItem-RL-ReconfPrepFDD	INTEGER ::= 94
id-DSCH-ModifyItem-RL-ReconfReqFDD	INTEGER ::= 95
id-DedicatedMeasurementObjectType	INTEGER ::= 96
id-DedicatedMeasurementType	INTEGER ::= 97
id-FACH-Information-ResourceStatIndItem	INTEGER ::= 98
id-FACH-InformationItem	INTEGER ::= 99
id-FACH-ListItem	INTEGER ::= 100
id-FACH-ParametersList-CTCHreconf-Req-FDD	INTEGER ::= 101
id-FACH-ParametersList-CTCHreconf-Req-TTD	INTEGER ::= 102
id-FACH-ParametersListItem-CTCHreconf-Req-FDD	INTEGER ::= 103
id-FACH-ParametersListItem-CTCHreconf-Req-TTD	INTEGER ::= 104
id-FACH-ParametersListItem-CTCHsetup-Req-FDD	INTEGER ::= 105
id-FACH-ParametersListItem-CTCHsetup-Response	INTEGER ::= 106
id-GapStartingSlotNumber	INTEGER ::= 107
id-IndicationType	INTEGER ::= 108
id-Local-Cell-Information-ResourceStatIndItem	INTEGER ::= 109
id-Local-CellInformation-ResourceStatIndItem	INTEGER ::= 110
id-LocalCell-ID	INTEGER ::= 111
id-LocalCell-InformationItem	INTEGER ::= 112
id-LocalCellInformationList	INTEGER ::= 113
id-MIB-SegmentInformationItem	INTEGER ::= 114
id-MIB-SegmentInformationList	INTEGER ::= 115
id-MaximumTransmissionPower	INTEGER ::= 116
id-MeasuredCellInfo	INTEGER ::= 117
id-MeasurementCharacteristics	INTEGER ::= 118
id-MeasurementID	INTEGER ::= 119
id-MeasurementType	INTEGER ::= 120
id-NeighbouringFDD-Cell-InformationItem	INTEGER ::= 121
id-NeighbouringTDD-Cell-InformationItem	INTEGER ::= 122
id-NodeB-CommunicationContextID	INTEGER ::= 123
id-PCCPCH-Information	INTEGER ::= 124
id-PCH-Information-ResourceStatIndItem	INTEGER ::= 125
id-PCH-InformationItem	INTEGER ::= 126
id-PCH-ListItem	INTEGER ::= 127
id-PCH-Parameters-CTCHreconf-Req-FDD	INTEGER ::= 128
id-PCH-ParametersList	INTEGER ::= 129
id-PCH-ParametersListItem	INTEGER ::= 130
id-PICH-Parameters-CTCHreconf-Req-FDD	INTEGER ::= 131
id-PRACH-ParametersList	INTEGER ::= 132
id-PRACH-ParametersListItem	INTEGER ::= 133
id-PSCH-Information	INTEGER ::= 134
id-PSCHandPCCPCH-Information	INTEGER ::= 135
id-PUSCH-ListItem	INTEGER ::= 136
id-PatternDuration	INTEGER ::= 137
id-PowerControlMode	INTEGER ::= 138
id-PowerResumeMode	INTEGER ::= 139
id-PrimaryCCPCH-Information	INTEGER ::= 140
id-PrimaryCPICH-Information	INTEGER ::= 141

```

id-PrimarySCH-Information          INTEGER ::= 142
id-PrimaryScramblingCode          INTEGER ::= 143
id-ProcedureScopeType             INTEGER ::= 144
id-RACH-Information-ResourceStatIndItem  INTEGER ::= 145
id-RACH-InformationItem           INTEGER ::= 146
id-RL-ID                           INTEGER ::= 147
id-RL-Information                 INTEGER ::= 148
id-RL-Information-DMeasureReportItem  INTEGER ::= 149
id-RL-Information-DMeasureRequestItem  INTEGER ::= 150
id-RL-Information-DMeasureResponseItem  INTEGER ::= 151
id-RL-Information-RL-ReconfPrepFDDItem  INTEGER ::= 152
id-RL-Information-RL-SetupReqFDDItem    INTEGER ::= 153
id-RL-InformationItem             INTEGER ::= 154
id-RL-InformationItem-RL-SetupReqTDD    INTEGER ::= 155
id-RL-InformationList            INTEGER ::= 156
id-RL-InformationList-RL-ReconfReqFDD   INTEGER ::= 157
id-RL-InformationList-RL-SetupReqFDD    INTEGER ::= 158
id-RL-InformationResponse-RL-setupResFDDItem  INTEGER ::= 159
id-RL-InformationResponseItem-RL-ReconfResp  INTEGER ::= 160
id-RL-InformationResponseList-RL-ReconfReady  INTEGER ::= 161
id-RL-InformationResponseList-RL-ReconfReadyItem  INTEGER ::= 162
id-RL-InformationResponseList-RL-ReconfResp  INTEGER ::= 163
id-RL-InformationResponseList-RL-setupResFDD  INTEGER ::= 164
id-RL-InformationResponseList-RL-setupResTDD  INTEGER ::= 165
id-RL-ReconfigurationFailure-RL-ReconfFailItem  INTEGER ::= 166
id-RL-ReconfigurationFailureList-RL-ReconfFail  INTEGER ::= 167
id-RL-ResponseInformation         INTEGER ::= 168
id-RL-ResponseInformationItem      INTEGER ::= 169
id-RL-ResponseInformationList      INTEGER ::= 170
id-RL-informationItem             INTEGER ::= 171
id-RL-informationList            INTEGER ::= 172
id-RadioLinkInformation-RL-ReconfPrepFDDItem  INTEGER ::= 173
id-RadioLinkInformation-RL-ReconfPrepTDD    INTEGER ::= 174
id-RadioLinkInformation-RL-ReconfReqTDD    INTEGER ::= 175
id-RadioLinkInformationList-RL-ReconfPrepFDD  INTEGER ::= 176
id-ReportCharacteristics          INTEGER ::= 177
id-SFN                            INTEGER ::= 178
id-SIB-SegmentInformationItem      INTEGER ::= 179
id-SIB-SegmentInformationList      INTEGER ::= 180
id-ScramblingCodeChange           INTEGER ::= 181
id-Secondary-CCPCHListItem        INTEGER ::= 182
id-SecondaryCPICH-InformationList-Cellreconf-Req  INTEGER ::= 183
id-SecondaryCPICH-InformationList-Cellsetup-Req  INTEGER ::= 184
id-SecondaryCPICH-Information                INTEGER ::= 183
id-SecondarySCH-Information        INTEGER ::= 184185
id-ShutdownTimer                 INTEGER ::= 185186
id-Successful-RL-InformationResponse-RL-SetupFailFDDItem  INTEGER ::= 186187
id-Successful-RL-InformationResponseItem  INTEGER ::= 187188
id-Successful-RL-InformationResponseList  INTEGER ::= 188189
id-Successful-RL-InformationResponseList-RL-SetupFailFDD  INTEGER ::= 189190
id-SynchronisationMethod          INTEGER ::= 190191

```



```

id-T-Cell INTEGER ::= 191192
id-TDDChipOffset INTEGER ::= 192193
id-TimeSlotConfigurationItem INTEGER ::= 193194
id-TimeSlotConfigurationList INTEGER ::= 194195
id-TransmissionGapDistance INTEGER ::= 195196
id-TransmissionGapPeriod INTEGER ::= 196197
id-TransmitGapLength INTEGER ::= 197198
id-TransmitGapPositionMode INTEGER ::= 198199
id-UARFCN INTEGER ::= 199200
id-UC-ID INTEGER ::= 200201
id-UL-CCTrCH-Information-RL-ReconfPrepTDDItem INTEGER ::= 201202
id-UL-CCTrCH-Information-RL-ReconfReqTDDItem INTEGER ::= 202203
id-UL-CCTrCH-Information-RL-SetupReqTDDItem INTEGER ::= 203204
id-UL-CCTrCH-InformationItemIE INTEGER ::= 204205
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD INTEGER ::= 205206
id-UL-CCTrCH-InformationList-RL-ReconfReqTDD INTEGER ::= 206207
id-UL-CCTrCH-InformationList-RL-SetupReqTDD INTEGER ::= 207208
id-UL-CCTrCHInformation INTEGER ::= 208209
id-UL-CCTrCHInformationList INTEGER ::= 209210
id-UL-DPCH-Information-RL-ReconfPrepFDD INTEGER ::= 210211
id-UL-DPCH-Information-RL-ReconfPrepTDDItem INTEGER ::= 211212
id-UL-DPCH-Information-RL-SetupReqTDDItem INTEGER ::= 212213
id-UL-DPCH-InformationItem-RL-ReconfReqFDD INTEGER ::= 213214
id-UL-DPCH-InformationItem-RL-SetupReqFDD INTEGER ::= 214215
id-UL-DPCH-InformationItemIE INTEGER ::= 215216
id-USCH-Information-ResourceStatIndItem INTEGER ::= 216217
id-USCH-InformationItem INTEGER ::= 217218
id-USCH-ListItem-CTCHsetup-Req-TDD INTEGER ::= 218219
id-Unsuccessful-RL-InformationResponse INTEGER ::= 219220
id-Unsuccessful-RL-InformationResponse-RL-SetupFailFDDItem INTEGER ::= 220221
id-Unsuccessful-RL-InformationResponseItem INTEGER ::= 221222
id-Unsuccessful-RL-InformationResponseItem-RL-SetupFailTDD INTEGER ::= 222223
id-Unsuccessful-RL-InformationResponseList INTEGER ::= 223224
id-Unsuccessful-RL-InformationResponseList-RL-SetupFailFDD INTEGER ::= 224225

```

END

CHANGE REQUEST		<small>Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.</small>
25.433	CR 022	Current Version: 3.0.0
<small>GSM (AA.BB) or 3G (AA.BBB) specification number ↑</small>	<small>↑ CR number as allocated by MCC support team</small>	
For submission to: TSG-RAN#7 <small>list expected approval meeting # here ↑</small>	for approval for information <input checked="" type="checkbox"/>	strategic <input type="checkbox"/> non-strategic <input type="checkbox"/> <small>(for SMG use only)</small>

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: TSG-RAN WG3 **Date:** 24 January 2000

Subject: CR to 25.433: Editorial Correction of the ASN.1 with the Syntax Checking of the NBAP : Common Module

Work item: _____

Category:	F Correction <input type="checkbox"/> A Corresponds to a correction in an earlier release <input type="checkbox"/> B Addition of feature <input type="checkbox"/> C Functional modification of feature <input checked="" type="checkbox"/> D Editorial modification <input type="checkbox"/>	Release:	Phase 2 <input type="checkbox"/> Release 96 <input type="checkbox"/> Release 97 <input type="checkbox"/> Release 98 <input type="checkbox"/> Release 99 <input checked="" type="checkbox"/> Release 00 <input type="checkbox"/>
------------------	--	-----------------	--

(only one category shall be marked with an X)

Reason for change: This CR is to provides the NBAP ASN.1 descripton (Common Module) with the syntax checking.

Clauses affected: 9.3.5

Other specs affected:	Other 3G core specifications <input type="checkbox"/> → List of CRs: Other GSM core specifications <input type="checkbox"/> → List of CRs: MS test specifications <input type="checkbox"/> → List of CRs: BSS test specifications <input type="checkbox"/> → List of CRs: O&M specifications <input type="checkbox"/> → List of CRs:	
------------------------------	--	--

Other comments: _____



<----- double-click here for help and instructions on how to create a CR.

```

-- *****
--
-- Common definitions
--
-- *****

NBAP-CommonDataTypes -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

Criticality      ::= ENUMERATED { reject, ignore, notify }

MessageDiscriminator ::= ENUMERATED { common, dedicated }

Presence        ::= ENUMERATED { optional, conditional, mandatory }

PrivateExtensionID ::= CHOICE {
    local          INTEGER (0..65535),
    global         OBJECT IDENTIFIER
}

ProcedureCode   ::= INTEGER (0..255)

ProcedureID     ::= SEQUENCE {
    procedureCode  INTEGER (0..255),
    ddMode        ENUMERATED { tdd, fdd, common }
}

ProtocolExtensionID ::= INTEGER (0..65535)

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

TransactionID   ::= INTEGER (0..255)

TriggeringMessage ::= ENUMERATED { initiating-message, successful-outcome, unsuccessful-
outcome, outcome }

END

```

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.433

CR 023

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **TSG-RAN#7**
list expected approval meeting # here ↑

for approval
for information

strategic
non-strategic (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: TSG-RAN WG3 **Date:** 24 January 2000

Subject: CR to 25.433: Editorial Correction of the ASN.1 with the Syntax Checking of the NBAP : Elementary Procedure Module

Work item:

Category: F Correction **Release:** Phase 2
A Corresponds to a correction in an earlier release Release 96
(only one category shall be marked with an X) B Addition of feature Release 97
C Functional modification of feature Release 98
D Editorial modification Release 99
Release 00

Reason for change: This CR is to provides the NBAP ASN.1 descriptor (Elementary Procedure Module) with the syntax checking. And also alignment with the RNSAP ASN.1 description.

Clauses affected: 9.3.2

Other specs affected: Other 3G core specifications → List of CRs:
Other GSM core specifications → List of CRs:
MS test specifications → List of CRs:
BSS test specifications → List of CRs:
O&M specifications → List of CRs:

Other comments:



[<----- double-click here for help and instructions on how to create a CR.](#)

```

--
-- Elementary Procedure definitions
--
-- *****
| NBAP-ELEMENTARY-PROCEDUREDefinitionsSPDU-Discriptions -- { object identifier to be allocated }--
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,
    AuditRequiredIndication,
    AuditRequest,
    AuditResponse,
    CommonMeasurementInitiationRequest,
    CommonMeasurementInitiationResponse,
    CommonMeasurementInitiationFailure,
    CommonMeasurementReport,
    CommonMeasurementTerminationRequest,
    CommonMeasurementFailureIndication,
    CommonMeasurementReport,
    CellSetupRequestFDD,
    CellSetupRequestTDD,
    CellSetupResponse,
    CellSetupFailure,
    CellReconfigurationRequestFDD,
    CellReconfigurationRequestTDD,
    CellReconfigurationResponse,
    CellReconfigurationFailure,
    CellDeletionRequest,
    CellDeletionResponse,
    ResourceStatusIndication,
    SystemInformationUpdateRequest,
    SystemInformationUpdateResponse,
    SystemInformationUpdateFailure,
    RadioLinkSetupRequestFDD,
    RadioLinkSetupRequestTDD,
    RadioLinkSetupResponseFDD,
    RadioLinkSetupResponseTDD,
    RadioLinkSetupFailureFDD,
    RadioLinkSetupRequestTDD,
    RadioLinkSetupResponseTDD,
    RadioLinkSetupFailureTDD,
    NeighbourCellMeasurementRequestTDD,
    NeighbourCellMeasurementResponseTDD,
    NeighbourCellMeasurementFailureTDD,
    SynchronisationAdjustmentRequestTDD,
    SynchronisationAdjustmentResponseTDD,
    SynchronisationAdjustmentFailureTDD,
    NodeBOutOfSyncIndicationTDD,

```

~~SynchronisationRestartRequestTDD,~~
RadioLinkAdditionRequestFDD,
RadioLinkAdditionRequestTDD,
RadioLinkAdditionResponseFDD,
RadioLinkAdditionResponseTDD,
RadioLinkAdditionFailureFDD,
~~RadioLinkAdditionRequestTDD,~~
~~RadioLinkAdditionResponseTDD,~~
RadioLinkAdditionFailureTDD,
RadioLinkReconfigurationPrepareFDD,
RadioLinkReconfigurationPrepareTDD,
RadioLinkReconfigurationReady,
RadioLinkReconfigurationFailure,
RadioLinkReconfigurationCommit,
~~RadioLinkReconfigurationFailure,~~
RadioLinkReconfigurationCancel,
RadioLinkReconfigurationRequestFDD,
RadioLinkReconfigurationRequestTDD,
RadioLinkReconfigurationResponse,
RadioLinkDeletionRequest,
RadioLinkDeletionResponse,
DL-PowerControlRequest~~FDD,~~
DedicatedMeasurementInitiationRequest,
DedicatedMeasurementInitiationResponse,
DedicatedMeasurementInitiationFailure,
DedicatedMeasurementReport,
DedicatedMeasurementTerminationRequest,
DedicatedMeasurementFailureIndication,
~~DedicatedMeasurementReport,~~
RadioLinkFailureIndication,
RadioLinkRestoreIndication,
CompressedModePrepare~~FDD,~~
CompressedModeReady~~FDD,~~
CompressedModeCommit~~FDD,~~
CompressedModeFailure~~FDD,~~
CompressedModeCancel~~FDD,~~
ErrorIndication,
PrivateMessage

FROM NBAP-PDU-Contents

id-audit,
id-auditRequired,
id-blockResource,
id-cellDeletion,
id-cellReconfiguration,
id-cellSetup,
id-commonMeasurementFailure,
id-commonMeasurementInitiation,
id-commonMeasurementReport,
id-commonMeasurementTermination,
id-commonTransportChannelDeletion,
id-commonTransportChannelReconfiguration,
id-commonTransportChannelSetup,
id-compressedMode~~Control~~Cancellation,
id-compressedMode~~Control~~Commit,
id-compressedMode~~Control~~Preparation,
id-dedicatedMeasurementFailure,
id-dedicatedMeasurementInitiation,
id-dedicatedMeasurementReport,
id-dedicatedMeasurementTermination,
id-~~dl~~downlinkPowerControl,
id-errorIndication,
id-privateMessage,
~~id-neighbourCellMeasurement,~~
id-radioLinkAddition,
id-radioLinkDeletion,
id-radioLinkFailure,
~~id-radioLinkReconfigurationCommit,~~
~~id-radioLinkReconfigurationCancel,~~
id-radioLinkRestoration,
id-radioLinkSetup,
id-resourceStatusIndication,
~~id-synchronisationAdjustment,~~
~~id-synchronisationFailure,~~
~~id-synchronisationRestart,~~
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,
    unsuccessfulOutcome_        UnsuccessfulOutcome,
    outcome_                     Outcome,
    ...
}

InitiatingMessage ::= SEQUENCE {
    procedureID_                 NBAP-ELEMENTARY-PROCEDURE.&procedureID ( {NBAP-ELEMENTARY-
    PROCEDURES} ),
    criticality_                 NBAP-ELEMENTARY-PROCEDURE.&criticality ( {NBAP-ELEMENTARY-
    PROCEDURES} { @procedureID } ),
    messageDiscriminator_        NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator
    ( {NBAP-ELEMENTARY-PROCEDURES} { @procedureID } ),
    transactionID_               TransactionID,
    value_                       NBAP-ELEMENTARY-PROCEDURE.&InitiatingMessage
    ( {NBAP-ELEMENTARY-PROCEDURES} { @procedureID } )
}

SuccessfulOutcome ::= SEQUENCE {
    procedureID_                 NBAP-ELEMENTARY-PROCEDURE.&procedureID ( {NBAP-ELEMENTARY-
    PROCEDURES} ),
    criticality_                 NBAP-ELEMENTARY-PROCEDURE.&criticality ( {NBAP-ELEMENTARY-
    PROCEDURES} { @procedureID } ),
    messageDiscriminator_        NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator
    ( {NBAP-ELEMENTARY-PROCEDURES} { @procedureID } ),
    transactionID_               TransactionID,
    value_                       NBAP-ELEMENTARY-PROCEDURE.&SuccessfulOutcome_
    ( {NBAP-ELEMENTARY-PROCEDURES} { @procedureID } )
}

UnsuccessfulOutcome ::= SEQUENCE {
    procedureID_                 NBAP-ELEMENTARY-PROCEDURE.&procedureID ( {NBAP-ELEMENTARY-
    PROCEDURES} ),
    criticality_                 NBAP-ELEMENTARY-PROCEDURE.&criticality ( {NBAP-ELEMENTARY-
    PROCEDURES} { @procedureID } ),
    messageDiscriminator_        NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator

```



```

transactionID TransactionID,
value NBAP-ELEMENTARY-PROCEDURE.&UnsuccessfulOutcome
)
)

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 |
  commonTransportChannelReconfigurationFDD |
  commonTransportChannelReconfigurationTDD |
  commonTransportChannelDeletion |
  audit |
  blockResource |
  audit +
  commonMeasurementInitiation +
  cellSetupFDD +
  cellSetupTDD +
  cellReconfigurationFDD +
  cellReconfigurationTDD +
  cellDeletion +
  systemInformationUpdate +
  radioLinkSetupFDD |
  radioLinkSetupTDD |
  systemInformationUpdate |
  commonMeasurementInitiation |
  neighbourCellMeasurementTDD +
  synchronisationAdjustmentTDD +
  radioLinkAdditionFDD |
  radioLinkAdditionTDD |
  radioLinkDeletion |
  radioLinkReconfigurationCommit +
  radioLinkReconfigurationCancellation +
  radioLinkDeletion +
  synchronisedRadioLinkReconfigurationPreparationFDD |
  synchronisedRadioLinkReconfigurationPreparationTDD |
  unsynchronisedRadioLinkReconfigurationFDD |
  unsynchronisedRadioLinkReconfigurationTDD |
  dedicatedMeasurementInitiation |
  compressedModeControlPreparationFDD |
  ...
}

NBAP-ELEMENTARY-PROCEDURES-CLASS-2 NBAP-ELEMENTARY-PROCEDURE ::= {
  resourceStatusIndication |
  unblockResource +
  auditRequired |

```

```

commonMeasurementReport
commonMeasurementTermination
commonMeasurementFailure
commonMeasurementReport
resourceStatusIndication
synchronisationFailureTDD
synchronisationRestartTDD
synchronisedRadioLinkReconfigurationCommitPreparationFDD
synchronisedRadioLinkReconfigurationCancellationPreparationTDD
unsynchronisedRadioLinkReconfigurationFDD
unsynchronisedRadioLinkReconfigurationTDD
dlPowerControlFDD
radioLinkFailure
radioLinkRestoration
dedicatedMeasurementReport
dedicatedMeasurementTermination
dedicatedMeasurementFailure
dedicatedMeasurementReport
radioLinkFailure
radioLinkRestoration
downlinkPowerControlFDD
compressedModeControlCommitFDD
compressedModeControlCancellationFDD
unblockResource
errorIndication
privateMessage
...
}

-- *****
--
-- 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              ignore
}

-- *** 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              ignore
}

-- *** 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              ignore
}

-- *** 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              ignore
}

```

```

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

-- *** 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             ignore
}

-- *** 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             ignore
}

-- *** CommonTransportChannelReconfiguration (FDD) ***
commonTransportChannelReconfigurationFDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      CommonTransportChannelReconfigurationRequestFDD
  SUCCESSFUL OUTCOME      CommonTransportChannelReconfigurationResponse
  UNSUCCESSFUL OUTCOME    CommonTransportChannelReconfigurationFailure
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-commonTransportChannelReconfiguration,
ddMode fdd }
  CRITICALITY             ignore
}

-- *** CommonTransportChannelReconfiguration (TDD) ***
commonTransportChannelReconfigurationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      CommonTransportChannelReconfigurationRequestTDD
  SUCCESSFUL OUTCOME      CommonTransportChannelReconfigurationResponse
  UNSUCCESSFUL OUTCOME    CommonTransportChannelReconfigurationFailure
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-commonTransportChannelReconfiguration,
ddMode tdd }
  CRITICALITY             ignore
}

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

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

-- *** 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      ___ ignore
}


*** UnblockResourceIndication ***
unblockResource NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  UnblockResourceIndication
  MESSAGE DISCRIMINATOR common
  PROCEDURE ID        { procedureCode id-unblockResource, ddMode common }
  CRITICALITY         ignore
}
}

*****

*** AuditRequired ***
auditRequired NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  AuditRequiredIndication
  MESSAGE DISCRIMINATOR common
  PROCEDURE ID        { procedureCode id-auditRequired, ddMode common }
  CRITICALITY         ignore
}
}


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

*****

*** 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         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
}
}


*** CommonMeasurementReport ***
commonMeasurementReport NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  CommonMeasurementReport
  MESSAGE DISCRIMINATOR common
  PROCEDURE ID        { procedureCode id-commonMeasurementReport, ddMode common }
  CRITICALITY         ignore
}
}

*****

*** 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         ignore
}
}


*** 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 ignore
}

-- *** 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 ignore
}

-- *** 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 ignore
}

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

-----
-- *** ResourceStatusIndication ***
resourceStatusIndication NBAP-ELEMENTARY-PROCEDURE ::= {
-- INITIATING MESSAGE ResourceStatusIndication
-- MESSAGE DISCRIMINATOR common
-- PROCEDURE ID { procedureCode id-resourceStatusIndication, ddMode common }
-- CRITICALITY ignore
}

-----
-- *** 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 ignore
}

-----
-- *** 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 ignore
}

-- *** 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 ignore
}

```

```

}

-- *** 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             ignore
}

-- *** 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             ignore
}

-----
-- *** NeighbourCellMeasurement (TDD only) ***
neighbourCellMeasurementTDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      NeighbourCellMeasurementRequestTDD
  SUCCESSFUL OUTCOME      NeighbourCellMeasurementResponseTDD
  UNSUCCESSFUL OUTCOME    NeighbourCellMeasurementFailureTDD
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-neighbourCellMeasurement, ddMode tdd }
  CRITICALITY             ignore
}

-----
-- *** SynchronisationAdjustment (TDD only) ***
synchronisationAdjustmentTDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      SynchronisationAdjustmentRequestTDD
  SUCCESSFUL OUTCOME      SynchronisationAdjustmentResponseTDD
  UNSUCCESSFUL OUTCOME    SynchronisationAdjustmentFailureTDD
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-synchronisationAdjustment, ddMode tdd }
  CRITICALITY             ignore
}

-- *** NodeBOutOfSyncIndication (TDD only) ***
synchronisationFailureTDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      NodeBOutOfSyncIndicationTDD
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-synchronisationFailure, ddMode tdd }
  CRITICALITY             ignore
}

-- *** SynchronisationRestart (TDD only) ***
synchronisationRestartTDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      SynchronisationRestartRequestTDD
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-synchronisationRestart, ddMode tdd }
  CRITICALITY             ignore
}

-----
-- *** 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             ignore
}

-- *** 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      ___ ignore
}


*** RadioReconfirurationPrepare (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       ignore
}

*** RadioReconfirurationPrepare (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       ignore
}

*** (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       ignore
}

*** (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       ignore
}

*** RadioLinkReconfirurationCommit ***
radioLinkReconfigurationCommit NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkReconfigurationCommit
  MESSAGE DISCRIMINATOR dedicated
  PROCEDURE ID       { procedureCode id-radioLinkReconfigurationCommit, ddMode common }
  CRITICALITY       ignore
}

*** RadioReconfigurationCancellation ***
radioLinkReconfigurationCancellation NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkReconfigurationCancel
  MESSAGE DISCRIMINATOR dedicated
  PROCEDURE ID       { procedureCode id-radioLinkReconfirurationCancel, ddMode common }
  CRITICALITY       ignore
}

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

*****
*** DLPowerControl (FDD only) ***
dlPowerControlFDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  DLPowerControlRequestFDD


```

```

MESSAGE DISCRIMINATOR dedicated
PROCEDURE ID { procedureCode id-dlPowerControl, ddMode fdd }
CRITICALITY ignore
}

-- *** 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 ignore
}

-- *** 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 ignore
}

-- *** 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 ignore
}

-- *** 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 ignore
}

*****
-- *** 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 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
}

```



```


--- *** DedicatedMeasurementReport ***
dedicatedMeasurementReport NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE DedicatedMeasurementReport
  MESSAGE DISCRIMINATOR dedicated
  PROCEDURE ID { procedureCode id dedicatedMeasurementReport, ddMode common }
  CRITICALITY ignore
}

*****
--- *** RadioLinkFailureIndication ***
radioLinkFailure NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkFailureIndication
  MESSAGE DISCRIMINATOR dedicated
  PROCEDURE ID { procedureCode id radioLinkFailure, ddMode common }
  CRITICALITY ignore
}

--- *** RadioLinkRestoreIndication ***
radioLinkRestoration NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkRestoreIndication
  MESSAGE DISCRIMINATOR dedicated
  PROCEDURE ID { procedureCode id radioLinkRestoration, ddMode common }
  CRITICALITY ignore
}

*****
-- *** CompressedModePreparation (FDD only) ***
compressedModeControlPreparation FDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE CompressedModePrepare FDD
  SUCCESSFUL OUTCOME CompressedModeReady FDD
  UNSUCCESSFUL OUTCOME CompressedModeFailure FDD
  MESSAGE DISCRIMINATOR dedicated
  PROCEDURE ID { procedureCode id-compressedModeControlPreparation, ddMode fdd }
}
CRITICALITY ignore
}

--- *** CompressedModeCommit (FDD only) ***
compressedModeControlCommit FDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE CompressedModeCommit FDD
  MESSAGE DISCRIMINATOR dedicated
  PROCEDURE ID { procedureCode id-compressedModeControlCommit, ddMode fdd }
  CRITICALITY ignore
}

--- *** CompressedModeCommit (FDD only) ***
compressedModeControlCancellation FDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE CompressedModeCancel FDD
  MESSAGE DISCRIMINATOR dedicated
  PROCEDURE ID { procedureCode id-compressedModeControlCancellation, ddMode fdd }
  CRITICALITY ignore
}
}
-- 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
}

-- *** 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 ::= {
--itaba
    INITIATING MESSAGE      DL-PowerControlRequest
    MESSAGE DISCRIMINATOR   dedicated
--itaba
    PROCEDURE ID            { procedureCode id-downlinkPowerControl, ddMode fdd }
    CRITICALITY              ignore
}

-- *** CompressedModeCommit (FDD only) ***
compressedModeCommit NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CompressedModeCommit
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-compressedModeCommit, ddMode fdd }
    CRITICALITY              ignore
}

-- *** CompressedModeCancellation (FDD only) ***
compressedModeCancellation NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CompressedModeCancel
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-compressedModeCancellation, 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 ***
errorIndication NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      eErrorIndication
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-errorIndication
Cancellation, ddMode common }
    CRITICALITY              ignore
}

-- *** PrivateMessage ***
privateMessage NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      PrivateMessage
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-privateMessage, ddMode common }
    CRITICALITY              ignore
}

END

```

CHANGE REQUEST		Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.	
25.433	CR	025	Current Version: 3.0.0
GSM (AA.BB) or 3G (AA.BBB) specification number ↑		↑ CR number as allocated by MCC support team	
For submission to: TSG-RAN#7	for approval <input checked="" type="checkbox"/>	strategic <input type="checkbox"/>	(for SMG use only)
list expected approval meeting # here ↑	for information <input type="checkbox"/>	non-strategic <input type="checkbox"/>	

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: TSG-RAN WG3 **Date:** 26 January 2000

Subject: CR to 25.433: Editorial Correction of the ASN.1 with the Syntax Checking of the NBAP : Information Element Module

Work item: _____

Category:	F Correction <input type="checkbox"/> A Corresponds to a correction in an earlier release <input type="checkbox"/> B Addition of feature <input type="checkbox"/> C Functional modification of feature <input checked="" type="checkbox"/> D Editorial modification <input type="checkbox"/>	Release:	Phase 2 <input type="checkbox"/> Release 96 <input type="checkbox"/> Release 97 <input type="checkbox"/> Release 98 <input type="checkbox"/> Release 99 <input checked="" type="checkbox"/> Release 00 <input type="checkbox"/>
------------------	--	-----------------	--

(only one category shall be marked with an X)

Reason for change: This CR is to provides the NBAP ASN.1 descriptor (Information Element Module) with the syntax checking. And also alignment with the RNSAP ASN.1 description.

Clauses affected: 9.3.4

Other specs affected:	Other 3G core specifications <input type="checkbox"/> → List of CRs: Other GSM core specifications <input type="checkbox"/> → List of CRs: MS test specifications <input type="checkbox"/> → List of CRs: BSS test specifications <input type="checkbox"/> → List of CRs: O&M specifications <input type="checkbox"/> → List of CRs:	
------------------------------	--	--

Other comments: _____



<----- double-click here for help and instructions on how to create a CR.

9.3.4 NBAP Information Elements

__*****
 --

```
-- Information Element Definitions
--
--*****
```

```
NBAP-IEs
DEFINITIONS AUTOMATIC TAGS ::=
BEGIN
```

```
IMPORTS
maxTFcount,
maxnoofTFCS,
maxCTF-1,
maxRM,
maxNrOfTFCS,
maxNrOfErrors,
maxCTFC-1,
maxNrOfTFs,
maxTTI-count,
maxRateMatching
```

```
FROM NBAP-Constants+
```

```
Criticality,
ProcedureCode,
ProtocolIE-ID,
TransactionID,
TriggeringMessage
FROM NBAP-CommonDataTypes
```

```
ProtocolExtensionContainer{},
NBAP-PROTOCOL-EXTENSION
FROM NBAP-Containers;
```

```
DTX-InsertionPoint ::= INTEGER
DedicatedMeasurementValue ::= INTEGER
DeltaTFC ::= INTEGER
```

```
=====
---_A
=====
```

```
to do
AcknowledgedRA-TriesValue ::= TBD
```

```
AddOrDeleteIndicator ::= ENUMERATED {
add,
delete,
...
}
```

```
AICH-TransmissionTiming ::= ENUMERATED {
timing0,
timing1
v0,
v1,
...
}
```

```
AvailabilityStatus ::= ENUMERATED {
empty,
in-test,
failed,
power-off,
off-line,
off-duty,
dependency,
degraded,
not-installed,
log-full,
...
}
```

```
to do
AveragingDuration ::= TBD
```

```

-----
-- =====
---_B
-----
-- =====

BCCH-ModificationTime ::= INTEGER (0|2|4|..|4095) (0..8190)
-- Time = BCCH-ModificationTime / 2
-- Range 0 to 4095, step 2
-- All even SFN values are allowed

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

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.

BurstType ::= ENUMERATED {
    type1 (1),
    type2 (2),
    ...
}

```

```

-----
---_C
-----
-- =====

Cause ::= ENUMERATEDCHOICE {
radioNetworkLayer RadioNetworkLayerCause,
    radioNetwork CauseRadioNetwork,
transportLayer TransportLayerCause,
    transport CauseTransport,
protocol ProtocolCause,
    protocol CauseProtocol,
misc MiscellaneousCause
    misc CauseMisc,
    ...
}

```

```

CauseMisc ::= ENUMERATED {
    control-processing-overload,
    hardware-failure,
    oam-intervention,
    not-enough-user-plane-processing-resources,
    unspecified,
    ...
}

CauseProtocol ::= ENUMERATED {
    transaction-not-allowed,
    transfer-syntax-error,
    abstract-syntax-error-reject,
    abstract-syntax-error-ignore-and-notify,
    message-not-compatible-with-receiver-state,
    semantic-error,
    unspecified,
    ...
}

CauseRadioNetwork ::= ENUMERATED {
    unknown-C-ID,
    cell-not-available,
    power-level-not-supported,
    ul-scramblingcode-already-in-use,
    dl-radio-resources-not-available,
    ul-radio-resources-not-available,
    rl-already-ActivatedOrAllocated,
    nodeB-Resources-unavailable,

```

```

insufficient-physical-channel-resources,
measurement-not-supported-for-the-object,
macrodiversity-combining-not-possible,
reconfiguration-not-allowed,
requested-configuration-not-supported,
synchronization-failure,
unspecified,
...
}

CauseTransport ::= ENUMERATED {
transport-link-failure,
transmission-port-not-available,
transport-resource-unavailable,
unspecified,
...
}

CCTrCH-ID ::= INTEGER (±0..15)

Cell-ID-Length ::= ENUMERATED {
short,
medium,
long,
...
}

CellParameterID ::= INTEGER (0..127)

CFN ::= INTEGER (0..255)

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

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

CodingRate ::= ENUMERATED {
rate1-2,
rate1-3
}

CommonMeasurementObjectType ::= ENUMERATED {
cell,
rach,
...
}

CommonMeasurementType ::= SEQUENCE ENUMERATED {
rsi, RSSI-Value,
transmitted-carrier-power TransmittedCarrierPowerValue,
acknowledged-ra-tries AcknowledgedRA-TriesValue,
time-slot-iscp TimeSlotISCP-Value,
...
}

CommonMeasurementValue ::= SEQUENCE {
transmitted-carrier-power Common-Measurement-TransmittedCarrierPowerValue
OPTIONAL,
rsi Common-Measurement-RSSI-Value
OPTIONAL,
acknowledged-ra-tries Common-Measurement-Acknowledged-RA-TriesValue
OPTIONAL,
time-slot-iscp Common-Measurement-TimeSlot-ISCP-Value
OPTIONAL,
iE-Extensions ProtocolExtensionContainer { {CommonMeasurementValue-
ExtIEs} } OPTIONAL,
...
}

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

Common-Measurement-RSSI-Value ::= INTEGER(300..1000)
-- Common-Measurement-RSSI-Value = RSSI-Value * -10
-- If RSSI-Value <= -1000 Common-Measurement-RSSI-Value shall be set to -1000
-- If RSSI-Value >= -300 Common-Measurement-RSSI-Value shall be set to -300

```

```

-- Unit dB, Range -30dB .. -100dB, Step -0.1dB

-- to do, #TBD#
Common-Measurement-Acknowledged-RA-TriesValue ::= INTEGER

Common-Measurement-TransmittedCarrierPowerValue ::= INTEGER(-350..100)
-- Common-Measurement-TransmittedCarrierPowerValue = TransmittedCarrierPowerValue * 10
-- If TransmittedCarrierPowerValue <=-35 Common-Measurement-TransmittedCarrierPowerValue
shall be set to -350
-- If TransmittedCarrierPowerValue >=10 Common-Measurement-TransmittedCarrierPowerValue
shall be set to 100
-- Unit dB, Range -35dB .. +10dB, Step +0.1dB

-- to do, #TBD#
Common-Measurement-TimeSlot-ISCP-Value ::= INTEGER

CommonPhysicalChannelID ::= INTEGER (0..255)

CommonTransportChannelID ::= INTEGER (0..255)

CommunicationControlPortID ::= INTEGER (0..65535)

CompressedModeMethod ::= ENUMERATED {
  none,
  puncturing,
  sF-2,
  gating,
  none...
}
-- none = restore the normal mode

ConfigurationGenerationID ::= INTEGER (0..255)
-- Value '0' means "No configuration"

CRC-Size ::= ENUMERATED {
size0,
size12,
size16,
size24
}
CriticalityDiagnostics ::= SEQUENCE {
  procedureCode ProcedureCode OPTIONAL,
  triggeringMessage TriggeringMessage OPTIONAL,
  criticalityResponse Criticality OPTIONAL,
  transactionID TransactionID OPTIONAL,
  iEsCriticalityResponses CriticalityDiagnostics-IE-List OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {CriticalityDiagnostics-
ExtIEs} } OPTIONAL,
  ...
}

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

CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF
SEQUENCE {
  criticalityResponse Criticality,
  iE-ID ProtocolIE-ID,
  iE-Extensions ProtocolExtensionContainer { {CriticalityDiagnostics-IE-
List-ExtIEs} } OPTIONAL,
  ...
}

CriticalityDiagnostics-IE-List-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

CTFC ::= INTEGER (0..maxCTF-1)

-----
-- =====
---_D

```



```

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

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

DedicatedMeasurementObjectType1 ::= ENUMERATED {
  cell,
  rach,
  ...
}

DedicatedMeasurementObjectType2 ::= SEQUENCE {
  sir-value SIR-Value OPTIONAL,
  sir-error-value SIR-ErrorValue OPTIONAL,
  transmitted-code-power TransmittedCodePowerValue OPTIONAL,
  time-slot-isep TimeSlotISCP-Value OPTIONAL,
  ...
}

DedicatedMeasurementObjectType3 ::= ENUMERATED {
  rl,
  all-rl,
  ...
}

-- Reference: 25.215 and 25.225
DedicatedMeasurementType ::= ENUMERATED {
  sir,
  sir-error,
  transmitted-code-power,
  timeslot-isep-rscp,
  ...
}

DedicatedMeasurementValue ::= SEQUENCE {
  sIR-Value DedicatedMeasurement-SIR-Value
  OPTIONAL,
  sIR-ErrorValue DedicatedMeasurement-SIR-Error-Value
  OPTIONAL,
  transmittedCodePowerValue DedicatedMeasurement-Transmitted-Code-Power-Value
  OPTIONAL, -- Relative to CPICH
  rSCP DedicatedMeasurement-RSCP
  OPTIONAL, -- TDD only
  iE-Extensions ProtocolExtensionContainer {
  {DedicatedMeasurementValue-ExtIEs} } OPTIONAL,
  ...
}

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

-- to do #TBD#
DedicatedMeasurement-RSCP ::= INTEGER

DedicatedMeasurement-SIR-Error-Value ::= INTEGER (-100..100)
-- DedicatedMeasurement-SIR-Error-Value = SIR-Error-Value * 10
-- If SIR-Error-Value <= -10 DedicatedMeasurement-SIR-ErrorValue shall be set to -100
-- If SIR-Error-Value >= 10 DedicatedMeasurement-SIR-ErrorValue shall be set to 100
-- Unit dB, Range -10dB .. +10dB, Step +0.1dB

DedicatedMeasurement-SIR-Value ::= INTEGER (-100..200)
-- DedicatedMeasurement-SIR-Value = SIR-Value * 10
-- If SIR-Value <= 10 DedicatedMeasurement-SIR-Value shall be set to -100
-- If SIR-Value >= 20 DedicatedMeasurement-SIR-Value shall be set to 200
-- Unit dB, Range -10dB .. +20dB, Step +0.1dB

DedicatedMeasurement-Transmitted-Code-Power-Value ::= INTEGER (-350..150)
-- Dedicated Measurement-Transmitted-Code-Power-Value = Transmitted-Code-Power-Value * 10
-- If Transmitted-Code-Power-Value <=35 Dedicated MeasurementType-Transmitted-Code shall be
set to -350
-- If Transmitted-Code-Power-Value >=15 Dedicated MeasurementType-Transmitted-Code shall be
set to 150
-- Unit dB, Range -35dB .. +15dB, Step +0.1dB

```

```
-- to do, This parameter is present in NBAP tabular but not defined in IE(TS25.433v3.0.0)
Delta-TPC ::= INTEGER
```

```
D-FieldLength ::= ENUMERATED {
    v1,
    v2,
    ...
}
```

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

```
DiversityIndication ::= ENUMERATED {
    combined,
    not-combined
}
```

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

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

```
DL-FrameType ::= ENUMERATED {
    typeA,
    typeB,
    ...
}
```

```
-- -35..15 is transformed into 0..50. 0.1 steps gives 0..500
-- Power0 indicates -35dB, Power1 indicates -34.9dB, ..., Power500 indicates 15dB
DL-Power ::= ENUMERATED {
    power0,
    power1,
    ...
}
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
```

```
-- 0= Primary scrambling code of the cell, 1..15= Secondary scrambling code --
DL-ScramblingCode ::= INTEGER (0..15)
-- 0= Primary scrambling code of the cell, 1..15= Secondary scrambling code --
```

```
DPCH-ID ::= INTEGER (0..15239)
```

```
DPCH-Offset ::= INTEGER (0..255)
```

```
DSCH-ID ::= INTEGER (0..255)
```

```
-- to do
-- the parameter need to be defined. It may correspond to the DL TFS defined for DCH
DSCH-TransportFormatSet ::= TBD
DSCH-TFS ::= INTEGER
```

```
-- to do
-- the parameter need to be defined. It may correspond to the DL TFS defined for DCH
DSCH-TransportFormatCombinationSet ::= TBD
DSCH-TFCS ::= INTEGER
```

```
DTX-InsertionPosition ::= ENUMERATED {
    fixed,
```

```

flexible
}

DynamicTransportFormatInformation ::= SEQUENCE (SIZE (1..maxTFcount)) OF
-- SEQUENCE {
--   numberOfTransportBlocks      NumberOfTransportBlocks,
--   transportBlockSize           TransportBlockSize OPTIONAL
--   -- This IE is only present if Number of Transport Blocks is greater than 0 --,
--   mode dynamicTFS             Mode DynamicTFS
--   ...
}

```

```

-----
-- =====
---_E
-----
-- =====

```

```

EventA ::= SEQUENCE {
--   measurementThreshold          MeasurementThreshold,
--   measurementHysteresisTime    MeasurementHysteresisTime OPTIONAL
}

```

```

EventB ::= SEQUENCE {
--   measurementThreshold          MeasurementThreshold,
--   measurementHysteresisTime    MeasurementHysteresisTime OPTIONAL
}

```

```

EventC ::= SEQUENCE {
--   measurementIncreaseThreshold  MeasurementIncreaseThreshold,
--   measurementChangeTime        MeasurementChangeTime
}

```

```

EventD ::= SEQUENCE {
--   measurementDecreaseThreshold  MeasurementDecreaseThreshold,
--   measurementChangeTime        MeasurementChangeTime
}

```

```

EventE ::= SEQUENCE {
--   measurementThreshold1         MeasurementThreshold1,
--   measurementThreshold2         MeasurementThreshold2 OPTIONAL,
--   measurementHysteresisTime     MeasurementHysteresisTime OPTIONAL,
--   reportPeriodicity             ReportPeriodicity OPTIONAL
}

```

```

EventF ::= SEQUENCE {
--   measurementThreshold1         MeasurementThreshold1,
--   measurementThreshold2         MeasurementThreshold2 OPTIONAL,
--   measurementHysteresisTime     MeasurementHysteresisTime OPTIONAL,
--   reportPeriodicity             ReportPeriodicity OPTIONAL
}

```

```

-----
-- =====
---_F
-----
-- =====

```

```

-- The maximum value is equal to the DL spreading factor --
FDD-DL-ChannelisationCodeNumber ::= INTEGER(0.. 255)
-- The maximum value is equal to the DL spreading factor -1--

```

```

-- 0: 0 chip, 1: 256 chip, 2: 512 chip, ..,149: 38144 chip [TS 25.211] --
FDD-S-CCPCH-Offset ::= INTEGER (0..-149)
-- 0: 0 chip, 1: 256 chip, 2: 512 chip, ..,149: 38144 chip [TS 25.211] --

```

```

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

```

```

FrameOffset ::= INTEGER (0..255)

```

```

-----
-- =====
---_G

```

```
-----  
-- =====  
GapPeriod ::= INTEGER_(0..255)  
-- Unit Frame  
Gap-Position-Mode ::= ENUMERATED {  
    fixed,  
    flexible,  
    ...  
}  
-----  
---_H  
-----  
-----  
---_I  
-----  
-- to do  
IB-SG ::= BIT STRING  
IB-SG-POS ::= INTEGER (0..4095)  
IB-SG-REP ::= INTEGER {rep(16), rep(32), rep(64), rep(128), rep(256), rep(512), rep(1024),  
rep(2048)}  
IB-SG-REP ::= INTEGER (16| 32| 64| 128| 256| 512| 1024| 2048)  
IB-Type ::= EnumeratedENUMERATED {  
    MIBmib,  
    SIB1sib1,  
    SIB2sib2,  
    SIB12sib12,  
    ...  
}  
IndicationType ::= ENUMERATED {  
    noFailure,  
    serviceImpacting,  
    cellControl,  
    ...  
}  
-----  
---_J  
-----  
-----  
---_K  
-----  
-----  
---_L  
-----  
Local_Cell-ID ::= INTEGER (0..268435455)  
-----  
---_M  
-----  
---dBm, granularity 1 dBm  
---dl power0 indicates 0 dBm  
MaximumDL-PowerCapability ::= ENUMERATED{ INTEGER(0..50)  
-- Unit dBm, Range 0dBm .. 50dBm, Step +1dB  
dl power0,
```

```

dl-power1,
dl-power2,
...
}

-- Unit dBm, 0 to 50, Granularity 1 dB
MaximumTransmissionPower ::= ENUMERATED { INTEGER(0..50)
-- Unit dB, Range 0dB .. 50dB, Step +1dB
power0,
power1,
power2,
...
}

MaxNumberNrOfUL-DPDCHs ::= INTEGER (1..6)

MaxPRACH-MidambleShifts ::= ENUMERATED {
__ shift4,
__ shift8,
__ ...
}

-- 10ms to 1min, Step10ms
MeasurementChangeTime ::= ENUMERATED {
time10ms,
time20ms,
time30ms,
...
}

MeasurementCharacteristics ::= SEQUENCE {
measurementFrequency MeasurementFrequencyMeasurementCharacteristics-
MeasurementFrequency,
averagingDuration AveragingDurationMeasurementCharacteristics-
AveragingDuration,
iE-Extensions ProtocolExtensionContainer { { MeasurementCharacteristics-
ExtIEs } } OPTIONAL,
...
}

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

-- to do #TBD#
MeasurementCharacteristics-AveragingDuration ::= INTEGER

__ to do
MeasurementDecreaseThreshold ::= TBD

__ to do
MeasurementFrequency ::= TBD
-- to do #TBD#
MeasurementCharacteristics-MeasurementFrequency ::= INTEGER

__ to do
MeasurementIncreaseThreshold ::= TBD

__ to do
-- 10ms to 1min, Step10ms
MeasurementHysteresisTime ::= ENUMERATED {
time10ms,
time20ms,
time30ms,
...
}

MeasurementID ::= INTEGER (0..1048575)

__ to do
MeasurementThreshold ::= TBD

__ to do
MeasurementThreshold1 ::= TBD

```

```

-- to do
MeasurementThreshold2 ::= TBD

MeasurementType ::= ENUMERATED {
SCH,
syncRACH-access
}

MessageDiscriminator ::= ENUMERATED {
common,
dedicated
}

MidambleShift ::= INTEGER (0..15)

MinimumSpreadingFactor ::= ENUMERATED {
SF4v4,
SF16v16,
SF32v32,
SF64v64,
SF128v128,
SF256v256,
SF512v512,
...
}

MinUL-ChannelisationCodeLength ::= ENUMERATED {
code-length4v4,
code-length8v8,
code-length16v16,
code-length32v32,
code-length64v64,
code-length128v128,
code-length256
...
}

MiscellaneousCause ::= ENUMERATED {
control-processing-overload,
hardware-failure,
oam-intervention,
not-enough-user-plane-processing-resources,
unspecified
}

Mode-DynamicTFS ::= CHOICE {
tdd-mode-dynamic TransmissionTimeInterval-Dynamic,
...
}

Mode-SemiStaticTFS ::= CHOICE {
tdd-mode-semistatic TransmissionTimeInterval-SemiStatic,
...
}

MultiplexingPosition ::= ENUMERATED {
fixed,
flexible,
...
}

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

NumberOfChannelElements ::= TBD

NodeB-CommunicationContextID ::= INTEGER (0..1048576)

-- to do, This parameter is present in NBAP tabular but not defined in IE (TS25.433v3.0.0)
NumberOfChannelElements ::= INTEGER

NumberOfTransportBlocks ::= INTEGER (0..4095)

```

```

-----
-- =====
---_O
-----
-----
-- =====
---_P
-----
-----

PagingIndicatorLength ::= ENUMERATED {INTEGER (2| 4| 8)
ind_length2,
ind_length4,
ind_length8
}

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

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

PD ::= INTEGER(0..2047, ...)

PICH-Mode ::= ENUMERATED {
    ___noefPI18v18,
    ___noefPI36v36,
    ___noefPI72v72,
    ___noefPI144v144,
    ___...
}

PilotBitsUsedIndicator ::= ENUMERATED {
    ___pilot-bits-used,
    ___pilot-bits-not-used,
    ___...
}

PowerControlMode ::= ENUMERATED {
    ___pem0v0,
    ___pem1v1,
    ___...
}

-- Chips. Step size is 3 chips. 0=0 chips, 1=3 chips .. --
--** TODO. -15..40 is transformed to 0..55. 0.1 steps gives 0..550 **
PowerOffset ::= INTEGER (0..24)
-- PowerOffset = offset * 0.25
-- Unit dB, Range 0dB .. +6dB, Step +0.25dB

PowerResumeMode ::= ENUMERATED {
    ___prm0v0,
    ___prm1v1,
    ___...
}

PRACH-Midamble ::= ENUMERATED {
    ___inverted,
    ___direct,
    ___...
}

PreambleScramblingCode ::= INTEGER (0..4095)

-- Bit 0=P0, Bit 1=P1, .. ,Bit 15=P15 [25.213] --
PreambleSignatures ::= BIT STRING (SIZE (16))
-- Bit 0=P0, Bit 1=P1, .. ,Bit 15=P15 [25.213] --

```

```

-- Unit dBm, -15 to 40, Granularity 0.1 dB
-- epich-power1 indicates -5 dB
PrimaryCPICH-Power ::= ENUMERATED {
epich-power1,
epich-power2,
...
}
PrimaryCPICH-Power ::= INTEGER(-150..400)
-- PrimaryCPICH-Power = Power * 10
-- Unit dBm, Range -15dBm .. +40dBm, Step +0.1dBm

PrimaryScramblingCode ::= INTEGER (0..511)

PropagationDelay ::= INTEGER (0..255)
-- Unit: chips, step size 3 chips
-- example: 0 = 0chip, 1 = 3chips
ProtocolCause ::= ENUMERATED
transaction-not-allowed,
transfer-syntax-error,
abstract-syntax-error-reject,
abstract-syntax-error-ignore-and-notify,
message-not-compatible-with-receiver-state,
semantic-error,
unspecified
}

-- PCCPCH Power unit dBm
-- PCCPCH Power step 0.1dBm
PCCPCH-power ::= INTEGER (-15..40)

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

PSCH-Power ::= INTEGER (0..511)

PUSCH-Offset ::= INTEGER (0..255)
PunctureLimit ::= INTEGER (0..100)
-- Unit %

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

-----
--- R
-----

-- =====

-- SF

RACH-SlotFormat ::= ENUMERATED {
format256v0,
format128v1,
format64v2,
format32v3,
...
}

-- Bit 0=Sub Channel Number 0, Bit 1=Sub Channel Number 1, ..., Bit 14=Sub Channel Number 14
RACH-SubChannelNumbers ::= BIT STRING (SIZE (15))
-- Bit 0=Sub Channel Number 0, Bit 1=Sub Channel Number 1, ..., Bit 14=Sub Channel Number 14
RadioNetworkLayerCause ::= Enumerated {
unknown-C-ID,
cell-not-available,
power-level-not-supported,
ul-scramblingcode-already-in-use,
dl-radio-resources-not-available,
ul-radio-resources-not-available,
rl-Already-ActivatedorAllocated,
nodeB-Resources-Unavailable,
insufficient-physical-channel-resources,
measurement-not-supported-for-the-object,
macrodiversity-combining-not-possible,
reconfiguration-not-allowed,
requested-configuration-not-supported,

```



```
synchronization-failure,  
unspecified  
}
```

```
RateMatchingAttribute ::= INTEGER (1..maxRM)
```

```
RepetitionLength ::= ENUMERATED {INTEGER (1..63)  
length1,  
length2,  
length4,  
length8  
}
```

```
RepetitionPeriod ::= ENUMERATED {  
v1,  
v2,  
v4,  
v8,  
v16,  
v32,  
v64,  
...  
}
```

```
ReportCharacteristicsType ::= CHOICE {  
onDemand NULL,  
periodic ReportPeriodicityReportCharacteristicsType-ReportPeriodicity,  
event-a EventAReportCharacteristicsType-EventA,  
event-b EventBReportCharacteristicsType-EventB,  
event-c EventCReportCharacteristicsType-EventC,  
event-d EventDReportCharacteristicsType-EventD,  
event-e EventEReportCharacteristicsType-EventE,  
event-f EventFReportCharacteristicsType-EventF  
}
```

```
ReportCharacteristicsType-EventA ::= SEQUENCE {  
measurementThreshold ReportCharacteristicsType-MeasurementThreshold,  
measurementHysteresisTime ReportCharacteristicsType-  
ScaledMeasurementHysteresisTime OPTIONAL,  
iE-Extensions ProtocolExtensionContainer { {  
ReportCharacteristicsType-EventA-ExtIEs} } OPTIONAL,  
...  
}
```

```
ReportCharacteristicsType-EventA-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {  
...  
}
```

```
ReportCharacteristicsType-EventB ::= SEQUENCE {  
measurementThreshold ReportCharacteristicsType-MeasurementThreshold,  
measurementHysteresisTime ReportCharacteristicsType-  
ScaledMeasurementHysteresisTime OPTIONAL,  
iE-Extensions ProtocolExtensionContainer { {  
ReportCharacteristicsType-EventB-ExtIEs} } OPTIONAL,  
...  
}
```

```
ReportCharacteristicsType-EventB-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {  
...  
}
```

```
ReportCharacteristicsType-EventC ::= SEQUENCE {  
measurementIncreaseThreshold ReportCharacteristicsType-MeasurementIncreaseThreshold,  
measurementChangeTime ReportCharacteristicsType-ScaledMeasurementChangeTime,  
iE-Extensions ProtocolExtensionContainer { {  
ReportCharacteristicsType-EventC-ExtIEs} } OPTIONAL,  
...  
}
```

```
ReportCharacteristicsType-EventC-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {  
...  
}
```

```
ReportCharacteristicsType-EventD ::= SEQUENCE {
```

```

    measurementDecreaseThreshold    ReportCharacteristicsType-MeasurementDecreaseThreshold,
    measurementChangeTime           ReportCharacteristicsType-ScaledMeasurementChangeTime,
    iE-Extensions                   ProtocolExtensionContainer { {
ReportCharacteristicsType-EventD-ExtIEs} } OPTIONAL,
    ...
}

ReportCharacteristicsType-EventD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventE ::= SEQUENCE {
    measurementThreshold1           ReportCharacteristicsType-MeasurementThreshold1,
    measurementThreshold2           ReportCharacteristicsType-MeasurementThreshold2          OPTIONA
    measurementHysteresisTime       ReportCharacteristicsType-
ScaledMeasurementHysteresisTime OPTIONAL,
    reportPeriodicity               ReportCharacteristicsType-ReportPeriodicity          OPTIONA
    iE-Extensions                   ProtocolExtensionContainer { {
ReportCharacteristicsType-EventE-ExtIEs} } OPTIONAL,
    ...
}

ReportCharacteristicsType-EventE-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventF ::= SEQUENCE {
    measurementThreshold1           ReportCharacteristicsType-MeasurementThreshold1,
    measurementThreshold2           ReportCharacteristicsType-MeasurementThreshold2          OPTIONA
    measurementHysteresisTime       ReportCharacteristicsType-
ScaledMeasurementHysteresisTime OPTIONAL,
    reportPeriodicity               ReportCharacteristicsType-ReportPeriodicity          OPTIONA
    iE-Extensions                   ProtocolExtensionContainer { {
ReportCharacteristicsType-EventF-ExtIEs} } OPTIONAL,
    ...
}

ReportCharacteristicsType-EventF-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- to do #TBD#
ReportCharacteristicsType-MeasurementDecreaseThreshold ::= INTEGER

-- to do #TBD#
ReportCharacteristicsType-MeasurementIncreaseThreshold ::= INTEGER

-- to do #TBD#
ReportCharacteristicsType-MeasurementThreshold ::= INTEGER

-- to do #TBD#
ReportCharacteristicsType-MeasurementThreshold1 ::= INTEGER

-- to do #TBD#
ReportCharacteristicsType-MeasurementThreshold2 ::= INTEGER

ReportCharacteristicsType-ScaledMeasurementChangeTime ::= INTEGER (1..600)
-- ReportCharacteristicsType-MeasurementChangeTime = Time * 10
-- Unit ms, Range 10ms .. 6000ms(1min), Step 10ms

ReportCharacteristicsType-ScaledMeasurementHysteresisTime ::= INTEGER (1..600)
-- ReportCharacteristicsType-MeasurementHysteresisTime = Time * 10
-- Unit ms, Range 10ms .. 6000ms(1min), Step 10ms

ReportCharacteristicsType-ReportPeriodicity ::= CHOICE {
    msec           ReportPeriodicity-Scaledmsec,
    min            ReportPeriodicity-Scaledmin
}

ReportPeriodicity-Scaledmsec ::= INTEGER (1..600)
-- ReportPeriodicity-msec = ReportPeriodicity * 10
-- Unit ms, Range 10ms .. 6000ms(1min), Step 10ms

ReportPeriodicity-Scaledmin ::= INTEGER (1..60)
-- Unit min, Range 1min .. 60min(hour), Step 1min
-- 10ms to 1min, step 10ms or
-- 1min to 1hour, step 1min

```

```
ReportPeriodicity ::= CHOICE {
_____ msec _____ INTEGER (1..1000),
_____ min _____ INTEGER (1..60)
}
```

```
ResourceOperationalState ::= ENUMERATED {
_____ enabled,
_____ disabled,
_____ ...
}
```

```
RLC-Mode ::= ENUMERATED {
_____ acknowledgedMode,
_____ unacknowledgedMode,
_____ transparentMode,
_____ ...
}
```

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

```
RNC-ID ::= INTEGER (0..4095)
```

```
-----30...100 step 0.1
-----rs-sil indicates 30
RSSI-Value ::= ENUMERATED {
rs-sil,
rs-sil2,
...
}
```

```
-----
-- =====
---_S
-----
```

```
ScramblingCodeChange ::= ENUMERATED {
_____ code-change,
_____ no-code-change,
_____ ...
}
```

```
Scrambling-Code-Word-Number ::= INTEGER (0..255)
```

```
SecondaryCCPCH-SlotFormat ::= INTEGER(0..8)
```

```
SegmentType ::= ENUMERATED {
_____ first,
_____ subsequent,
_____ last,
_____ complete,
_____ ...
}
```

```
SemiStaticTransportFormatInformation ::= SEQUENCE {
_____ transmissionTimeInterval _____ TransmissionTimeInterval,
_____ typeOfChannelCoding _____ TypeOfChannelCoding,
_____ codingRate _____ CodingRate _____ OPTIONAL
----- This IE is only present if IE Type of channel coding is Convolutional or Turbo -----
_____ rateMatchingAttribute _____ RateMatchingAttribute,
_____ crc-Size _____ CRC-Size,
_____ mode-semistatic _____ Mode-SemiStatic-
}
```

```
S-FieldLength ::= ENUMERATED {
_____ s-length1v1,
_____ s-length2v2,
_____ ...
}
```

```
-- to do, This parameter is present in NBAP tabular but not defined in IE(TS25.433v3.0.0)
SFN ::= INTEGER
```

```
ShutdownTimer ::= INTEGER (1..3600)
-- Unit sec
```

```
SIB-DeletionIndicator ::= ENUMERATED {
_____ noDeletion,
```

```

    deletion,
    ...
}

SIB-Originator ::= ENUMERATED {
    nodeB,
    cRNC,
    ...
}

-- to do, This parameter is present in NBAP tabular but not defined in IE(TS25.433v3.0.0)
SlotFormat ::= INTEGER

--** TODO, -10..10 is transformed to 0..10. 0.1 steps gives 0..200 **
--sir-error-value1 indicates -∞ dB
SIR-ErrorValue ::= ENUMERATED {
    sir-error-value1,
    sir-error-value2,
    ...
}

--** TODO, -10..20 is transformed to 0..30. 0.1 steps gives 0..300 **
--sir-value1 indicates -∞ dB
SIR-Value ::= ENUMERATED {
    sir-value1,
    sir-value2,
    ...
}

SSDT-Cell_Identity ::= ENUMERATED {a, b, c, d, e, f, g, h}

SSDT-CellID-Length ::= ENUMERATED {
    short,
    medium,
    long,
    ...
}

SSDT-Indication ::= ENUMERATED {
    ssdtActiveInTheUEssdt-active-in-the-UE,
    ssdtNotActiveInTheUEssdt-not-active-in-the-UE,
    ...
}

STTD-Indicator ::= ENUMERATED {
    active,
    inactive,
    ...
}

SSDT-SupportIndicator ::= ENUMERATED {
    sSDT-Supported,
    sSDT-not-supported,
    ...
}
}
sSDT-Supported
}

ShutdownTimer ::= INTEGER (1..3600)

SyncCase ::= INTEGER (1..3)

SynchronisationMethod ::= ENUMERATED {
    external-reference,
    locked-to-Master-cell,
    one-time-synchronisation,
    ...
}

-----
--- T
-----
-----

T-Cell ::= ENUMERATED {

```

```

chip-0,
chipP-256,
chipP-512,
chipP-768,
chipP-1024,
chipP-1280,
chipP-1536,
chipP-1892,
chipP-2048,
chipP-2304,
...
}

```

```

TDD-ChannelisationCode ::= ENUMERATED {
channelisationCode1-1,
channelisationCode2-1,
channelisationCode2-2,
channelisationCode4-1,
channelisationCode4-2, 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-PhysicalChannelOffset ::= INTEGER (0..63)

```

```

-- the ChipOffset is -9200 to +19199
TDD-ChipOffset ::= INTEGER (-19200..19199)

```

```

TransmissionTimeInterval-Dynamic ::= SEQUENCE (SIZE (1..maxTTIcount)) OF
ENUMERATED {tti10, tti20, tti40, tti80}
}

```

```

TransmissionTimeInterval-SemiStatic ::= ENUMERATED {
frameRelated,
timeSlotRelated
}

```

```

-- to do, This parameter is defined in IE but not present in NBAP tabular(TS25.433v3.0.0)
--TDD-S-CCPCH-Offset ::= INTEGER (0..63)

```

```

TFCI-Coding ::= ENUMERATED {
v4,
v8,
v16,
v32,
...
}

```

```

TFCI-Presence ::= ENUMERATED {
    present,
    not-present,
    ...
}

TFCI-SignallingMode ::= ENUMERATED {
    normal,
    split,
    ...
}

TFCS ::= SEQUENCE (SIZE (1..maxnoofTFCs)) OF
SEQUENCE {
    eTFC CTFC
}
TFCS-CTFC ::= INTEGER (1..maxCTFC-1)

TFS ::= SEQUENCE {
    dynamicTransportFormatInformation
DynamicTransportFormatInformation,
    semiStaticTransportFormatInformation
SemiStaticTransportFormatInformation
}

TGD ::= INTEGER (0..255)

TCL ::= INTEGER (3,4,7,10,14)
TGL ::= INTEGER (3|4|7|10|14)

TimeSlot ::= INTEGER (0..14)

TimeSlotDirection ::= ENUMERATED {
    ul,
    dl,
    ...
}

to do
TimeSlotISCP Value ::= TBD

TimeSlotStatus ::= ENUMERATED {
    active,
    not-active,
    ...
}

ToAWE ::= INTEGER (0..2559) msec.
-- Unit ms

ToAWS ::= INTEGER (0..1279) msec.
-- Unit ms

TPC-DownlinkStepSize ::= ENUMERATED {
    step-size0-5,
    step-size1
}
-- to do, This parameter is defined in IE but not present in NBAP tabular(TS25.433)
-- TPCDownlinkStepSize ::= ENUMERATED {
--    v0dot5,
--    v1,
--    ...
--}

Transmit Diversity Indicator ::= ENUMERATED {
    active,
    inactive
}
TransmissionDiversityApplied ::= BOOLEAN
-- true: applied, false: not applied

TransmitDiversityIndicator ::= ENUMERATED {
    active,

```

```

    inactive,
    ...
}

TransmissionTimeInterval ::= ENUMERATED {
time-interval10,
time-interval20,
time-interval40,
time-interval80
}

--** TODO. --35..15 is transformed to 0..50. 0.1 steps gives 0..500 **
-- carrier power1 indicates -5 dB
TransmittedCarrierPowerValue ::= ENUMERATED {
carrier-power1,
carrier-power2,
...
}

--** TODO. --35..15 is transformed to 0..50. 0.1 steps gives 0..500 **
-- code power1 indicated -5 dB
TransmittedCodePowerValue ::= ENUMERATED {
eode-power1,
eode-power2,
...
}

TransportFormatCombinationSet ::= SEQUENCE (SIZE (1..maxNrOfTFCs)) OF
SEQUENCE {
cTFC TFCs-CTFC,
iE-Extensions ProtocolExtensionContainer { { TransportFormatCombinationSet-
ExtIEs } } OPTIONAL,
...
}

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

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..maxNrOfTFCs)) 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 ::= {
...
}

TransmissionTimeIntervalList ::= SEQUENCE (SIZE (1..maxTTI-count)) OF
SEQUENCE {
transmissionTimeInterval TransportFormatSet-TransmissionTimeInterval,
iE-Extensions ProtocolExtensionContainer { {
TransmissionTimeIntervalList-ExtIEs } } OPTIONAL,
...
}

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

TransportFormatSet-Semi-staticPart ::= SEQUENCE {

```

```

transmissionTimeI          TransportFormatSet-TransmissionTimeInterval,
channelCoding              TransportFormatSet-ChannelCodingType,
codingRate                 TransportFormatSet-CodingRate                OPTIONAL,
-- This IE is only present if channelCoding is 'convolutional' or 'turbo'
rateMatchingAttribute     TransportFormatSet-RateMatchingAttribute,
cRC-Size                  TransportFormatSet-CRC-Size,
mode                      TransportFormatSet-ModeSSP                  OPTIONAL,
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          TransmissionTimeIntervalList,
-- This IE is mandatory if not defined as semistatic parameter, otherwise it is absent
...
}

TransportFormatSet-ModeSSP ::= CHOICE {
tdd          TransportFormatSet-SecondInterleavingMode,
...
}

TransportFormatSet-NrOfTransportBlocks ::= INTEGER (0..4095)

TransportFormatSet-RateMatchingAttribute ::= INTEGER (1..maxRateMatching)

TransportFormatSet-SecondInterleavingMode ::= ENUMERATED {
frame-related,
timeSlot-related,
...
}

TransportFormatSet-TransmissionTimeInterval ::= ENUMERATED {
msec-10,
msec-20,
msec-40,
msec-80,
...
}

TransportFormatSet-TransportBlockSize ::= INTEGER (1..5000)

TransportBlockSize ::= INTEGER (1..5000)
-- bit --

TSTD-Indicator ::= ENUMERATED {
active,
inactive
}

```



```

TransportLayerAddress ::= OCTET STRING (SIZE (1..20, ...))
TransportLayerAddress ::= BIT STRING (SIZE (1..160, ...))

TSTD-Indicator ::= ENUMERATED {
  active,
  inactive,
  ...
}

TransportLayerCause ::= ENUMERATED {
  transport-link-failure,
  transmission-port-not-available,
  transport-resource-unavailable,
  unspecified
}

TypeOfChannelCoding ::= ENUMERATED {
  no-coding,
  convolutional,
  turbo
}

-----
-- =====
-- _U
-----
-- =====

UARFCN ::= INTEGER (174 .. 474)
UARFCN ::= INTEGER (0..698, ...)
-- corresponds to 1885.2MHz .. 2024.8MHz

UL-DL-CompressedModeSelection ::= ENUMERATED {
  ul-only,
  dl-only,
  both-UandDL,
  ...
}

UL-DeltaEbNo ::= INTEGER (-60..100)
-- UL-DeltaEbNo = DeltaEbNo * 10
-- Unit dB, Range -6dB .. 10dB, Step 0.1dB

UL-DeltaEbNo-after ::= INTEGER (-60..100)
-- UL-DeltaEbNo = DeltaEbNo * 10
-- Unit dB, Range -6dB .. 10dB, Step 0.1dB

UL-DPCCH-SlotFormat ::= INTEGER (0..5)

UL-EbNo ::= INTEGER (0..255)
-- Resolution is 0.1 dB, range 0-25.5 dB --
-- Unit dB, Range 0dB .. +25.5dB, Step +0.1dB

UL-FP-Mode ::= ENUMERATED {
  normal,
  silent,
  ...
}

-- unit dBm, step 0.1dBm
UL-InterferenceLevel ::= INTEGER (-1280..-600)
-- UL-InterferenceLevel = InterferenceLevel * 10
-- Unit dBm, Range -128dBm .. -60dBm, Step 0.1dBm

UL-PunctureLimit ::= INTEGER (0..100)

UL-ScramblingCode ::= SEQUENCE {
  uL-ScramblingCodeNumber_          UL-ScramblingCodeNumber,
  uL-ScramblingCodeLength_         UL-ScramblingCodeLength,
  iE-Extensions                     ProtocolExtensionContainer { { UL-ScramblingCode-ExtIEs
} } OPTIONAL,
  ...
}

UL-ScramblingCode-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```

```

    ...
}
-- 2^24
UL-ScramblingCodeLengthNumber ::= INTEGER (0..16777215)
UL-ScramblingCodeNumberLength ::= ENUMERATED {
    short,
    long,
    ...
}

UplinkDeltaEb-No ::= ENUMERATED {
    deltaEb-No-6dB,
    ...
}

UplinkDeltaEb-No-after ::= ENUMERATED {
    deltaEb-No-after-6dB,
    ...
}
USCH-ID ::= INTEGER (0..255)

-- =====
-- V
-- =====

-- =====
-- W
-- =====

-- =====
-- X
-- =====

-- =====
-- Y
-- =====

-- =====
-- Z
-- =====

```

END

CHANGE REQUEST			Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.
25.433	CR 026	Current Version: 3.0.0	
GSM (AA.BB) or 3G (AA.BBB) specification number ↑	↑ CR number as allocated by MCC support team		
For submission to: TSG-RAN#7 <small>list expected approval meeting # here</small>	for approval for information	<input checked="" type="checkbox"/>	strategic <input type="checkbox"/> non-strategic <input type="checkbox"/> <small>(for SMG use only)</small>

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: TSG-RAN WG3 **Date:** 24 January 2000

Subject: CR to 25.433: Editorial Correction of the ASN.1 with the Syntax Checking of the NBAP : Constant Module

Work item: _____

Category:	F Correction <input type="checkbox"/> A Corresponds to a correction in an earlier release <input type="checkbox"/> B Addition of feature <input type="checkbox"/> C Functional modification of feature <input checked="" type="checkbox"/> D Editorial modification <input type="checkbox"/>	Release:	Phase 2 <input type="checkbox"/> Release 96 <input type="checkbox"/> Release 97 <input type="checkbox"/> Release 98 <input type="checkbox"/> Release 99 <input type="checkbox"/> Release 00 <input checked="" type="checkbox"/>
------------------	--	-----------------	--

(only one category shall be marked with an X)

Reason for change: This CR is to provides the NBAP ASN.1 descriptor (Constant Module) with the syntax checking. And also alignment with the RNSAP ASN.1 description.

Clauses affected: 9.3.7

Other specs affected:	Other 3G core specifications <input type="checkbox"/> Other GSM core specifications <input type="checkbox"/> MS test specifications <input type="checkbox"/> BSS test specifications <input type="checkbox"/> O&M specifications <input type="checkbox"/>	→ List of CRs: → List of CRs: → List of CRs: → List of CRs: → List of CRs:	
------------------------------	---	--	--

Other comments: _____



<----- double-click here for help and instructions on how to create a CR.

-- *****
--

```

-- Constant definitions
--
-- *****

NBAP-Constants -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

id-audit                               INTEGER ::= 0
id-auditRequired                       INTEGER ::= 1
id-blockResource                       INTEGER ::= 2
id-cellDeletion                        INTEGER ::= 3
id-cellReconfiguration                 INTEGER ::= 4
id-cellSetup                           INTEGER ::= 5
id-commonMeasurementFailure            INTEGER ::= 6
id-commonMeasurementInitiation        INTEGER ::= 7
id-commonMeasurementReport            INTEGER ::= 8
id-commonMeasurementTermination       INTEGER ::= 9
id-commonTransportChannelDeletion     INTEGER ::= 10
id-commonTransportChannelReconfiguration INTEGER ::= 11
id-commonTransportChannelSetup        INTEGER ::= 12
id-compressedModeControlCancellation   INTEGER ::= 13
id-compressedModeControlCommit        INTEGER ::= 14
id-compressedModeControlPreparation   INTEGER ::= 15
id-dedicatedMeasurementFailure        INTEGER ::= 16
id-dedicatedMeasurementInitiation     INTEGER ::= 17
id-dedicatedMeasurementReport        INTEGER ::= 18
id-dedicatedMeasurementTermination   INTEGER ::= 19
id-downlinkPowerControl               INTEGER ::= 20
id-errorIndication                    INTEGER ::= 21
id-privateMessage                     INTEGER ::= 22
id-neighbourCellMeasurement            INTEGER ::= 21
id-radioLinkAddition                  INTEGER ::= 23
id-radioLinkDeletion                  INTEGER ::= 24
id-radioLinkFailure                   INTEGER ::= 25
id-radioLinkReconfigurationCommit     INTEGER ::= 25
id-radioLinkReconfigurationCancel     INTEGER ::= 26
id-radioLinkRestoration               INTEGER ::= 26
id-radioLinkSetup                     INTEGER ::= 27
id-resourceStatusIndication           INTEGER ::= 28
id-synchronisationAdjustment          INTEGER ::= 30
id-synchronisationFailure              INTEGER ::= 31
id-synchronisationRestart             INTEGER ::= 32
id-synchronisedRadioLinkReconfigurationCancellation INTEGER ::= 29
id-synchronisedRadioLinkReconfigurationCommit INTEGER ::= 30
id-synchronisedRadioLinkReconfigurationPreparation INTEGER ::= 31
id-systemInformationUpdate            INTEGER ::= 32
id-unblockResource                    INTEGER ::= 33
id-unsynchronisedRadioLinkReconfiguration INTEGER ::= 34

-- *****
--
-- Extension constants
--
-- *****

maxPrivateExtensions                   INTEGER ::= 65535
maxProtocolExtensions                  INTEGER ::= 65535
maxProtocolIEs                        INTEGER ::= 65535

-- *****
--
-- Lists
--

```

-- *****

```
maxSF INTEGER ::= 10
maxNrOfCodes INTEGER ::= 10
maxNrOfDLCodes INTEGER ::= 10
maxNrOfErrors INTEGER ::= 10
maxNrOfTFs INTEGER ::= 10
maxNrOfTFCs INTEGER ::= 10
maxNrOfRNs INTEGER ::= 10
maxNrOfDPCHs INTEGER ::= 10
maxNrOfSCCPCHs INTEGER ::= 10
maxNrOfPRACHs INTEGER ::= 10
maxNrOfDCHs INTEGER ::= 10
maxNrOfDSCHs INTEGER ::= 10
maxNrOfFACHs INTEGER ::= 10
maxNrOfCCTrCHs INTEGER ::= 10
maxNrOfPCHs INTEGER ::= 10
maxnrOfPUSCHs INTEGER ::= 10
maxnrOfTFCs INTEGER ::= 10
maxNrOfUSCHs INTEGER ::= 10
maxUCIDinNodeB INTEGER ::= 10
maxSF INTEGER ::= 10
maxCellinNodeB INTEGER ::= 10
maxCCPinNodeB INTEGER ::= 10
maxCTFC-1 INTEGER ::= 10
maxLocalCellinNodeB INTEGER ::= 10
maxPCHinNodeB INTEGER ::= 10
maxRACHCell INTEGER ::= 10
maxPRACHCell INTEGER ::= 10
maxnrOfFACHCell INTEGER ::= 10
maxPCHCell INTEGER ::= 10
maxSCCPCHCell INTEGER ::= 10
maxSCPICHCell INTEGER ::= 10
maxUSCHCell INTEGER ::= 10
maxAICHCell INTEGER ::= 10
maxMIBSEG INTEGER ::= 10
maxSIBSEG INTEGER ::= 10
maxnrOfFDDNeighbours INTEGER ::= 10
maxnrOfTDDNeighbours INTEGER ::= 10
maxTTI-Fcount INTEGER ::= 10
maxnrOfTFCs INTEGER ::= 10
maxIBSEG INTEGER ::= 10
maxIB INTEGER ::= 10
maxFACHCell INTEGER ::= 10
maxnrOfCCTrCH INTEGER ::= 10
maxnrOfCCTrCHs INTEGER ::= 10
maxnrOfCCTrCH INTEGER ::= 10
maxnrOfDPCH INTEGER ::= 10
maxnrOfPUSCHs INTEGER ::= 10
maxnrOfRL-1 INTEGER ::= 10
maxnrOfRL-2 INTEGER ::= 10
maxRateMatching INTEGER ::= 10
```

-- *****

-- IEs

-- *****

```
id-AICH-ParametersItem-CTCH-ReconfRqstFDD INTEGER ::= 0
id-AICH-ParametersList-CTCH-ReconfRqstFDD INTEGER ::= 1
id-AICH-Information-ResourceStatIndItem INTEGER ::= 0
id-AICH-ParametersList INTEGER ::= 1
id-AICH-ParametersListItem INTEGER ::= 2
id-AllowedSlotFormatInformationListItem-CTCHreconf-Req-FDD INTEGER ::= 3
id-AllowedSlotFormatInformationListItem-CTCHsetup-Req-FDD INTEGER ::= 4
id-BCCH-ModificationTime INTEGER ::= 2
id-BlockingPriorityIndicator INTEGER ::= 35
id-CCTrCH-ParametersList INTEGER ::= 6
id-CCTrCH-ParametersListItem INTEGER ::= 7
```

```

id-CFN _____ INTEGER ::= 8
id-CRNC-CommunicationContextID _____ INTEGER ::= 9
id-CRNCCommunicationContextID _____ INTEGER ::= 10
id-Cause _____ INTEGER ::= 411
id-CCP-InformationItem-AuditRsp _____ INTEGER ::= 5
id-CCP-InformationList-AuditRsp _____ INTEGER ::= 6
id-Cell-ParametersItem-AuditRqst _____ INTEGER ::= 7
id-Cell-ParametersList-AuditRqst _____ INTEGER ::= 8
id-Cell-InformationItem-AuditRsp _____ INTEGER ::= 9
id-Cell-InformationList-AuditRsp _____ INTEGER ::= 10
id-Cell-Information-ResourceStatIndItem _____ INTEGER ::= 12
id-Cell-InformationItem _____ INTEGER ::= 13
id-Cell-InformationList _____ INTEGER ::= 14
id-Cell-Parameter _____ INTEGER ::= 15
id-Cell-ParametersItem _____ INTEGER ::= 16
id-Cell-ParametersList _____ INTEGER ::= 17
id-CellParameterID _____ INTEGER ::= 118
id-CFN _____ INTEGER ::= 12
id-C-ID _____ INTEGER ::= 13
id-CommonMeasurementObjectType-CM-Rpirt _____ INTEGER ::= 14
id-CommonMeasurementObjectType-CM-Rqst _____ INTEGER ::= 159
id-CommonMeasurementObjectType-CM-Rsp _____ INTEGER ::= 16
id-CommonMeasurementType _____ INTEGER ::= 1720
id-CommonPhysicalChannelID _____ INTEGER ::= 1821
id-CommonPhysicalChannelType-CTCH-ReconfRqstTDD _____ INTEGER ::= 19
id-CommonPhysicalChannelType-CTCH-sSetup-Rqsteq-FDD _____ INTEGER ::= 202
id-CommonPhysicalChannelType-CTCH-SetupRqstTDD _____ INTEGER ::= 21
id-CommonPhysicalChannelType-CTCHsetup-Response _____ INTEGER ::= 23
id-CommonTransportChannelType-CTCH-ReconfRqstTDD _____ INTEGER ::= 22
id-CommonTransportChannelType-CTCH-SetupRqstTDD _____ INTEGER ::= 23
id-CommonTransportChannelType-CTCH-SetupRsp _____ INTEGER ::= 24
id-CommunicationControlPort-InformationItem _____ INTEGER ::= 24
id-CommunicationControlPortID _____ INTEGER ::= 25
id-CommunicationControlPortInformation-ResourceStatIndItem _____ INTEGER ::= 26
id-CommunicationControlPortInformationList _____ INTEGER ::= 27
id-CommunicationControlPortID _____ INTEGER ::= 25
id-CompressedModeMethod _____ INTEGER ::= 268
id-ConfigurationGenerationID _____ INTEGER ::= 279
id-CriticalityDiagnostics _____ INTEGER ::= 28
id-CRNC-CommunicationContextID _____ INTEGER ::= 29
id-DCH-AddItem-RL-ReconfPrepFDDItem _____ INTEGER ::= 30
id-DCH-AddItem-RL-ReconfPrepTDDItem _____ INTEGER ::= 31
id-DCH-Add-RL-ReconfReadyItem _____ INTEGER ::= 32
id-DCH-AddItem-RL-ReconfRqsteqFDDItem _____ INTEGER ::= 323
id-DCH-AddItem-RL-ReconfRqsteqTDDItem _____ INTEGER ::= 334
id-DCH-AddItem-RL-ReconfResp _____ INTEGER ::= 35
id-DCH-AddList-RL-ReconfPrepFDD _____ INTEGER ::= 346
id-DCH-AddList-RL-ReconfPrepTDD _____ INTEGER ::= 357
id-DCH-AddList-RL-ReconfRqsteqFDD _____ INTEGER ::= 368
id-DCH-AddList-RL-ReconfRqsteqTDD _____ INTEGER ::= 379
id-DCH-DeleteItem-RL-ReconfPrepFDDItem _____ INTEGER ::= 3840
id-DCH-DeleteItem-RL-ReconfPrepTDDItem _____ INTEGER ::= 3941
id-DCH-DeleteItem-RL-ReconfRqsteqFDDItem _____ INTEGER ::= 402
id-DCH-DeleteItem-RL-ReconfRqsteqTDDItem _____ INTEGER ::= 413
id-DCH-DeleteList-RL-ReconfPrepFDD _____ INTEGER ::= 424
id-DCH-DeleteList-RL-ReconfPrepTDD _____ INTEGER ::= 435
id-DCH-DeleteList-RL-ReconfRqsteqFDD _____ INTEGER ::= 446
id-DCH-DeleteList-RL-ReconfRqsteqTDD _____ INTEGER ::= 457
id-DCH-InformationItem-RL-SetupRqsteqFDDItem _____ INTEGER ::= 468
id-DCH-InformationItem-RL-SetupRqsteqTDDItem _____ INTEGER ::= 479
id-DCH-InformationList-RL-SetupRqsteqFDD _____ INTEGER ::= 4850
id-DCH-InformationList-RL-SetupRqsteqTDD _____ INTEGER ::= 4951
id-DCH-InformationResponseItem-RL-SetupRspFailFTDDItem _____ INTEGER ::= 502
id-DCH-InformationResponseList-RL-sSetupRspesTDDItem _____ INTEGER ::= 513
id-DCH-InformationResponseItem _____ INTEGER ::= 54
id-DCH-ModifyItem-RL-ReconfPrepFDDItem _____ INTEGER ::= 525
id-DCH-ModifyItem-RL-ReconfPrepTDDItem _____ INTEGER ::= 536
id-DCH-Modify-RL-ReconfReadyItem _____ INTEGER ::= 57
id-DCH-ModifyItem-RL-ReconfRqsteqFDDItem _____ INTEGER ::= 548
id-DCH-ModifyItem-RL-ReconfRqsteqTDDItem _____ INTEGER ::= 556
id-DCH-ModifyItem-RL-ReconfResp _____ INTEGER ::= 60
id-DCH-ModifyList-RL-ReconfPrepFDD _____ INTEGER ::= 5661

```

id-DCH-ModifyList-RL-ReconfPrepTDD _____ INTEGER ::= 5762
id-DCH-ModifyList-RL-ReconfRqsteqFDD _____ INTEGER ::= 5863
id-DCH-ModifyList-RL-ReconfRqsteqTDD _____ INTEGER ::= 5964
id-DedicatedMeasurementObjectType _____ INTEGER ::= 60
id-DedicatedMeasurementObjectType-DM-Rprt _____ INTEGER ::= 61
id-DedicatedMeasurementObjectType-DM-Rqst _____ INTEGER ::= 62
id-DedicatedMeasurementObjectType-DM-Rsp _____ INTEGER ::= 63
id-DedicatedMeasurementType _____ INTEGER ::= 64
id-DL-CCTrCH-InformationItem-RL-AdditionRqstTDD _____ INTEGER ::= 65
id-DL-CCTrCH-InformationItem-RL-ReconfPrepTDDItem _____ INTEGER ::= 665
id-DL-CCTrCH-InformationItem-RL-ReconfRqsteqTDDItem _____ INTEGER ::= 676
id-DL-CCTrCH-InformationItem-RL-SetupRqsteqTDDItem _____ INTEGER ::= 687
id-DL-CCTrCH-InformationItem _____ INTEGER ::= 68
id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD _____ INTEGER ::= 69
id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD _____ INTEGER ::= 7069
id-DL-CCTrCH-InformationList-RL-ReconfRqsteqTDD _____ INTEGER ::= 710
id-DL-CCTrCH-InformationList-RL-SetupRqsteqTDD _____ INTEGER ::= 721
id-DL-CCTrCHInformationItem _____ INTEGER ::= 72
id-DL-CCTrCHInformationList _____ INTEGER ::= 73
id-DL-CodeInformation _____ INTEGER ::= 74
id-DL-CodeInformation-RL-ReconfPrepFDDItem _____ INTEGER ::= 75
id-DL-CodeInformation-RL-SetupReqFDDItem _____ INTEGER ::= 76
id-DL-DPCH-InformationItem-RL-AdditionRqstTDD _____ INTEGER ::= 73
id-DL-DPCH-Information-RL-ReconfPrepFDD _____ INTEGER ::= 77
id-DL-DPCH-Information-RL-ReconfRqstFDD _____ INTEGER ::= 78
id-DL-DPCH-InformationItem-RL-SetupRqsteqTDDItem _____ INTEGER ::= 749
id-DL-DPCH-InformationItem _____ INTEGER ::= 80
id-DL-DPCH-InformationItem-RL-ReconfReqFDD _____ INTEGER ::= 81
id-DL-DPCH-InformationItem-RL-SetupReqFDD _____ INTEGER ::= 82
id-DL-DPCH-InformationList-RL-AdditionRqstTDD _____ INTEGER ::= 75
id-DL-DPCH-InformationList-RL-SetupRqstTDD _____ INTEGER ::= 76
id-DL-DPCH-Information-RL-ReconfPrepFDD _____ INTEGER ::= 77
id-DL-DPCH-Information-RL-ReconfRqstFDD _____ INTEGER ::= 78
id-DL-DPCH-Information-RL-SetupRqstFDD _____ INTEGER ::= 79
id-DL-FrameType _____ INTEGER ::= 803
id-DL-ReferencePowerInformationItem _____ INTEGER ::= 84
id-DSCH-AddItem-RL-ReconfPrepFDD _____ INTEGER ::= 815
id-DSCH-AddItem-RL-ReconfRqsteqFDD _____ INTEGER ::= 826
id-DSCH-DeleteItem-RL-ReconfPrepFDD _____ INTEGER ::= 837
id-DSCH-DeleteItem-RL-ReconfRqsteqFDD _____ INTEGER ::= 848
id-DSCH-ID _____ INTEGER ::= 859
id-DSCH-Information-AddItem-RL-ReconfPrepTDD _____ INTEGER ::= 86
id-DSCH-Information-AddItem-RL-ReconfRqstTDD _____ INTEGER ::= 87
id-DSCH-information-AddList-RL-ReconfPrepTDD _____ INTEGER ::= 88
id-DSCH-Information-AddList-RL-ReconfRqstTDD _____ INTEGER ::= 89
id-DSCH-Information-DeleteItem-RL-ReconfPrepTDD _____ INTEGER ::= 90
id-DSCH-Information-DeleteItem-RL-ReconfRqstTDD _____ INTEGER ::= 91
id-DSCH-Information-DeleteList-RL-ReconfPrepTDD _____ INTEGER ::= 92
id-DSCH-Information-DeleteList-RL-ReconfRqstTDD _____ INTEGER ::= 93
id-DSCH-Information-ModifyItem-RL-ReconfPrepTDD _____ INTEGER ::= 94
id-DSCH-Information-ModifyItem-RL-ReconfRqstTDD _____ INTEGER ::= 95
id-DSCH-Information-ModifyList-RL-ReconfPrepTDD _____ INTEGER ::= 96
id-DSCH-Information-ModifyList-RL-ReconfRqstTDD _____ INTEGER ::= 97
id-DSCH-InformationItem-RL-SetupRqsteqFDDItem _____ INTEGER ::= 980
id-DSCH-InformationItem-RL-SetupRqstTDD _____ INTEGER ::= 99
id-DSCH-InformationList-RL-SetupRqsteqFDD _____ INTEGER ::= 10091
id-DSCH-InformationList-RL-SetupRqstTDD _____ INTEGER ::= 101
id-DSCH-InformationResponse-RL-SetupFailFDDItem _____ INTEGER ::= 92
id-DSCH-InformationResponseItem-RL-SetupRspesFTDDItem _____ INTEGER ::= 10293
id-DSCH-InformationResponseList-RL-SetupRspTDD _____ INTEGER ::= 103
id-DSCH-ModifyItem-RL-ReconfPrepFDD _____ INTEGER ::= 10494
id-DSCH-ModifyItem-RL-ReconfRqsteqFDD _____ INTEGER ::= 10595
id-DSCH-TFCS _____ INTEGER ::= 106
id-DedicatedMeasurementObjectType _____ INTEGER ::= 96
id-DedicatedMeasurementType _____ INTEGER ::= 97
id-FACH-Information-ResourceStatIndItem _____ INTEGER ::= 98
id-FACH-InformationItem _____ INTEGER ::= 99
id-FACH-ListItem _____ INTEGER ::= 100
id-FACH-ParametersList-CTCHreconf-Req-FDD _____ INTEGER ::= 101
id-FACH-ParametersList-CTCHreconf-Req-TTD _____ INTEGER ::= 102
id-FACH-ParametersListItem-CTCH-Reconf-Rqsteq-FDD _____ INTEGER ::= 1073

id-FACH-ParametersListItem-CTCH-#Reconf-RqstFDDeq-TDD _____ INTEGER ::= 1084
id-FACH-ParametersListItem-CTCHsetup-Req-FDD _____ INTEGER ::= 105
id-FACH-ParametersListItem-CTCHsetup-Response _____ INTEGER ::= 106
id-GapPositionMode _____ INTEGER ::= 109
id-GapStartingSlotNumber _____ INTEGER ::= 107
id-IndicationType-ResourceStatusInd _____ INTEGER ::= 11008
id-Local-Cell-ID _____ INTEGER ::= 111
id-Local-Cell-Information-ResourceStatIndItem _____ INTEGER ::= 109
id-Local-CellInformation-ResourceStatIndItem _____ INTEGER ::= 110
id-LocalCell-ID _____ INTEGER ::= 111
id-Local-Cell-InformationItem-AuditRsp _____ INTEGER ::= 112
id-Local-Cell-InformationList-AuditRsp _____ INTEGER ::= 113
id-MIB-SegmentInformationItem _____ INTEGER ::= 114
id-MIB-SegmentInformationList _____ INTEGER ::= 115
id-MaximumTransmissionPower _____ INTEGER ::= 1146
id-MeasuredCellInfo _____ INTEGER ::= 117
id-MeasurementCharacteristics _____ INTEGER ::= 1158
id-MeasurementID _____ INTEGER ::= 1169
id-MeasurementType _____ INTEGER ::= 120
id-MIB-SIB-InformationItem-SystemInfoUpdateRqst _____ INTEGER ::= 117
id-MIB-SIB-InformationList-SystemInfoUpdateRqst _____ INTEGER ::= 118
id-NeighbouringFDD-Cell-InformationItem _____ INTEGER ::= 121
id-NeighbouringTDD-Cell-InformationItem _____ INTEGER ::= 122
id-NodeB-CommunicationContextID _____ INTEGER ::= 11923
id-PCCPCH-Information-Cell-ReconfRqstTDD _____ INTEGER ::= 1204
id-PCCPCH-Information-Cell-SetupRqstTDD _____ INTEGER ::= 121
id-PCCH-Information-ResourceStatIndItem _____ INTEGER ::= 125
id-PCCH-InformationItem _____ INTEGER ::= 126
id-PCCH-ListItem _____ INTEGER ::= 127
id-PCCH-Parameters-CTCH-#Reconf-Rqsteq-FDD _____ INTEGER ::= 1228
id-PCCH-ParametersList _____ INTEGER ::= 129
id-PCCH-ParametersListItem _____ INTEGER ::= 130
id-PD _____ INTEGER ::= 123
id-PCICH-Parameters-CTCH-#Reconf-Rqsteq-FDD _____ INTEGER ::= 12431

id-PowerControlMode _____ INTEGER ::= 125
id-PowerResumeMode _____ INTEGER ::= 126
id-PRACH-ParametersItem-List-CTCH-ReconfRqstFDD _____ INTEGER ::= 12732
id-PRACH-ParametersListItem-CTCH-ReconfRqstFDD _____ INTEGER ::= 12833
id-PSCH-Information _____ INTEGER ::= 134
id-PSCHandPCCPCH-Information _____ INTEGER ::= 135
id-PUSCH-ListItem _____ INTEGER ::= 136
id-PatternDuration _____ INTEGER ::= 137
id-PowerControlMode _____ INTEGER ::= 138
id-PowerResumeMode _____ INTEGER ::= 139
id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD _____ INTEGER ::= 12940
id-PrimaryCCPCH-Information-Cell-SetupRqstFDD _____ INTEGER ::= 130
id-PrimaryCPICH-Information-Cell-ReconfRqstFDD _____ INTEGER ::= 131
id-PrimaryCPICH-Information-Cell-SetupRqstFDD _____ INTEGER ::= 13241
id-PrimarySCH-Information-Cell-ReconfRqstFDD _____ INTEGER ::= 13342
id-PrimarySCH-Information-Cell-SetupRqstFDD _____ INTEGER ::= 134
id-PrimaryScramblingCode _____ INTEGER ::= 13543
id-ProcedureScopeType-DL-PC-Rqst _____ INTEGER ::= 13644
id-PSCH-Information-Cell-ReconfRqstTDD _____ INTEGER ::= 137
id-PSCH-Information-Cell-SetupRqstTDD _____ INTEGER ::= 138
id-ReportCharacteristics _____ INTEGER ::= 139
id-RACH-Information-ResourceStatIndItem _____ INTEGER ::= 145
id-RACH-InformationItem _____ INTEGER ::= 146
id-RL-ID _____ INTEGER ::= 1407
id-RL-Information _____ INTEGER ::= 148
id-RL-InformationItem-RL-AdditionRqstFDD _____ INTEGER ::= 141
id-RL-InformationItem-RL-DeletionRqst _____ INTEGER ::= 142
id-RL-InformationItem-RL-FailureInd _____ INTEGER ::= 143
id-RL-Information-DMeasureReportItem _____ INTEGER ::= 149
id-RL-Information-DMeasureRequestItem _____ INTEGER ::= 150
id-RL-Information-DMeasureResponseItem _____ INTEGER ::= 151
id-RL-InformationItem-RL-ReconfPrepFDDItem _____ INTEGER ::= 14452
id-RL-InformationItem-RL-SetupReconfRqsteqFDDItem _____ INTEGER ::= 14553
id-RL-InformationItem-RL-ReconfRqstTDD _____ INTEGER ::= 14654
id-RL-InformationItem-RL-RestoreInd _____ INTEGER ::= 147

id-RL-InformationItem-RL-SetupRqstFDD	INTEGER ::= 14855
id-RL-InformationList-RL-AdditionRqstFDD	INTEGER ::= 14956
id-RL-InformationList-RL-DeletionRqst	INTEGER ::= 150
id-RL-InformationList-RL-FailureInd	INTEGER ::= 151
id-RL-InformationList-RL-ReconfPrepFDD	INTEGER ::= 152
id-RL-InformationList-RL-ReconfRqstFDD	INTEGER ::= 1537
id-RL-InformationList-RL-ReconfRqstTDD	INTEGER ::= 154
id-RL-InformationList-RL-RestoreInd	INTEGER ::= 155
id-RL-InformationList-RL-SetupRqstFDD	INTEGER ::= 1568
id-RL-InformationResponseItem-RL-AdditionRspFDD	INTEGER ::= 157
id-RL-InformationResponseItem-RL-ReconfReady	INTEGER ::= 158
id-RL-InformationResponseItem-RL-ReconfRsp	INTEGER ::= 159
id-RL-InformationResponseItem-RL-sSetupRspesFDDItem	INTEGER ::=
16059id-RL-InformationResponseItem-RL-ReconfResp	INTEGER ::= 160
id-RL-InformationResponseList-RL-AdditionRspFDD	INTEGER ::= 161
id-RL-InformationResponseList-RL-ReconfReady	INTEGER ::= 1621
id-RL-InformationResponseList-RL-ReconfReadyItem	INTEGER ::= 162
id-RL-InformationResponseList-RL-ReconfResp	INTEGER ::= 163
id-RL-InformationResponseList-RL-sSetupRspesFDD	INTEGER ::= 164id-
RL-InformationResponseList-RL-setupRestTDD	INTEGER ::= 165
id-RL-InformationResponse-RL-AdditionRspTDD	INTEGER ::= 165
id-RL-InformationResponse-RL-SetupRspTDD	INTEGER ::= 166
id-RL-Information-RL-AdditionRqstTDD	INTEGER ::= 167
id-RL-Information-RL-ReconfPrepTDD	INTEGER ::= 168
id-RL-Information-RL-SetupRqstTDD	INTEGER ::= 169
id-RL-ReconfigurationFailureItem-RL-ReconfFailureItem	INTEGER ::= 17066
id-RL-ReconfigurationFailureList-RL-ReconfFailure	INTEGER ::= 17167
id-RL-ResponseInformation	INTEGER ::= 168
id-RL-ResponseInformationItem	INTEGER ::= 169
id-RL-ResponseInformationList	INTEGER ::= 170
id-RL-InformationItem	INTEGER ::= 171
id-RL-InformationList	INTEGER ::= 172
id-RadioLinkInformation-RL-ReconfPrepFDDItem	INTEGER ::= 173
id-RadioLinkInformation-RL-ReconfPrepTDD	INTEGER ::= 174
id-RadioLinkInformation-RL-ReconfReqTDD	INTEGER ::= 175
id-RadioLinkInformationList-RL-ReconfPrepFDD	INTEGER ::= 176
id-ReportCharacteristics	INTEGER ::= 177
id-SFN	INTEGER ::= 178
id-SIB-SegmentInformationItem	INTEGER ::= 179
id-SIB-SegmentInformationList	INTEGER ::= 180
id-ScramblingCodeChange	INTEGER ::= 17281
id-Secondary-CCPCHListItem	INTEGER ::= 182
id-SecondaryCPICH-Information-Cell-ReconfRqstFDD	INTEGER ::= 17383
id-SecondaryCPICH-Information-Cell-SetupRqstFDD	INTEGER ::= 174
id-SecondarySCH-Information-Cell-ReconfRqstFDD	INTEGER ::= 17584
id-SecondarySCH-Information-Cell-SetupRqstFDD	INTEGER ::= 176
id-SFN	INTEGER ::= 177
id-ShutdownTimer	INTEGER ::= 17885
id-SN	INTEGER ::= 179
id-Successful-RL-InformationRespItem-RL-AdditionFailureFDD	INTEGER ::= 180
id-Successful-RL-InformationResponseItem-RL-SetupFailureFDDItem	INTEGER ::= 181
6id-Successful-RL-InformationResponseItem	INTEGER ::= 187
id-Successful-RL-InformationResponseList-RL-AdditionFailureFDD	INTEGER ::= 1828
id-Successful-RL-InformationResponseList-RL-SetupFailureFDD	INTEGER ::= 1839
id-SyncCase	INTEGER ::= 184
id-SynchronisationMethod	INTEGER ::= 190
id-T-Cell	INTEGER ::= 18591
id-TGD	INTEGER ::= 186
id-TGL	INTEGER ::= 187
id-TGP1	INTEGER ::= 188
id-TGP2	INTEGER ::= 189
id-TDDChipOffset	INTEGER ::= 192
id-TimeSlotConfigurationItem-Cell-ReconfRqstTDD	INTEGER ::= 1903
id-TimeSlotConfigurationItem-Cell-SetupRqstTDD	INTEGER ::= 191
id-TimeSlotConfigurationList-Cell-ReconfRqstTDD	INTEGER ::= 1924
id-TimeSlotConfigurationList-Cell-SetupRqstTDD	INTEGER ::= 193
id-TransmissionDiversityApplied	INTEGER ::= 194
id-TransmissionGapDistance	INTEGER ::= 195
id-TransmissionGapPeriod	INTEGER ::= 196
id-TransmitCapLength	INTEGER ::= 197
id-TransmitCapPositionMode	INTEGER ::= 198
id-UARFCN	INTEGER ::= 1959

```

id-UC-ID _____ INTEGER ::= 200
id-UL-CCTrCH-InformationItem-RL-ReconfPrepAdditionRqstTDDItem _____ INTEGER ::=
196201
id-UL-CCTrCH-InformationItem-RL-ReconfReqPrepTDDItem _____ INTEGER ::=
197202
id-UL-CCTrCH-InformationItem-RL-ReconfRqstTDD _____ INTEGER ::= 198
id-UL-CCTrCH-InformationItem-RL-SetupRqsteqTDDItem _____ INTEGER ::= 199203
id-UL-CCTrCH-InformationItemIE _____ INTEGER ::= 204
id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD _____ INTEGER ::= 200
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD _____ INTEGER ::= 2015
id-UL-CCTrCH-InformationList-RL-ReconfRqsteqTDD _____ INTEGER ::= 2026
id-UL-CCTrCH-InformationList-RL-SetupRqsteqTDD _____ INTEGER ::= 2037
id-UL-CCTrCHInformation _____ INTEGER ::= 208
id-UL-CCTrCHInformationList _____ INTEGER ::= 209
id-UL-DeltaEbNo _____ INTEGER ::= 204
id-UL-DeltaEbNo-after _____ INTEGER ::= 205
id-UL-DL-CompressedModeSelection _____ INTEGER ::= 206
id-UL-DPCH-InformationItem-RL-AdditionRqstTDD _____ INTEGER ::= 207
id-UL-DPCH-InformationItem-RL-SetupRqstTDD _____ INTEGER ::= 208
id-UL-DPCH-InformationList-RL-AdditionRqstTDD _____ INTEGER ::= 209
id-UL-DPCH-InformationList-RL-SetupRqstTDD _____ INTEGER ::= 210
id-UL-DPCH-Information-RL-ReconfPrepFDD _____ INTEGER ::= 2110
id-UL-DPCH-Information-RL-ReconfPrepTDDItem _____ INTEGER ::= 211
id-UL-DPCH-Information-RL-SetupReqTDDItem _____ INTEGER ::= 212
id-UL-DPCH-InformationItem-RL-ReconfRqsteqFDD _____ INTEGER ::= 2123
id-UL-DPCH-InformationItem-RL-SetupRqsteqFDD _____ INTEGER ::= 2134
id-UL-DPCH-InformationItemIE _____ INTEGER ::= 215
id-USCH-Information-ResourceStatIndItem _____ INTEGER ::= 216
id-USCH-InformationItem _____ INTEGER ::= 217
id-USCH-ListItem-CTCHsetup-Req-TDD _____ INTEGER ::= 218
id-Unsuccessful-RL-InformationResponseItem-RL-AdditionFailureFDD _____ INTEGER ::= 2149
id-Unsuccessful-RL-InformationResponseItem-RL-SetupFailureFDDItem _____ INTEGER ::=
21520
id-Unsuccessful-RL-InformationResponseItem _____ INTEGER ::= 221
id-Unsuccessful-RL-InformationResponseItem-RL-SetupFailTDD _____ INTEGER ::= 222
id-Unsuccessful-RL-InformationResponseList-RL-AdditionFailureFDD _____ INTEGER ::= 21623
id-Unsuccessful-RL-InformationResponseList-RL-SetupFailureFDD _____ INTEGER ::= 21724
id-Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD _____ INTEGER ::= 218
id-Unsuccessful-RL-InformationResp-RL-SetupFailureTDD _____ INTEGER ::= 219
id-USCH-Information-AddItem-RL-ReconfPrepTDD _____ INTEGER ::= 220
id-USCH-Information-AddItem-RL-ReconfRqstTDD _____ INTEGER ::= 221
id-USCH-information-AddList-RL-ReconfPrepTDD _____ INTEGER ::= 222
id-USCH-Information-AddList-RL-ReconfRqstTDD _____ INTEGER ::= 223
id-USCH-Information-DeleteItem-RL-ReconfPrepTDD _____ INTEGER ::= 224
id-USCH-Information-DeleteItem-RL-ReconfRqstTDD _____ INTEGER ::= 225
id-USCH-Information-DeleteList-RL-ReconfPrepTDD _____ INTEGER ::= 226
id-USCH-Information-DeleteList-RL-ReconfRqstTDD _____ INTEGER ::= 227
id-USCH-Information-ModifyItem-RL-ReconfPrepTDD _____ INTEGER ::= 228
id-USCH-Information-ModifyItem-RL-ReconfRqstTDD _____ INTEGER ::= 229
id-USCH-Information-ModifyList-RL-ReconfPrepTDD _____ INTEGER ::= 230
id-USCH-Information-ModifyList-RL-ReconfRqstTDD _____ INTEGER ::= 231
id-USCH-InformationItem-RL-SetupRqstTDD _____ INTEGER ::= 232
id-USCH-InformationList-RL-SetupRqstTDD _____ INTEGER ::= 233
id-USCH-InformationResponseItem-RL-SetupRspTDD _____ INTEGER ::= 234
id-USCH-InformationResponseList-RL-SetupRspTDD _____ INTEGER ::= 235

```

END

8.3.1.2 Successful operation

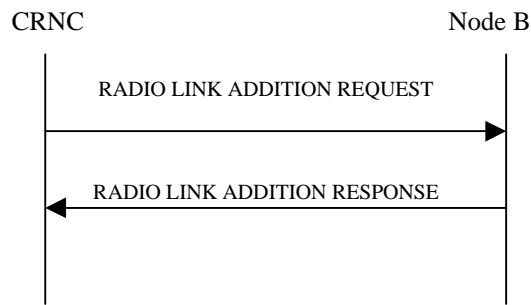


Figure: 1 RL Addition procedure: Successful case

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.

~~[FDD] The Diversity Control Field IE indicates for each RL whether the Node B shall combine the new RL with existing RL(s) or not. [TDD] The Diversity Control Field IE indicates whether the Node B shall reuse the Sub interface Transport Bearers of the old RL for the new RL.~~ If the Diversity Control Field IE indicates, "may be combined with already existing RLs", then Node B shall decide for any of the alternatives. When a new RL is to be combined, the Node B shall choose which RL(s) to combine it with.

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. 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.

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 may activate SSDT for the concerned new RL, with the indicated cell identity used for that RL.]

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

~~[FDD]~~ 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.

~~[FDD]~~ 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 of the RL in the RADIO LINK ADDITION RESPONSE message.

~~[TDD] In the case of not reusing the transport bearers of the old RL for the new RL, the Node B shall indicate in the RADIO LINK ADDITION RESPONSE message with the "Diversity Indication" that no transport bearer reuse 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, DSCH and 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 co-ordinated DCHs.

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

~~[FDD]~~ After sending of the RADIO LINK ADDITION RESPONSE message the Node B shall continuously attempt to obtain UL synchronisation and start reception on the new RL. The Node B shall start transmission on the new RL after synchronisation is achieved in the Iub user plane as specified in 25.427.

9.2. 1.x2.5 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.y2.6 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			ENUMERATED(Combined, not combined)	

9.1.35 RADIO LINK SETUP REQUEST

9.1.35.1 FDD message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
CRNC Communication Context ID	M			
Transaction ID	M			
UL DPCH Information		1		
UL Scrambling Code	M			
Min UL Channelisation Code length	M			
Max Number of UL DPDCHs	C – CodeLen			
puncture limit	M			For UL
Transport Format Combination Set	M			for UL
UL DPCCCH Slot Format	M			
UL Eb/No Target	M		Uplink Eb/No	
Diversity mode	M			
D Field Length	C – FB			
SSDT cell ID Length	O			
S Field Length	O			
DL DPCH Information				
Transport Format Combination Set	M			For DL
DL DPCH Slot Format	M			
TFCI signalling mode	M			
TFCI presence	C- SlotFormat			
Multiplexing Position	M			
Power Offset Information		1		
PO1	M		Power Offset	Power offset for the TFCI bits
PO2	M		Power Offset	Power offset for the TPC bits
PO3	M		Power Offset	Power offset for the pilot bits
Delta TPC	M			
DCH Information		1 to <maxnoofDCHs>		
DCH ID	M			
DCH Combination Ind	O			
RLC mode	M			
Transport Format Set	M			For UL
Transport Format Set	M			For DL
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP mode	M			
ToAWS	M			
ToAWE	M			
RL ID	O			RL Supporting the DSCH
DSCH TFCS	O			
DSCH Information		0 to		

		<maxnoofDSCHs >		
DSCH ID	M			
Transport Format Set	M			For DSCH
Frame handling Priority	M			
ToAWS	M			
ToAWE	M			
RL Information		1 to <maxnoofRLs>		
RL ID	M			
C-ID	M			
Frame Offset	M			
Chip Offset	M			
Propagation Delay	O			
Diversity Control Field	C – NotFirstRL			
DL Code Information		1 to <maxnoof- DLCodes		
DL Scrambling Code	M			
FDD DL Channelisation Code Number	M			
Initial DL transmission Power	M			DL Power
Maximum DL power	M			DL Power
Minimum DL power	M			DL Power
SSDT Cell Identity	O			

Condition	Explanation
CodeLen	This IE is present only if "Min UL Channelisation Code length" equals to 4
FB	This IE is present only if Feed Back mode diversity is activated.
NotFirstRL	This IE is present only if the RL is not the first one in the RL Information.
SlotFormat	This IE is only present if the DL DPCH slot format is equal to any of the value 12 to 16.

Range bound	Explanation
MaxnoofDSCHs	Maximum no. of DSCHs for one UE.
MaxnoofDCHs	Maximum no. of DCHs for one UE.
MaxnoofRLs	Maximum no. of RLs for one UE.
MaxnoofDLCodes	Maximum no. of DL code information.

9.1.35.2 TDD message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
CRNC Communication Context ID	M			
Transaction ID	M			
UL CCTrCH Information		0 to <maxno CCTrCH>		
CCTrCH ID	M			
Transport Format Combination Set	M			
TFCI Coding	M			
Puncture Limit	M			
UL DPCH Information		0 to <maxnoOfDPCH>		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
DL CCTrCH Information		0 to <maxno CCTrCH>		
CCTrCH ID	M			
Transport Format Combination Set	M			
TFCI Coding	M			
Puncture Limit	M			
DL DPCH information		0 to <maxnoOfDPCH>		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
DCH Information		1 to <maxnoofDCHs>		
DCH ID	M			
RLC mode	M			
CCTrCH ID	M			UL CCTrCH in which the DCH is mapped
CCTrCH ID	M			DL CCTrCH in which the DCH is mapped
DCH Combination Ind	O			
Transport Format Set	M			For UL
Transport Format Set	M			For DL
Frame Handling Priority	O			

Payload CRC Presence Indicator	M			
UL FP mode	M			
ToAWS	M			
ToAWE	M			
DSCH Information		0 to <MaxnoofDSCHs >		
DSCH ID	M			
CCTrCH ID	M			DL CCTrCH in which the DSCH is mapped
Transport Format Set	M			For DSCH
Frame handling Priority	M			
ToAWS	M			
ToAWE	M			
USCH Information		0 to <MaxnoofUSCHs >		
USCH ID	M			
CCTrCH ID	M			UL CCTrCH in which the USCH is mapped
Transport Format Set	M			For USCH
RL Information		1		
RL ID	M			
C-ID	M			
Frame TDD Physical Channel -Offset	M			
Initial DL transmission Power	M		DL Power	
Maximum DL power	M		DL Power	
Minimum DL power	M		DL Power	

Range bound	Explanation
MaxnoofDCHs	Maximum no. of DCHs for one UE.
MaxnoOfDPCH	Maximum number of DPCH in one CCTrCH
MaxnoCCTrCH	no. of CCTrCH for one UE.
MaxnoofDSCHs	Maximum number of DSCH for one UE
MaxnoofUSCHs	Maximum number of USCH for one UE

```

-- *****
--
-- 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 ignore TYPE CRNC-CommunicationContextID      PRESENCE mandatory }|
    { ID id-UL-CCTrCH-InformationList-RL-SetupReqTDD CRITICALITY ignore TYPE UL-CCTrCH-InformationList-RL-SetupReqTDD PRESENCE optional }|
    { ID id-DL-CCTrCH-InformationList-RL-SetupReqTDD CRITICALITY ignore TYPE DL-CCTrCH-InformationList-RL-SetupReqTDD PRESENCE optional }|
    { ID id-DCH-InformationList-RL-SetupReqTDD CRITICALITY ignore TYPE DCH-InformationList-RL-SetupReqTDD PRESENCE optional }|
    {ID id-DSCH-InformationList-RL-SetupReqTDD CRITICALITY ignore TYPE DSCH-InformationList-RL-SetupReqTDD PRESENCE optional }|
    {ID id-USCH-InformationList-RL-SetupReqTDD CRITICALITY ignore TYPE USCH-InformationList-RL-SetupReqTDD PRESENCE optional }|
    { ID id-RL-InformationItem-RL-SetupReqTDD CRITICALITY ignore TYPE RL-InformationItem-RL-SetupReqTDD PRESENCE mandatory },
    ...
}

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

UL-CCTrCH-InformationList-RL-SetupReqTDD ::= SEQUENCE (SIZE(1..maxnoofCCTrCHs)) OF
    ProtocolIE-Container{{UL-CCTrCH-Information-RL-SetupReqTDDItemIE }}

UL-CCTrCH-Information-RL-SetupReqTDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-Information-RL-SetupReqTDDItem CRITICALITY ignore TYPE UL-CCTrCH-Information-RL-SetupReqTDDItem PRESENCE mandatory },
    ...
}

UL-CCTrCH-Information-RL-SetupReqTDDItem ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    transportFormatCombinationSet TransportFormatCombinationSet,
    tFCI-Coding        TFCI-Coding,
    puncturing-Limit   Puncturing-Limit,
    ul-DPCH-InformationList-RL-SetupReqTDD UL-DPCH-InformationList-RL-SetupReqTDD OPTIONAL
}

UL-DPCH-InformationList-RL-SetupReqTDD ::= SEQUENCE (SIZE (1..maxnoofDPCHs)) OF
    ProtocolIE-Container{{UL-DPCH-Information-RL-SetupReqTDDItemIE }}

UL-DPCH-Information-RL-SetupReqTDDItemIE NBAP-PROTOCOL-IES ::= {

```

```

    { ID id-UL-DPCH-Information-RL-SetupReqTDDItem CRITICALITY ignore TYPE UL-DPCH-Information-RL-SetupReqTDDItem PRESENCE mandatory },
    ...
}

UL-DPCH-Information-RL-SetupReqTDDItem ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tdd-ChannelisationCode TDD-ChannelisationCode,
    burstType              BurstType,
    midambleShift          MidambleShift,
    timeSlot                TimeSlot,
    tdd-PhysicalChannelOffset TDD-PhysicalChannelOffset,
    repetitionPeriod        RepetitionPeriod,
    repetitionLength        RepetitionLength,
    tFCI-Presence           TFCI-Presence
}

DL-CCTrCH-InformationList-RL-SetupReqTDD ::= SEQUENCE (SIZE (1..maxnoCCTrCHs)) OF
    ProtocolIE-Container{{DL-CCTrCH-Information-RL-SetupReqTDDItemIE }}

DL-CCTrCH-Information-RL-SetupReqTDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-Information-RL-SetupReqTDDItem CRITICALITY ignore TYPE DL-CCTrCH-Information-RL-SetupReqTDDItem PRESENCE mandatory },
    ...
}

DL-CCTrCH-Information-RL-SetupReqTDDItem ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    transportFormatCombinationSet TransportFormatCombinationSet,
    tFCI-Coding              TFCI-Coding,
    puncturing-Limit          Puncturing-Limit,
    dl-DPCH-InformationList-RL-SetupReqTDD DL-DPCH-InformationList-RL-SetupReqTDD OPTIONAL
}

DL-DPCH-InformationList-RL-SetupReqTDD ::= SEQUENCE (SIZE (1..maxnoofDPCHs)) OF
    ProtocolIE-Container{{DL-DPCH-Information-RL-SetupReqTDDItemIE }}

DL-DPCH-Information-RL-SetupReqTDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-Information-RL-SetupReqTDDItem CRITICALITY ignore TYPE DL-DPCH-Information-RL-SetupReqTDDItem PRESENCE mandatory },
    ...
}

DL-DPCH-Information-RL-SetupReqTDDItem ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tdd-ChannelisationCode TDD-ChannelisationCode,
    burstType              BurstType,
    midambleShift          MidambleShift,
    timeSlot                TimeSlot,
    tdd-PhysicalChannelOffset TDD-PhysicalChannelOffset,
    repetitionPeriod        RepetitionPeriod,
    repetitionLength        RepetitionLength,
    tFCI-Presence           TFCI-Presence
}

```

```

DCH-InformationList-RL-SetupReqTDD ::= SEQUENCE (SIZE (1..maxnoofDPCHs)) OF
  ProtocolIE-Container{{DCH-Information-RL-SetupReqTDDItemIE }}

DCH-Information-RL-SetupReqTDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-DCH-Information-RL-SetupReqTDDItem CRITICALITY ignore TYPE DCH-Information-RL-SetupReqTDDItem PRESENCE mandatory},
  ...
}

DCH-Information-RL-SetupReqTDDItem ::= SEQUENCE {
  ul-CCTrCH-ID          UL-CCTrCH-ID,
  dl-CCTrCH-ID          DL-CCTrCH-ID,
  dCH-CombinationIndication DCH-CombinationIndication OPTIONAL,
  ul-TransportFormatSet TransportFormatSet,
  dl-TransportFormatSet TransportFormatSet,
  frameHandlingPriority FrameHandlingPriority,
  payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
  ul-FP-Mode            UL-FP-Mode,
  toAWE                 ToAWE,
  toAWS                 ToAWS
}

DSCH-InformationList-RL-SetupReqTDD ::= SEQUENCE (SIZE (1..maxnoofDSCHs)) OF
  ProtocolIE-Container{{DSCH-Information-RL-SetupReqTDDItemIE}}

DSCH-Information-RL-SetupReqTDDItemIE NBAP-PROTOCOL-IES ::= {
  {ID id-DCH-Information-RL-SetupReqTDDItem CRITICALITY ignore TYPE DSCH-Information-RL-SetupReqTDDItem PRESENCE mandatory}
  ...
}

DSCH-Information-RL-SetupReqTDDItem ::= SEQUENCE {
  dSCH-ID              DSCH-ID,
  cCTrCH-ID            CCTrCH-ID,
  transportFormatSet TransportFormatSet,
  frameHandlingPriority FrameHandlingPriority,
  toAWE                 ToAWE,
  toAWS                 ToAWS
}

USCH-InformationList-RL-SetupReqTDD ::= SEQUENCE (SIZE (1..maxnoofUSCHs)) OF
  ProtocolIE-Container{{USCH-Information-RL-SetupReqTDDItemIE}}

USCH-Information-RL-SetupReqTDDItemIE NBAP-PROTOCOL-IES ::= {
  {ID id-USCH-Information-RL-SetupReqTDDItem CRITICALITY ignore TYPE USCH-Information-RL-SetupReqTDDItem PRESENCE mandatory}
  ...
}

USCH-Information-RL-SetupReqTDDItem ::= SEQUENCE {
  uSCH-ID              USCH-ID,
  cCTrCH-ID            CCTrCH-ID,
  transportFormatSet TransportFormatSet
}

```

```
}  
RL-Information-RL-SetupReqTDD ::= SEQUENCE {  
  rL-ID          RL-ID,  
  c-ID          C-ID,  
  frameOffset      FrameOffset, tdd-PhysicalChannelOffset TDD-PhysicalChannelOffset,  
  initialDL-transmissionPower      DL-Power,  
  maximumDL-power      DL-Power,  
  minimumDL-power      DL-Power  
}
```

3GPP TSG-RAN Working Group Meeting #11
Nice, France, 28th February – 3rd March 2000

Document **R3-000492**

e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.433 CR 36

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **TSG RAN #7**

list expected approval meeting # here
↑

for approval
for information

Strategic
non-strategic (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: **RAN-WG3** **Date:** **Feb , 2000**

Subject: **Alignment to R2 definition of puncture limit range and stepsize**

Work item:

Category: F Correction **Release:** Phase 2
(only one category shall be marked with an X) A Corresponds to a correction in an earlier release Release 96
B Addition of feature Release 97
C Functional modification of feature Release 98
D Editorial modification Release 99
Release 00

Reason for change: Currently the R2 and R3 definitions for the puncture limit are different. After long discussions between R1 and R2, it has been decided that only a limited step size and range are sufficient for the puncture limit. In order to avoid inconsistencies, it is proposed to align the R3 definition to the R2 definition.

Clauses affected: **9.2.1.45, 9.3.4.**

Other specs Affected: Other 3G core specifications → List of CRs:
Other GSM core specifications → List of CRs:
MS test specifications → List of CRs:
BSS test specifications → List of CRs:
O&M specifications → List of CRs:

Other comments:

- In another CR the UL-puncture limit type is renamed to Puncture limit type in ASN.1.
- Another "inconsistency" in the handling of the puncture limit between R2 and R3 is the fact that since in RRC, the change of puncture limit is performed with the physical channel reconfiguration it can also be changed unsynchronised, whereas this is currently not possible on NBAP/RNSAP (puncture limit not included in RL_RECONF_REQ). However, this asynchronous capability seems more caused by the RRC procedure structure than a functional requirement. Therefore this issue not aligned.

9.2.1.45 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
UL <u>p</u> Puncture limit			INTEGER (0..1 500)	<u>0</u> : 40% <u>1</u> : 44 % ... <u>14</u> : 96% <u>15</u> : 100%

9.3.4 NBAP Information Elements

```

...
-----
-- U
-----

UARFCN ::= INTEGER (174 .. 474)

UL-DL-CompressedModeSelection ::= ENUMERATED {
ul-only,
dl-only,
both-UlandDL
}

UL-DPCH-SlotFormat ::= INTEGER (0..5)

UL-EbNo ::= INTEGER (0..255)
-- Resolution is 0.1 dB, range 0-25.5 dB --

UL-FP-Mode ::= ENUMERATED {
normal,
silent
}

-- unit dBm, step 0.1dBm
UL-InterferenceLevel ::= INTEGER (-128..60)
-- 0: 40%; 1: 44%; ...; 14: 96%; 15: 100%
UL-PunctureLimit ::= INTEGER (0..1500)

UL-ScramblingCode ::= SEQUENCE {
    uL-ScramblingCodeNumber    UL-ScramblingCodeNumber,
    uL-ScramblingCodeLength    UL-ScramblingCodeLength
}

-- 2^24
UL-ScramblingCodeLength ::= INTEGER (0..16777215)

UL-ScramblingCodeNumber ::= ENUMERATED {
short,
long
}

UplinkDeltaEb-No ::= ENUMERATED {
deltaEb-No-6dB,
...
}

UplinkDeltaEb-No-after ::= ENUMERATED {
deltaEb-No-after-6dB,
...
}

END

```


9.2.1.6 Cause

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
<i>Cause-group</i>	M		Enumerated (Radio Network Layer, Transport Layer, Protocol, Misc)	
<i>CHOICE Cause group</i>				
<i>Radio Network Layer</i>				
Radio Network Layer Cause	M		Enumerated (unknown C-ID, Cell not available, Power level not supported, UL scrambling code already in use, DL radio resources not available, UL radio resources not available, RL Already Activated/allocated Node B Resources Unavailable Insufficient physical channel resources Measurement not supported for the object, Macrodiversity combining not possible, Reconfiguration not allowed, Requested configuration not supported Synchronization failure, Unspecified,...)	
<i>Transport Layer</i>				
Transport Layer Cause	M		Enumerated (Transport link failure, Transmission port not available, Transport resource unavailable Unspecified,...)	
<i>Protocol</i>				
Protocol Cause			Enumerated (Transaction not allowed, Transfer syntax error, Abstract syntax error (reject), Abstract syntax error (ignore and notify), Message not compatible with receiver state Semantic error Unspecified,...)	
<i>Misc</i>				
Miscellaneous Cause	M		Enumerated (Control processing overload Hardware failure, O&M intervention, Not enough user plane processing resources, Unspecified,...)	

9.2.1.39 Report Characteristics

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

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
Report characteristics				
Report characteristics type			ENUMERATED(On Demand, Periodic, Event A, Event B, Event C, Event D, Event E, Event F, ...)	
Periodic Report Information	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. First working assumption!
Event A	C – Event A			
Measurement Threshold	M		TBD	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		TBD	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 Threshold	M		TBD	
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 Decrease Threshold	M		TBD	
Measurement Change Time	M		ENUMERATED (10ms...1min) step 10ms,...	The time the measurement entity shall fall (in ms), in order to trigger a measurement report.
Event E	C – Event			

	E			
Measurement Threshold 1	M		TBD	
Measurement Threshold 2	O		TBD	
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		TBD	
Measurement Threshold 2	O		TBD	
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.

Editors note: Encoding of threshold TBD.

Condition	Explanation
C-Periodic	Valid if <i>Report Characteristics Type</i> IE indicates "periodic"
C-Event A	Valid if <i>Report Characteristics Type</i> IE indicates "Event A"
C-Event B	Valid if <i>Report Characteristics Type</i> IE indicates "Event B"
C-Event C	Valid if <i>Report Characteristics Type</i> IE indicates "Event C"
C-Event D	Valid if <i>Report Characteristics Type</i> IE indicates "Event D"
C-Event E	Valid if <i>Report Characteristics Type</i> IE indicates "Event E"
C-Event F	Valid if <i>Report Characteristics Type</i> IE indicates "Event F"

9.3.4 NBAP Information Elements

-
-
-

```

Cause ::= ENUMERATED-CHOICE {
radioNetworkLayer      RadioNetworkLayerCause,
transportLayer         TransportLayerCause,
protocol               ProtocolCause,
misc                   MiscellaneousCause,
...
}
    
```

-
-
-

```
MiscellaneousCause ::= ENUMERATED {
  control-processing-overload,
  hardware-failure,
  oam-intervention,
  not-enough-user-plane-processing-resources,
  unspecified_
  ...
}
```

-
-
-

```
ProtocolCause ::= ENUMERATED
  transaction-not-allowed,
  transfer-syntax-error,
  abstract-syntax-error-reject,
  abstract-syntax-error-ignore-and-notify,
  message-not-compatible-with-receiver-state,
  semantic-error,
  unspecified_
  ...
}
```

-
-
-

```
RadioNetworkLayerCause ::= Enumerated {
  unknown-C-ID,
  cell-not-available,
  power-level-not-supported,
  ul-scramblingcode-already-in-use,
  dl-radio-resources-not-available,
  ul-radio-resources-not-available,
  rl-Already-ActivatedorAllocated,
  nodeB-Resources-Unavailable,
  insufficient-physical-channel-resources,
  measurement-not-supported-for-the-object,
  macrodiversity-combining-not-possible,
  reconfiguration-not-allowed,
  requested-configuration-not-supported,
  synchronization-failure,
  unspecified_
  ...
}
```

-
-
-

```
ReportCharacteristicsType ::= CHOICE {
  onDemand          NULL,
  periodic           ReportPeriodicity,
  event-a           EventA,
  event-b           EventB,
  event-c           EventC,
  event-d           EventD,
  event-e           EventE,
  event-f           EventF_
  ...
}
```

-
-
-

```
TransportLayerCause ::= ENUMERATED {
  transport-link-failure,
  transmission-port-not-available,
  transport-resource-unavailable,
  unspecified_
  ...
}
```

-

•
•

< The proposed changes according to this CR are highlighted by revision marks. >

9.1.2 COMMON TRANSPORT CHANNEL SETUP REQUEST

9.1.2.1 FDD Message

9.1.2.2 TDD Message

Information Element	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Transaction ID	M			
C-ID	M			
Configuration Generation ID	M			
CHOICE <i>common physical channels to be configured</i>				
<i>Secondary CCPCHs</i>				
CCTrCH ID	M			For DL CCTrCH supporting one or several Secondary CCPCHs
TFCS	M			For DL CCTrCH supporting one or several Secondary CCPCHs
Secondary CCPCH		1..<maxnoofS-CCPCHs>		
Common physical channel ID	M			
TDD Channelisation Code	M			
Time Slot	M			
Burst Type	M			Long or short midamble
Midamble shift	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
S-CCPCH Power	M		DL Power	
STTD Indicator	M			
<i>PRACH</i>				
PRACH	M			
Common physical channel ID	M			
Time Slot	M			
TDD Channelisation Code	M			
Max PRACH Midamble Shifts	O			
PRACH Midamble	M			
CHOICE <i>common transport channels to be configured</i>				
<i>FACH</i>				
FACH	C ChoiceCh	1..<maxnoofFA CHs>		
Common transport channel ID	M			
Transport Format Set	M			For the DL.
ToAWS	M			
ToAWE	M			
<i>PCH</i>				

PCH	C ChoiceCh	1..<maxnoofPC Hs>		
Common transport channel ID	M			
Transport Format Set	M			For the DL.
ToAWS	M			
ToAWE	M			
PICH Parameters		1		
Common Physical Channel ID	M			
TDD Channelisation Code	M			
Time Slot	M			
Burst type	O			
Midamble shift	M			
TDD Physical Channel Offset	M			
Repetition period	M			
Repetition length	M			
Paging Indicator Length	M			
PICH Power	M			
<i>RACH</i>		1		
RACH				
Common transport channel ID	M			

9.1.23 CELL SETUP REQUEST

9.1.23.1 FDD Message

9.1.23.2 TDD Message

Information Element	Presence	Range	IE type and reference	Semantics description
Message discriminator	M			
Message Type	M			
Transaction ID	M			
Local Cell Id	M			
C-Id	M			
Configuration Generation Id	M			
UARFCN	M			
Cell Parameter ID	M			
Maximum Transmission Power	O			
Transmission Diversity Applied	M			On DCHs
Sync Case	M			
PSCH Information		1		
Common physical channel ID	M			
CHOICE <i>Sync Case</i>				
<i>Case 1</i>				The same TS is used for PCCPCH
Time Slot	M			
<i>Case 2 and Case 3</i>				In Case 2 the same TS is used for PCCPCH
PSCH Time Slot	M			
PSCH Power	M			DL Power
TSTD Indicator	M			
PCCPCH Information		1		
Common physical channel ID	M			
CHOICE <i>Sync Case</i>				

Case 3				
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
PCCPCH Power	M			
Block STTD Indicator	M			
Time Slot Configuration		1 .. 15		
Time Slot	M			
Time Slot Status	M			
Time Slot Direction	M			

9.2.2.45 [1.x](#) TSTD Indicator

Indicates if TSTD shall be active or not.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
TSTD Indicator			ENUMERATED(active, inactive)	

9.2.3.x [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)	

9.3 Message and Information element abstract syntax (with ASN.1)

•
•
•

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

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

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

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

CommonPhysicalChannelType-CTCHsetupReqTDD ::= ENUMERATED {
    secondary-CCPCH-parameters-CTCHsetupReqTDD,
    PRACH-parameters-CTCHsetupReqTDD
}

Secondary-CCPCH-parameters-CTCHsetupReqTDD ::= SEQUENCE {
    cCtrCH-ID          CctrCH-ID,
    tFCS              TFCS,
    secondaryCCPCH     SecondaryCCPCHList-CTCHsetupReqTDD,
}

SecondaryCCPCHList-CTCHsetupReqTDD ::= SEQUENCE (SIZE (1..maxnoofSCCPCHs)) OF
    ProtocolIE-Container {{ SecondaryCCPCHList-CTCHsetupReqTDDItemIE }}

SecondaryCCPCHList-CTCHsetupReqTDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-SecondaryCCPCHList-CTCHsetupReqTDDItem CRITICALITY ignore    TYPE SecondaryCCPCHList-CTCHsetupReqTDDItem PRESENCE mandatory }
}
```

```

},
...
}

SecondaryCCPCHList-CTCHsetupReqTDDItem ::= SEQUENCE {
    commonPhysicalChannelID    CommonPhysicalChannelID,
    tdd-ChannelisationCode     TDD-ChannelisationCode,
    timeslot                   TimeSlot,
    burstType                   BurstType,
    midambleShift              MidambleShift,
    tdd-PhysicalChannelOffset   TDD-PhysicalChannelOffset,
    repetitionPeriod            RepetitionPeriod,
    repetitionLength            RepetitionLength,
    s-CCPCH-Power               DL-Power,
    tSTD-Indicator          TSTD-Indicator
}

PRACH-parameters-CTCHsetupReqTDD ::= SEQUENCE {
    commonPhysicalChannelID    CommonPhysicalChannelID,
    timeslot                   TimeSlot,
    tdd-ChannelisationCode     TDD-ChannelisationCode,
    burstType                   BurstType,
    maxPRACH-MidambleShift     MaxPRACH-MidambleShift OPTIONAL,
    prach-Midamble              PRACH-Midamble,
    commonTransportChannelType CommonTransportChannelType-CTCHsetupReqTDD,
    rach                        RACH-CTCHsetupReqTDD
}

CommonTransportChannelType-CTCHsetupReqTDD ::= ENUMERATED {
    fach-ParametersList        FACH-ParametersList-CTCHsetupReqTDD,
    pch-Parameters              PCH-Parameters-CTCHsetupReqTDD,
    bothCH-Parameters           BothCH-Parameters-CTCHsetupReqTDD
}

BothCH-Parameters-CTCHsetupReqTDD ::= SEQUENCE {
    fach-ParametersList        FACH-ParametersList-CTCHsetupReqFDD,
    pch-Parameters              PCH-Parameters-CTCHsetupReqFDD
}

FACH-ParametersList-CTCHsetupReqFDD ::= SEQUENCE (SIZE (1..maxnoofFACHs)) OF
    ProtocolIE-Container {{FACH-ParametersList-CTCHsetupReqFDD ItemIE }}

FACH-ParametersList-CTCHsetupReqFDDItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-FACH-ParametersList-CTCHsetupReqFDDItem CRITICALITY ignore TYPE FACH-ParametersList-CTCHsetupReqFDDItem PRESENCE mandatory },
    ...
}

FACH-ParametersList-CTCHsetupReqFDDItem ::= SEQUENCE {
    commonTransportChannelID    CommonTransportChannelID,
    dl-TransportFormatSet        DL-TransportFormatSet,
    toAWS                        ToAWS,
    toAWE                        ToAWE
}

PCH-ParametersList-CTCHsetupReqFDD ::= SEQUENCE (SIZE (1..maxnoofPCHs)) OF

```

```

ProtocolIE-Container {{PCH-ParametersLit-CTCHsetupReqFDD ItemIE }}

PCH-ParametersList-CTCHsetupReqFDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-PCH-ParametersList-CTCHsetupReqFDDItem CRITICALITY ignore TYPE PCH-ParametersList-CTCHsetupReqFDDItemPRESENCE mandatory },
  ...
}

PCH-ParametersList-CTCHsetupReqFDDItem ::= SEQUENCE {
  commonTransportChannelID CommonTransportChannelID,
  dl-TransportFormatSet DL-TransportFormatSet,
  toAWS ToAWS,
  toAWE ToAWE,
  pICH-Parameters PICH-Parameters-CTCHsetupReqTDD
}

PICH-Parameters-CTCHsetup-Req-TDD ::= SEQUENCE {
  CommonPhysicalChannelID CommonPhysicalChannelID,
  tdd-ChannelisationCode TDD-ChannelisationCode,
  timeSlot TimeSlot,
  pICH-Power PICH-Power,
  burstType BurstType OPTIONAL,
  midambleshift Midambleshift,
  tdd-PhysicalChannelOffset TDD-PhysicalChannelOffset,
  repetitionPeriod RepetitionPeriod,
  repetitionLength RepetitionLength,
  pagingIndicatorLength PagingIndicatorLength,
  pICH-Power DL-Power
  ...
}

RACH-CTCHsetupReqTDD ::= SEQUENCE {
  commontransportChannelID CommontransportChannelID
}

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

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

CellSetupRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-LocalCell-ID CRITICALITY ignore TYPE LocalCell-ID PRESENCE mandatory }|
  { ID id-C-ID CRITICALITY ignore TYPE C-ID PRESENCE mandatory }|
  { ID id-ConfigurationGenerationID CRITICALITY ignore TYPE ConfigurationGenerationID PRESENCE mandatory }|

```

```

    { ID id-UARFCN                CRITICALITY ignore TYPE UARFCN                PRESENCE mandatory }|
    { ID id-Cell-Parameter-ID     CRITICALITY ignore TYPE Cell-Parameter-ID     PRESENCE mandatory }|
    { ID id-MaximumTransmissionPower CRITICALITY ignore TYPE MaximumTransmissionPower PRESENCE optional }|
    { ID id-TransmissionDiversityApplied CRITICALITY ignore TYPE TransmissionDiversityApplied PRESENCE mandatory }|
    { ID id-SyncCase              CRITICALITY ignore TYPE TransmissionDiversityApplied PRESENCE mandatory }|
    { ID id-PSCH-Information-CellsetupReqTDD CRITICALITY ignore TYPE PSCH-Information-CellsetupReqTDD PRESENCE mandatory }|
    { ID id-PCCPCH-Information-CellsetupReqTDD CRITICALITY ignore TYPE PCCPCH-Information-CellsetupReqTDD PRESENCE mandatory }|
    { ID id-TimeSlotConfigurationList-CellsetupReqTDD CRITICALITY ignore TYPE TimeSlotConfigurationList-CellsetupReqTDD PRESENCE mandatory }
  },
  ...
}

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

PSCH-Information-CellsetupReqTDD ::= SEQUENCE {
  commonPhysicalChannelID CommonPhysicalChannelID,
  syncCaseIndicator SyncCaseIndicator-CellsetupReqTDD,
  pSCH-Power DL-Power,
  tSTD-Indicator TSTD-Indicator
}

SyncCaseIndicator-CellsetupReqTDD ::= ENUMERATED {
  case1 Case1-CellsetupReqTDD,
  case2andCase3 Case2andCase3-CellsetupReqTDD
}

Case1-CellsetupReqTDD ::= SEQUENCE {
  timeSlot TimeSlot
}

Case2andCase3-CellsetupReqTDD ::= SEQUENCE {
  PSCH-TimeSlot PSCH-TimeSlot
}

PCCPCH-Information-CellsetupReqTDD ::= SEQUENCE {
  syncCaseIndicator SyncCaseIndicator-CellsetupReqTDD2,
  repetitionPeriod RepetitionPeriod,
  repetitionLength RepetitionLength,
  pCCPCH-Power DL-Power,
  tSTDBlockSTTD-Indicator TSTDBlockSTTD-Indicator
}

SyncCaseIndicator-CellsetupReqTDD2 ::= ENUMERATED {
  case3 Case3-CellsetupReqTDD
}

Case3-CellsetupReqTDD ::= SEQUENCE {
  timeSlot TimeSlot
}

TimeSlotConfigurationList-CellsetupReqTDD ::= SEQUENCE (SIZE (1..15)) OF

```



```

ProtocolIE-Container{{TimeSlotConfigurationList-CellsetupReqTDD ItemIE }}
TimeSlotConfigurationList-CellsetupReqTDDItemIE NBAP-PROTOCOL-IES ::= {
  { ID id-TimeSlotConfigurationList-CellsetupReqTDDItem      CRITICALITY ignore
  CellsetupReqTDDItem      PRESENCE      mandatory
  },
  ...
}
TimeSlotConfigurationList-CellsetupReqTDDItem ::= SEQUENCE {
  timeSlot      TimeSlot,
  timeSlotStatus      TimeSlotStatus,
  timeSlotDirection      TimeSlotDirection
}
•
•
•

```

9.3.4 NBAP Information Elements

```

--*****
--
-- Information Element Definitions
--
--*****
•
•
•

```

```

BlockSTTD-Indicator ::= ENUMERATED {
  active,
  inactive
}

```

CHANGE REQUEST		Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.
25.433	CR	35
GSM (AA.BB) or 3G (AA.BBB) specification number ↑		↑ CR number as allocated by MCC support team
For submission to: TSG RAN #7 <small>list expected approval meeting # here</small>	for approval for information	<input checked="" type="checkbox"/> <input type="checkbox"/>
		strategic <input type="checkbox"/> non-strategic <input type="checkbox"/> <small>(for SMG use only)</small>
Current Version: 3.0.0		

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: RAN-WG3 **Date:** 00.02.28

Subject: Clarification of measurement characteristics

Work item:

Category:	F Correction <input checked="" type="checkbox"/> A Corresponds to a correction in an earlier release <input type="checkbox"/> B Addition of feature <input type="checkbox"/> C Functional modification of feature <input type="checkbox"/> D Editorial modification <input type="checkbox"/>	Release:	Phase 2 <input type="checkbox"/> Release 96 <input type="checkbox"/> Release 97 <input type="checkbox"/> Release 98 <input type="checkbox"/> Release 99 <input checked="" type="checkbox"/> Release 00 <input type="checkbox"/>
------------------	--	-----------------	--

(only one category shall be marked with an X)

Reason for change: There is a need for the RNC to be able to control the amount of filtering performed on physical layer measurements prior to reporting (and event evaluation).

By controlling the measurement filtering with a standardised algorithm the network is able to fine-tune the compromise between amount of reported events (lub/lur load) and response time. It is also possible to fine tune the compromise between amount of hysteresis used and amount of averaging filtering performed. The proposed standardised algorithm will also enable the RNC to get a more consistent event reporting behaviour from Node B's with different physical layer measurement implementation working in different radio propagation conditions.

In 25.133 v2.3.0 the measurement performance requirement stated is valid when a specific measurement period for the physical layer measurement is used. The measurement period is assumed to be defined short enough to allow the measurement period also to be used as defining the period time of the physical layer measurements.

By specifying a very simple averaging algorithm the RNC will be given the option to control the filtering and reporting.

This proposed CR include the changes needed to support a RNC controlled filtering for the Node B.

Clauses affected: 8.2.8, 8.3.8, 9.1.17, 9.1.51, 9.2.1.38, 9.2.X (new), 9.3.3

Other specs	Other 3G core specifications	<input checked="" type="checkbox"/>	→ List of CRs: 25.331 CR 146r1, 25.423 CR 23 (R3-000488)
affected:	Other GSM core specifications	<input type="checkbox"/>	→ List of CRs:
	MS test specifications	<input type="checkbox"/>	→ List of CRs:
	BSS test specifications	<input type="checkbox"/>	→ List of CRs:
	O&M specifications	<input type="checkbox"/>	→ List of CRs:

Other comments:

<----- double-click here for help and instructions on how to create a CR.

8.2.8 Common Measurement Initiation

8.2.8.1 General

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

8.2.8.2 Successful Operation

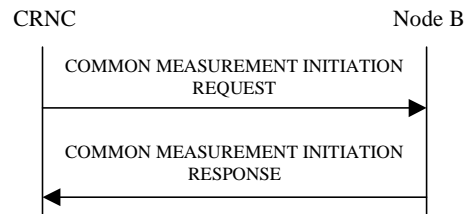


Figure 11: Measurement Request procedure: Successful Operation

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.]

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

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

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

If the *Report Characteristics IE* indicates 'Event A', the Node B shall initiate a 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* indicates 'Event B', the Node B shall initiate a 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* indicates 'Event C', the Node B shall initiate a Measurement Reporting procedure when the measured entity rises more than the requested threshold within the requested time.

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

If the *Report Characteristics IE* indicates 'Event E', the Node B shall initiate a Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). The Node B shall also initiate a Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time' (Report B). If the *Report Frequency IE* is provided, the Node B shall initiate Measurement Reporting procedures periodically, with the requested frequency, between Report A and Report B. 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* indicates 'Event F', the Node B shall initiate a Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time'

(Report A). The Node B shall also initiate a Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time' (Report B). If the *Report Frequency* IE is provided, the Node B shall initiate Measurement Reporting procedures periodically, with the requested frequency, between Report A and Report B. 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 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 a Measurement Reporting procedure immediately, and then continue with the measurements as in normal operation.

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 = one divided by 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 initialize the averaging filter, F_0 is set to M_1 when the first measurement result from the physical layer measurement is received.

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 the *Report Characteristics* IE indicated "On-Demand", the COMMON MEASUREMENT INITIATION RESPONSE message shall contain the measurement result.

NEXT SECTION WITH CHANGES

8.3.8 Dedicated Measurement Initiation

8.3.8.1 General

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

8.3.8.2 Successful Operation

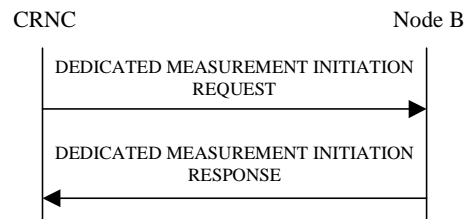


Figure 1: Measurement Request procedure: Successful Operation

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 that can be contacted via the current communication control port. Otherwise, this measurement request shall apply for the requested Node B Communication Context Id only.

If no RL Information is provided in the *Dedicated Measurement Object* IE, the measurement reports shall give the aggregated result for all radio links within the requested Node B Communication Context. If RL Information is provided in the request, the measurement request shall apply for the requested radio links individually.

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

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

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

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

If the *Report Characteristics* IE indicates 'Event A', the Node B shall initiate a 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 indicates 'Event B', the Node B shall initiate a 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 indicates 'Event C', the Node B shall initiate a Measurement Reporting procedure when the measured entity rises more than the requested threshold within the requested time.

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

If the *Report Characteristics* IE indicates 'Event E', the Node B shall initiate a Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). The Node B shall also initiate a Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time' (Report B). If the *Report Frequency* IE is provided, the Node B shall send shall initiate Measurement Reporting procedures periodically, with the requested frequency, between Report A and Report B. 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 indicates 'Event F', the Node B shall initiate a Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). The Node B shall also initiate a Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time' (Report B). If the *Report Frequency* IE is provided, the Node B shall send shall initiate Measurement Reporting procedures periodically, with the requested frequency, between Report A and Report B. 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 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 a Measurement Reporting procedure immediately, and then continue with the measurements as in normal operation.

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.

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

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 = one divided by 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 initialize the averaging filter, F_0 is set to M_1 when the first measurement result from the physical layer measurement is received.

If the NodeB was able to initiate the measurement requested by the ~~DRNC-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 the *Report Characteristics* IE indicated "On-Demand", the ~~COMMON-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.

NEXT SECTION WITH CHANGES

9.1.17 COMMON MEASUREMENT INITIATION REQUEST

Information Element	Presence	Range	IE Type and Reference	Semantics Description
Message Discriminator	M			
Message Type	M			
Transaction Id	M			
Measurement Id	M			
Common Measurement Object Type	M			
CHOICE Common Measurement Object Type				
"Cell"				
C-ID	M			
Time Slot	O			TDD only
"RACH"				
C-ID	M			
Common transport channel ID	M			
Common Measurement Type	M			
Measurement CharacteristicsFilter Coefficient	M <u>O</u>			
Report Characteristics	M			

NEXT SECTION WITH CHANGES

9.1.51 DEDICATED MEASUREMENT INITIATION REQUEST

Information Element	Presence	Range	IE Type and Reference	Semantics Description
Message Discriminator	M			
Message Type	M			
Node B Communication Context Id	M			
Transaction Id	M			
Measurement Id	M			
Dedicated Measurement Object Type	M			
CHOICE <i>Dedicated Measurement Object Type</i>				
"RL"				
RL Information		1..<maxn oofRLs>		
RL-id	M			
DPCH ID	O			
Dedicated Measurement Type	M			
Measurement Characteristics <u>Filter Coefficient</u>	M <u>O</u>			
Report Characteristics	M			

Range	Explanation
<i>MaxnoofRLs</i>	Maximum number of individual RL's a measurement can be started on.

NEXT SECTION WITH CHANGES

9.2.1.X Measurement Filter Coefficient

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

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE type and reference</u>	<u>Semantics description</u>
Measurement Filter Coefficient			INTEGER (1..256)	

9.2.1.38 Measurement Characteristics

The Measurement Characteristics indicates how the measurement shall be performed.

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
Measurement Characteristics				
Measurement Frequency	M		TBD	
Averaging Duration	M		TBD	

Editors Note: The exact definition and structure of this information element awaits decisions in TSG RAN WG2.

NEXT SECTION WITH CHANGES

9.3.3 NBAP PDU Content Definitions

```

-- *****
--
-- PDU definitions for NBAP.
--
-- *****

NBAP-PDU-Contents -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS
    AICH-InformationList,
    AICH-Parameters,
    AICH-Power,
    AICH-TransmissionTiming,
    AddOrDeleteIndicator,
    AvailabilityStatus,
    BindingID,
    BlockingPriorityIndicator,
    BurstType,
    CCTrCH-ID,
    CFN,
    CN-CSDomainIdentifier,
    CN-PSDomainIdentifier,
    CRNC-CommunicationContextID,
    Cause,
    CellParameter,
    Cell-Parameter,
    ChipOffset,
    CommonMeasurementType,
    CommonPhysicalChannelID,
    CommonPhysicalChannelType,
    CommonTransportChannelID,
    CommonTransportChannelType,
    CommunicationControlPortID,
    CommunicationControlPortInformationList,
    CompressesModeMethod,
    ConfigurationGenerationID,
    DCH-CombinationIndication,
    DCH-Delete-RL-ReconfReqTDDItem,
    DCH-ID,
    DCH-InformationResponse-RL-setupResFDD,
    DCH-Modify-RL-ReconfPrepTDDItem,
    DL-CCTrCH-ID,
    DL-CodeInformation,
    DL-DPCH-InformationItem-RL-ReconfReqFDD,
    DL-DPCH-SlotFormat,
    DL-FrameType,
    DL-Power,
    DL-ReferencePower,
    DL-ReferencePowerInformationItem,
    DL-ScramblingCode,
    DPCH-ID,
    DPCH-Offset,
    DSCH-ID,
    DSCH-InformationResponse-RL-setupResFDD,
    DSCH-ModifyList-RL-ReconfResp,
    DSCH-SetupList-RL-ReconfResp,
    DSCH-TransportFormatSet,
    DTX-InsertionPoint,
    DTX-InsertionPosition,
    D-FieldLength,
    DedicatedMeasurementType,

```

DedicatedMeasurementValue,
 DeltaTPC,
 DiversityControlField,
 DiversityMode,
 FACH-Power,
 FDD-DL-ChannelisationCodeNumber,
 FDD-SCCPCH-Offset,
 FrameHandlingPriority,
 FrameOffset,
 GapStartingSlotNumber,
 LocalCellID,
 LocalCellInformationList,
 LocalCell-ID,
 Local-CellID,
 MIB-SG-POS,
 MIB-SG-REP,
 MaxFACH-Power,
 MaxNrOfUL-DPDCHs,
 MaxNumberOfUL-DPDCHs,
 MaximumDLPowerCapability,
 MaximumDL-PowerCapability,
 MaximumTransmissionPower,
 MaximumUL-EbN0,
 Maximum-DL-PowerCapability,
 MeasuredCellInfo,
~~MeasurementFilterCoefficient,~~
~~MeasurementCharacteristics,~~
 MeasurementID,
 MeasurementType,
 MessagePartScramblingCode,
 MidambleShift,
 Midambleshift,
 MinUL-ChannelisationCodeLength,
 MinimumSpreadingFactor,
 MinimumUL-EbN0,
 NodeB-CommunicationContextID,
 NumberOfChannelElements,
 Offset,
 PCCPCH-Power,
 PCCPCH-TimeSloti,
 PCH-Power,
 PICH-Information,
 PICH-Power,
 PSCH-Power,
 PSCHandPCCPCH-Allocation,
 PSCHandPCCPCH-TimeSlotK,
 PUSCH,
 PagingIndicatorLength,
 PatternDuration,
 PayloadCRC-PresenceIndicator,
 PilotBitsUsedIndicator,
 PowerControlMode,
 PowerOffset,
 PowerResumeMode,
 PreambleScramblingCode,
 PreambleSignatures,
 PrimaryCPICH-Power,
 PrimarySCH-Power,
 PrimaryScramblingCode,
 Primary-ScramblingCode,
 PropagationDelay,
 PunctureLimit,
 RACH-SlotFormat,
 RACH-SubChannelNumbers,
 RLC-Mode,
 RL-ID,
 RL-Information,
 RL-InformationItem,
 RL-InformationItem-RL-SetupReqTDD,
 RL-InformationList-DMeasureRequest,
 RL-ReconfigurationFailure-RL-ReconfFailItem,
 RadioLinkInformation-RL-ReconfReqTDD,
 RepetitionLength,
 RepetitionPeriod,
 ReportCharacteristics,
 ResourceOperationState,
 ResourceOperationalState,
 SAI,

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SFN,
SIB-SG-POS,
SIB-SG-REP,
SSDT-CellIdentity,
SSDT-CellIdentityLength,
SSDT-Cell-IDLength,
SSDT-Indication,
SSDT-SupportIndicator,
STTD-Indicator,
S-CCPCH-Offset,
S-CCPCH-Power,
S-FieldLength,
ScramblingCode,
ScramblingCodeChange,
SecondaryCCPCH-SlotFormat,
SecondaryCPICH-Power,
SecondarySCH-Power,
ShutdownTimer,
SynchronisationMethod,
TDDChipOffset,
TDD-ChannelisationCode,
TFCI-Presence,
TFCI-SignallingMode,
TFCS,
TSTD-Indicator,
T-Cell,
TimeSlot,
TimeSlotDirection,
TimeSlotStatus,
ToAWE,
ToAWS,
TransmissionGapDistance,
TransmissionGapPeriod,
TransmitGapLength,
TransmitGapPositionMode,
TransportFormatCombinationSet,
TransportFormatSet,
TransportLayerAddress,
UARFCN,
C-ID,
UL-CCTrCHInformation,
UL-CCTrCH-ID,
UL-DPCCH-SlotFormat,
UL-FP-Mode,
UL-InterferenceLevel,
UL-PunctureLimit,
UL-ScramblingCode,
UplinkEbNo
FROM NBAP-IEs

ProtocolExtensionContainer{},
PrivateExtensionContainer{},
ProtocolIE-Container{},
ProtocolIE-ContainerList{},
NBAP-PROTOCOL-IES,
NBAP-PROTOCOL-EXTENSION,
NBAP-PRIVATE-EXTENSION
FROM NBAP-Containers

id-AICH-Information-ResourceStatIndItem,
id-AICH-ParametersList,
id-AICH-ParametersListItem,
id-AllowedSlotFormatInformationListItem-CTCHreconf-Req-FDD,
id-AllowedSlotFormatInformationListItem-CTCHsetup-Req-FDD,
id-BlockingPriorityIndicator,
id-CCTrCH-ParametersList,
id-CCTrCH-ParametersListItem,
id-CFN,
id-CRNC-CommunicationContextID,
id-CRNCommunicationContextID,
id-Cause,
id-Cell-Information-ResourceStatIndItem,
id-Cell-InformationItem,
id-Cell-InformationList,
id-Cell-Parameter,
id-Cell-ParametersItem,
id-Cell-ParametersList,
id-CellParameter,

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id-CommonMeasurementObjectType,
 id-CommonMeasurementType,
 id-CommonPhysicalChannelID,
 id-CommonPhysicalChannelType-CTCHsetup-Req-FDD,
 id-CommonPhysicalChannelType-CTCHsetup-Response,
 id-CommunicationControlPort-InformationItem,
 id-CommunicationControlPortID,
 id-CommunicationControlPortInformation-ResourceStatIndItem,
 id-CommunicationControlPortInformationList,
 id-CompressesModeMethod,
 id-ConfigurationGenerationID,
 id-DCH-Add-RL-ReconfPrepFDDItem,
 id-DCH-Add-RL-ReconfPrepTDDItem,
 id-DCH-Add-RL-ReconfReadyItem,
 id-DCH-Add-RL-ReconfReqFDDItem,
 id-DCH-Add-RL-ReconfReqTDDItem,
 id-DCH-AddItem-RL-ReconfResp,
 id-DCH-AddList-RL-ReconfPrepFDD,
 id-DCH-AddList-RL-ReconfPrepTDD,
 id-DCH-AddList-RL-ReconfReqFDD,
 id-DCH-AddList-RL-ReconfReqTDD,
 id-DCH-Delete-RL-ReconfPrepFDDItem,
 id-DCH-Delete-RL-ReconfPrepTDDItem,
 id-DCH-Delete-RL-ReconfReqFDDItem,
 id-DCH-Delete-RL-ReconfReqTDDItem,
 id-DCH-DeleteList-RL-ReconfPrepFDD,
 id-DCH-DeleteList-RL-ReconfPrepTDD,
 id-DCH-DeleteList-RL-ReconfReqFDD,
 id-DCH-DeleteList-RL-ReconfReqTDD,
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 id-DCH-Information-RL-SetupReqTDDItem,
 id-DCH-InformationList-RL-SetupReqFDD,
 id-DCH-InformationList-RL-SetupReqTDD,
 id-DCH-InformationResponse-RL-SetupFailFDDItem,
 id-DCH-InformationResponse-RL-setupResTDDItem,
 id-DCH-InformationResponseItem,
 id-DCH-Modify-RL-ReconfPrepFDDItem,
 id-DCH-Modify-RL-ReconfPrepTDDItem,
 id-DCH-Modify-RL-ReconfReadyItem,
 id-DCH-Modify-RL-ReconfReqFDDItem,
 id-DCH-Modify-RL-ReconfReqTDDItem,
 id-DCH-ModifyItem-RL-ReconfResp,
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 id-DCH-ModifyList-RL-ReconfPrepTDD,
 id-DCH-ModifyList-RL-ReconfReqFDD,
 id-DCH-ModifyList-RL-ReconfReqTDD,
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 id-DL-CCTrCH-Information-RL-SetupReqTDDItem,
 id-DL-CCTrCH-InformationItem,
 id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD,
 id-DL-CCTrCH-InformationList-RL-ReconfReqTDD,
 id-DL-CCTrCH-InformationList-RL-SetupReqTDD,
 id-DL-CCTrCHInformationItem,
 id-DL-CCTrCHInformationList,
 id-DL-CodeInformation,
 id-DL-CodeInformation-RL-ReconfPrepFDDItem,
 id-DL-CodeInformation-RL-SetupReqFDDItem,
 id-DL-DPCH-Information-RL-ReconfPrepFDD,
 id-DL-DPCH-Information-RL-ReconfPrepTDDItem,
 id-DL-DPCH-Information-RL-SetupReqTDDItem,
 id-DL-DPCH-InformationItem,
 id-DL-DPCH-InformationItem-RL-ReconfReqFDD,
 id-DL-DPCH-InformationItem-RL-SetupReqFDD,
 id-DL-FrameType,
 id-DL-ReferencePowerInformationItem,
 id-DSCH-AddItem-RL-ReconfPrepFDD,
 id-DSCH-AddItem-RL-ReconfReqFDD,
 id-DSCH-DeleteItem-RL-ReconfPrepFDD,
 id-DSCH-DeleteItem-RL-ReconfReqFDD,
 id-DSCH-ID,
 id-DSCH-Information-RL-SetupReqFDDItem,
 id-DSCH-InformationList-RL-SetupReqFDD,
 id-DSCH-InformationResponse-RL-SetupFailFDDItem,
 id-DSCH-InformationResponse-RL-setupResFDDItem,
 id-DSCH-ModifyItem-RL-ReconfPrepFDD,
 id-DSCH-ModifyItem-RL-ReconfReqFDD,
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id-DedicatedMeasurementType,
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 id-FACH-InformationItem,
 id-FACH-ListItem,
 id-FACH-ParametersList-CTCHreconf-Req-FDD,
 id-FACH-ParametersList-CTCHreconf-Req-TTD,
 id-FACH-ParametersListItem-CTCHreconf-Req-FDD,
 id-FACH-ParametersListItem-CTCHreconf-Req-TTD,
 id-FACH-ParametersListItem-CTCHsetup-Req-FDD,
 id-FACH-ParametersListItem-CTCHsetup-Response,
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 id-IndicationType,
 id-Local-Cell-Information-ResourceStatIndItem,
 id-Local-CellInformation-ResourceStatIndItem,
 id-LocalCell-ID,
 id-LocalCell-InformationItem,
 id-LocalCellInformationList,
 id-MIB-SegmentInformationItem,
 id-MIB-SegmentInformationList,
 id-MaximumTransmissionPower,
 id-MeasuredCellInfo,
~~id-MeasurementFilterCoefficient,~~
~~id-MeasurementCharacteristics,~~
 id-MeasurementID,
 id-MeasurementType,
 id-NeighbouringFDD-Cell-InformationItem,
 id-NeighbouringTDD-Cell-InformationItem,
 id-NodeB-CommunicationContextID,
 id-PCCPCH-Information,
 id-PCH-Information-ResourceStatIndItem,
 id-PCH-InformationItem,
 id-PCH-ListItem,
 id-PCH-Parameters-CTCHreconf-Req-FDD,
 id-PCH-ParametersList,
 id-PCH-ParametersListItem,
 id-PICH-Parameters-CTCHreconf-Req-FDD,
 id-PRACH-ParametersList,
 id-PRACH-ParametersListItem,
 id-PSCH-Information,
 id-PSCHandPCCPCH-Information,
 id-PUSCH-ListItem,
 id-PatternDuration,
 id-PowerControlMode,
 id-PowerResumeMode,
 id-PrimaryCCPCH-Information,
 id-PrimaryCPICH-Information,
 id-PrimarySCH-Information,
 id-PrimaryScramblingCode,
 id-ProcedureScopeType,
 id-RACH-Information-ResourceStatIndItem,
 id-RACH-InformationItem,
 id-RL-ID,
 id-RL-Information,
 id-RL-Information-DMeasureReportItem,
 id-RL-Information-DMeasureRequestItem,
 id-RL-Information-DMeasureResponseItem,
 id-RL-Information-RL-ReconfPrepFDDItem,
 id-RL-Information-RL-SetupReqFDDItem,
 id-RL-InformationItem,
 id-RL-InformationItem-RL-SetupReqTDD,
 id-RL-InformationList,
 id-RL-InformationList-RL-ReconfReqFDD,
 id-RL-InformationList-RL-SetupReqFDD,
 id-RL-InformationResponse-RL-setupResFDDItem,
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 id-RL-InformationResponseList-RL-ReconfReady,
 id-RL-InformationResponseList-RL-ReconfReadyItem,
 id-RL-InformationResponseList-RL-ReconfResp,
 id-RL-InformationResponseList-RL-setupResFDD,
 id-RL-InformationResponseList-RL-setupResTDD,
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 id-RL-ReconfigurationFailureList-RL-ReconfFail,
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 id-RL-ResponseInformationItem,
 id-RL-ResponseInformationList,
 id-RL-informationItem,
 id-RL-informationList,
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id-RadioLinkInformation-RL-ReconfPrepTDD,
 id-RadioLinkInformation-RL-ReconfReqTDD,
 id-RadioLinkInformationList-RL-ReconfPrepFDD,
 id-ReportCharacteristics,
 id-SFN,
 id-SIB-SegmentInformationItem,
 id-SIB-SegmentInformationList,
 id-ScramblingCodeChange,
 id-Secondary-CCPCHListItem,
 id-SecondaryCPICH-Information,
 id-SecondarySCH-Information,
 id-ShutdownTimer,
 id-Successful-RL-InformationResponse-RL-SetupFailFDDItem,
 id-Successful-RL-InformationResponseItem,
 id-Successful-RL-InformationResponseList,
 id-Successful-RL-InformationResponseList-RL-SetupFailFDD,
 id-SynchronisationMethod,
 id-T-Cell,
 id-TDDChipOffset,
 id-TimeSlotConfigurationItem,
 id-TimeSlotConfigurationList,
 id-TransmissionGapDistance,
 id-TransmissionGapPeriod,
 id-TransmitGapLength,
 id-TransmitGapPositionMode,
 id-UARFCN,
 id-C-ID,
 id-UL-CCTrCH-Information-RL-ReconfPrepTDDItem,
 id-UL-CCTrCH-Information-RL-ReconfReqTDDItem,
 id-UL-CCTrCH-Information-RL-SetupReqTDDItem,
 id-UL-CCTrCH-InformationItemIE,
 id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD,
 id-UL-CCTrCH-InformationList-RL-ReconfReqTDD,
 id-UL-CCTrCH-InformationList-RL-SetupReqTDD,
 id-UL-CCTrCHInformation,
 id-UL-CCTrCHInformationList,
 id-UL-DPCH-Information-RL-ReconfPrepFDD,
 id-UL-DPCH-Information-RL-ReconfPrepTDDItem,
 id-UL-DPCH-Information-RL-SetupReqTDDItem,
 id-UL-DPCH-InformationItem-RL-ReconfReqFDD,
 id-UL-DPCH-InformationItem-RL-SetupReqFDD,
 id-UL-DPCH-InformationItemIE,
 id-USCH-Information-ResourceStatIndItem,
 id-USCH-InformationItem,
 id-USCH-ListItem-CTCHsetup-Req-TDD,
 id-Unsuccessful-RL-InformationResponse,
 id-Unsuccessful-RL-InformationResponse-RL-SetupFailFDDItem,
 id-Unsuccessful-RL-InformationResponseItem,
 id-Unsuccessful-RL-InformationResponseItem-RL-SetupFailTDD,
 id-Unsuccessful-RL-InformationResponseList,
 id-Unsuccessful-RL-InformationResponseList-RL-SetupFailFDD,

 maxAICHCell,
 maxCCPInNodeB,
 maxCellInNodeB,
 maxFACHCell,
 maxLocalCellInNodeB,
 maxMIBSEG,
 maxPCHCell,
 maxPCHInNodeB,
 maxRACHCell,
 maxSF,
 maxSIBSEG,
 maxUCIDInNodeB,
 maxUSCHCell,
 maxnoCCTrCHs,
 maxnoofCCTrCHs,
 maxnoofDCHs,
 maxnoofDLCodes,
 maxnoofDPCHs,
 maxnoofDSCHs,
 maxnoofFACHCell,
 maxnoofFACHs,
 maxnoofFDDNeighbours,
 maxnoofPCHs,
 maxnoofPRACHs,
 maxnoofPUSHs,
 maxnoofRL-1,

```

maxnoofRL-2,
maxnoofRLs,
maxnoofSCCPCHs,
maxnoofTDDNeighbours,
maxnoofUSCHs
FROM NBAP-Constants;

```

NEXT SECTION WITH CHANGES

```

-- *****
--
-- 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 ignore  TYPE MeasurementID          PRESENCE
    mandatory }|
    { ID id-CommonMeasurementObjectType-CMeasureInitReq CRITICALITY ignore  TYPE
    CommonMeasurementObjectType-CMeasureInitReq PRESENCE mandatory
    }|
    { ID id-CommonMeasurementType CRITICALITY ignore  TYPE CommonMeasurementType
    PRESENCE mandatory }|
    { ID id-MeasurementCharacteristicsFilterCoefficient CRITICALITY ignore  TYPE
    MeasurementCharacteristicsFilterCoefficient PRESENCE mandatoryoptional }|
    { ID id-ReportCharacteristics CRITICALITY ignore  TYPE ReportCharacteristics
    PRESENCE mandatory },
    ...
}

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

CommonMeasurementObjectType-CMeasureInitReq ::= ENUMERATED {
    cell                Cell-CMeasureInitReq,
    rACH                RACH-CMeasureInitReq
}

Cell-CMeasureInitReq ::= SEQUENCE {
    c-ID                C-ID,
    timeSlot            TimeSlot
}

RACH-CMeasureInitReq ::= SEQUENCE {
    c-ID                C-ID,
    commonTransportChannelID CommonTransportChannelID
}

```

NEXT SECTION WITH CHANGES

```

-- *****
--
-- 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 ignore      TYPE NodeB-
CommunicationContextID      PRESENCE mandatory } |
  { ID id-MeasurementID                    CRITICALITY ignore      TYPE MeasurementID
  PRESENCE mandatory } |
  { ID id-DedicatedMeasurementObjectType-Req CRITICALITY ignore      TYPE
DedicatedMeasurementObjectType-Req PRESENCE mandatory } |
  { ID id-DedicatedMeasurementType          CRITICALITY ignore      TYPE DedicatedMeasurementType
  PRESENCE mandatory } |
  { ID id-MeasurementCharacteristicsFilterCoefficient CRITICALITY ignore      TYPE
MeasurementCharacteristicsFilterCoefficient PRESENCE mandatoryoptional } |
  { ID id-ReportCharacteristics            CRITICALITY ignore      TYPE ReportCharacteristics
  PRESENCE mandatory } ,
  ...
}

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

```

NEXT SECTION WITH CHANGES

```

-----
-- M
-----
-- dBm, granularity 1 dBm
-- dl-power0 indicates 0 dBm
MaximumDL-PowerCapability ::= ENUMERATED{
dl-power0,
dl-power1,
dl-power2,
...
}

-- Unit dBm, 0 to 50, Granularity 1 dB
MaximumTransmissionPower ::= ENUMERATED {
power0,
power1,
power2,
...
}

MaxNumberOfUL-DPDCHs ::= INTEGER (1..6)

MaxPRACH-MidambleShifts ::= ENUMERATED {
shift4,
shift8
}

-- 10ms to 1min, Step10ms
MeasurementChangeTime ::= ENUMERATED {
time10ms,
time20ms,
time30ms,
...
}

-- Measurement Filter Coefficient to be used for measurements
MeasurementFilterCoefficient ::= INTEGER(1..256)

MeasurementCharacteristics ::= SEQUENCE {
measurementFrequency MeasurementFrequency,
averagingDuration AveragingDuration
}

```

NEXT SECTION WITH CHANGES

```

-- *****
--
-- IEs
--
-- *****

id-AICH-Information-ResourceStatIndItem          INTEGER ::= 0
id-AICH-ParametersList                          INTEGER ::= 1
id-AICH-ParametersListItem                      INTEGER ::= 2
id-AllowedSlotFormatInformationListItem-CTCHreconf-Req-FDD  INTEGER ::= 3
id-AllowedSlotFormatInformationListItem-CTCHsetup-Req-FDD  INTEGER ::= 4
id-BlockingPriorityIndicator                    INTEGER ::= 5
id-CCTrCH-ParametersList                       INTEGER ::= 6
id-CCTrCH-ParametersListItem                   INTEGER ::= 7
id-CFN                                          INTEGER ::= 8
id-CRNC-CommunicationContextID                 INTEGER ::= 9
id-CRNCCommunicationContextID                  INTEGER ::= 10
id-Cause                                        INTEGER ::= 11
id-Cell-Information-ResourceStatIndItem        INTEGER ::= 12
id-Cell-InformationItem                        INTEGER ::= 13
id-Cell-InformationList                       INTEGER ::= 14
id-Cell-Parameter                             INTEGER ::= 15
id-Cell-ParametersItem                       INTEGER ::= 16
id-Cell-ParametersList                       INTEGER ::= 17
id-CellParameter                              INTEGER ::= 18
id-CommonMeasurementObjectType                 INTEGER ::= 19
id-CommonMeasurementType                     INTEGER ::= 20
id-CommonPhysicalChannelID                   INTEGER ::= 21
id-CommonPhysicalChannelType-CTCHsetup-Req-FDD  INTEGER ::= 22
id-CommonPhysicalChannelType-CTCHsetup-Response  INTEGER ::= 23
id-CommunicationControlPort-InformationItem    INTEGER ::= 24
id-CommunicationControlPortID                 INTEGER ::= 25
id-CommunicationControlPortInformation-ResourceStatIndItem  INTEGER ::= 26
id-CommunicationControlPortInformationList     INTEGER ::= 27
id-CompressesModeMethod                      INTEGER ::= 28
id-ConfigurationGenerationID                  INTEGER ::= 29
id-DCH-Add-RL-ReconfPrepFDDItem               INTEGER ::= 30
id-DCH-Add-RL-ReconfPrepTDDItem               INTEGER ::= 31
id-DCH-Add-RL-ReconfReadyItem                 INTEGER ::= 32
id-DCH-Add-RL-ReconfReqFDDItem                INTEGER ::= 33
id-DCH-Add-RL-ReconfReqTDDItem                INTEGER ::= 34
id-DCH-AddItem-RL-ReconfResp                  INTEGER ::= 35
id-DCH-AddList-RL-ReconfPrepFDD               INTEGER ::= 36
id-DCH-AddList-RL-ReconfPrepTDD               INTEGER ::= 37
id-DCH-AddList-RL-ReconfReqFDD                INTEGER ::= 38
id-DCH-AddList-RL-ReconfReqTDD                INTEGER ::= 39
id-DCH-Delete-RL-ReconfPrepFDDItem            INTEGER ::= 40
id-DCH-Delete-RL-ReconfPrepTDDItem            INTEGER ::= 41
id-DCH-Delete-RL-ReconfReqFDDItem             INTEGER ::= 42
id-DCH-Delete-RL-ReconfReqTDDItem             INTEGER ::= 43
id-DCH-DeleteList-RL-ReconfPrepFDD            INTEGER ::= 44
id-DCH-DeleteList-RL-ReconfPrepTDD            INTEGER ::= 45
id-DCH-DeleteList-RL-ReconfReqFDD             INTEGER ::= 46
id-DCH-DeleteList-RL-ReconfReqTDD             INTEGER ::= 47
id-DCH-Information-RL-SetupReqFDDItem          INTEGER ::= 48
id-DCH-Information-RL-SetupReqTDDItem          INTEGER ::= 49
id-DCH-InformationList-RL-SetupReqFDD          INTEGER ::= 50
id-DCH-InformationList-RL-SetupReqTDD          INTEGER ::= 51
id-DCH-InformationResponse-RL-SetupFailFDDItem  INTEGER ::= 52
id-DCH-InformationResponse-RL-setupResTDDItem  INTEGER ::= 53
id-DCH-InformationResponseItem                 INTEGER ::= 54
id-DCH-Modify-RL-ReconfPrepFDDItem             INTEGER ::= 55
id-DCH-Modify-RL-ReconfPrepTDDItem             INTEGER ::= 56
id-DCH-Modify-RL-ReconfReadyItem               INTEGER ::= 57
id-DCH-Modify-RL-ReconfReqFDDItem              INTEGER ::= 58
id-DCH-Modify-RL-ReconfReqTDDItem              INTEGER ::= 59
id-DCH-ModifyItem-RL-ReconfResp                INTEGER ::= 60
id-DCH-ModifyList-RL-ReconfPrepFDD             INTEGER ::= 61
id-DCH-ModifyList-RL-ReconfPrepTDD             INTEGER ::= 62
id-DCH-ModifyList-RL-ReconfReqFDD              INTEGER ::= 63
id-DCH-ModifyList-RL-ReconfReqTDD              INTEGER ::= 64
id-DL-CCTrCH-Information-RL-ReconfPrepTDDItem  INTEGER ::= 65
id-DL-CCTrCH-Information-RL-ReconfReqTDDItem  INTEGER ::= 66
id-DL-CCTrCH-Information-RL-SetupReqTDDItem   INTEGER ::= 67
id-DL-CCTrCH-InformationItem                   INTEGER ::= 68

```

id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD	INTEGER ::= 69
id-DL-CCTrCH-InformationList-RL-ReconfReqTDD	INTEGER ::= 70
id-DL-CCTrCH-InformationList-RL-SetupReqTDD	INTEGER ::= 71
id-DL-CCTrCHInformationItem	INTEGER ::= 72
id-DL-CCTrCHInformationList	INTEGER ::= 73
id-DL-CodeInformation	INTEGER ::= 74
id-DL-CodeInformation-RL-ReconfPrepFDDItem	INTEGER ::= 75
id-DL-CodeInformation-RL-SetupReqFDDItem	INTEGER ::= 76
id-DL-DPCH-Information-RL-ReconfPrepFDD	INTEGER ::= 77
id-DL-DPCH-Information-RL-ReconfPrepTDDItem	INTEGER ::= 78
id-DL-DPCH-Information-RL-SetupReqTDDItem	INTEGER ::= 79
id-DL-DPCH-InformationItem	INTEGER ::= 80
id-DL-DPCH-InformationItem-RL-ReconfReqFDD	INTEGER ::= 81
id-DL-DPCH-InformationItem-RL-SetupReqFDD	INTEGER ::= 82
id-DL-FrameType	INTEGER ::= 83
id-DL-ReferencePowerInformationItem	INTEGER ::= 84
id-DSCH-AddItem-RL-ReconfPrepFDD	INTEGER ::= 85
id-DSCH-AddItem-RL-ReconfReqFDD	INTEGER ::= 86
id-DSCH-DeleteItem-RL-ReconfPrepFDD	INTEGER ::= 87
id-DSCH-DeleteItem-RL-ReconfReqFDD	INTEGER ::= 88
id-DSCH-ID	INTEGER ::= 89
id-DSCH-Information-RL-SetupReqFDDItem	INTEGER ::= 90
id-DSCH-InformationList-RL-SetupReqFDD	INTEGER ::= 91
id-DSCH-InformationResponse-RL-SetupFailFDDItem	INTEGER ::= 92
id-DSCH-InformationResponse-RL-setupResFDDItem	INTEGER ::= 93
id-DSCH-ModifyItem-RL-ReconfPrepFDD	INTEGER ::= 94
id-DSCH-ModifyItem-RL-ReconfReqFDD	INTEGER ::= 95
id-DedicatedMeasurementObjectType	INTEGER ::= 96
id-DedicatedMeasurementType	INTEGER ::= 97
id-FACH-Information-ResourceStatIndItem	INTEGER ::= 98
id-FACH-InformationItem	INTEGER ::= 99
id-FACH-ListItem	INTEGER ::= 100
id-FACH-ParametersList-CTChreconf-Req-FDD	INTEGER ::= 101
id-FACH-ParametersList-CTChreconf-Req-TTD	INTEGER ::= 102
id-FACH-ParametersListItem-CTChreconf-Req-FDD	INTEGER ::= 103
id-FACH-ParametersListItem-CTChreconf-Req-TTD	INTEGER ::= 104
id-FACH-ParametersListItem-CTChsetup-Req-FDD	INTEGER ::= 105
id-FACH-ParametersListItem-CTChsetup-Response	INTEGER ::= 106
id-GapStartingSlotNumber	INTEGER ::= 107
id-IndicationType	INTEGER ::= 108
id-Local-Cell-Information-ResourceStatIndItem	INTEGER ::= 109
id-Local-CellInformation-ResourceStatIndItem	INTEGER ::= 110
id-LocalCell-ID	INTEGER ::= 111
id-LocalCell-InformationItem	INTEGER ::= 112
id-LocalCellInformationList	INTEGER ::= 113
id-MIB-SegmentInformationItem	INTEGER ::= 114
id-MIB-SegmentInformationList	INTEGER ::= 115
id-MaximumTransmissionPower	INTEGER ::= 116
id-MeasuredCellInfo	INTEGER ::= 117
id-Measurement Characteristics-FilterCoefficient	INTEGER ::= 118
id-MeasurementID	INTEGER ::= 119
id-MeasurementType	INTEGER ::= 120
id-NeighbouringFDD-Cell-InformationItem	INTEGER ::= 121
id-NeighbouringTDD-Cell-InformationItem	INTEGER ::= 122
id-NodeB-CommunicationContextID	INTEGER ::= 123
id-PCCPCH-Information	INTEGER ::= 124
id-PCH-Information-ResourceStatIndItem	INTEGER ::= 125
id-PCH-InformationItem	INTEGER ::= 126
id-PCH-ListItem	INTEGER ::= 127
id-PCH-Parameters-CTChreconf-Req-FDD	INTEGER ::= 128
id-PCH-ParametersList	INTEGER ::= 129
id-PCH-ParametersListItem	INTEGER ::= 130
id-PICH-Parameters-CTChreconf-Req-FDD	INTEGER ::= 131
id-PRACH-ParametersList	INTEGER ::= 132
id-PRACH-ParametersListItem	INTEGER ::= 133
id-PSCH-Information	INTEGER ::= 134
id-PSCHandPCCPCH-Information	INTEGER ::= 135
id-PUSCH-ListItem	INTEGER ::= 136
id-PatternDuration	INTEGER ::= 137
id-PowerControlMode	INTEGER ::= 138
id-PowerResumeMode	INTEGER ::= 139
id-PrimaryCCPCH-Information	INTEGER ::= 140
id-PrimaryCPICH-Information	INTEGER ::= 141
id-PrimarySCH-Information	INTEGER ::= 142
id-PrimaryScramblingCode	INTEGER ::= 143
id-ProcedureScopeType	INTEGER ::= 144
id-RACH-Information-ResourceStatIndItem	INTEGER ::= 145
id-RACH-InformationItem	INTEGER ::= 146

id-RL-ID	INTEGER ::= 147
id-RL-Information	INTEGER ::= 148
id-RL-Information-DMeasureReportItem	INTEGER ::= 149
id-RL-Information-DMeasureRequestItem	INTEGER ::= 150
id-RL-Information-DMeasureResponseItem	INTEGER ::= 151
id-RL-Information-RL-ReconfPrepFDDItem	INTEGER ::= 152
id-RL-Information-RL-SetupReqFDDItem	INTEGER ::= 153
id-RL-InformationItem	INTEGER ::= 154
id-RL-InformationItem-RL-SetupReqTDD	INTEGER ::= 155
id-RL-InformationList	INTEGER ::= 156
id-RL-InformationList-RL-ReconfReqFDD	INTEGER ::= 157
id-RL-InformationList-RL-SetupReqFDD	INTEGER ::= 158
id-RL-InformationResponse-RL-setupResFDDItem	INTEGER ::= 159
id-RL-InformationResponseItem-RL-ReconfResp	INTEGER ::= 160
id-RL-InformationResponseList-RL-ReconfReady	INTEGER ::= 161
id-RL-InformationResponseList-RL-ReconfReadyItem	INTEGER ::= 162
id-RL-InformationResponseList-RL-ReconfResp	INTEGER ::= 163
id-RL-InformationResponseList-RL-setupResFDD	INTEGER ::= 164
id-RL-InformationResponseList-RL-setupResTDD	INTEGER ::= 165
id-RL-ReconfigurationFailure-RL-ReconfFailItem	INTEGER ::= 166
id-RL-ReconfigurationFailureList-RL-ReconfFail	INTEGER ::= 167
id-RL-ResponseInformation	INTEGER ::= 168
id-RL-ResponseInformationItem	INTEGER ::= 169
id-RL-ResponseInformationList	INTEGER ::= 170
id-RL-informationItem	INTEGER ::= 171
id-RL-informationList	INTEGER ::= 172
id-RadioLinkInformation-RL-ReconfPrepFDDItem	INTEGER ::= 173
id-RadioLinkInformation-RL-ReconfPrepTDD	INTEGER ::= 174
id-RadioLinkInformation-RL-ReconfReqTDD	INTEGER ::= 175
id-RadioLinkInformationList-RL-ReconfPrepFDD	INTEGER ::= 176
id-ReportCharacteristics	INTEGER ::= 177
id-SFN	INTEGER ::= 178
id-SIB-SegmentInformationItem	INTEGER ::= 179
id-SIB-SegmentInformationList	INTEGER ::= 180
id-ScramblingCodeChange	INTEGER ::= 181
id-Secondary-CCPCHListItem	INTEGER ::= 182
id-SecondaryCPICH-Information	INTEGER ::= 183
id-SecondarySCH-Information	INTEGER ::= 184
id-ShutdownTimer	INTEGER ::= 185
id-Successful-RL-InformationResponse-RL-SetupFailFDDItem	INTEGER ::= 186
id-Successful-RL-InformationResponseItem	INTEGER ::= 187
id-Successful-RL-InformationResponseList	INTEGER ::= 188
id-Successful-RL-InformationResponseList-RL-SetupFailFDD	INTEGER ::= 189
id-SynchronisationMethod	INTEGER ::= 190
id-T-Cell	INTEGER ::= 191
id-TDDChipOffset	INTEGER ::= 192
id-TimeSlotConfigurationItem	INTEGER ::= 193
id-TimeSlotConfigurationList	INTEGER ::= 194
id-TransmissionGapDistance	INTEGER ::= 195
id-TransmissionGapPeriod	INTEGER ::= 196
id-TransmitGapLength	INTEGER ::= 197
id-TransmitGapPositionMode	INTEGER ::= 198
id-UARFCN	INTEGER ::= 199
id-UC-ID	INTEGER ::= 200
id-UL-CCTrCH-Information-RL-ReconfPrepTDDItem	INTEGER ::= 201
id-UL-CCTrCH-Information-RL-ReconfReqTDDItem	INTEGER ::= 202
id-UL-CCTrCH-Information-RL-SetupReqTDDItem	INTEGER ::= 203
id-UL-CCTrCH-InformationItemIE	INTEGER ::= 204
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD	INTEGER ::= 205
id-UL-CCTrCH-InformationList-RL-ReconfReqTDD	INTEGER ::= 206
id-UL-CCTrCH-InformationList-RL-SetupReqTDD	INTEGER ::= 207
id-UL-CCTrCHInformation	INTEGER ::= 208
id-UL-CCTrCHInformationList	INTEGER ::= 209
id-UL-DPCH-Information-RL-ReconfPrepFDD	INTEGER ::= 210
id-UL-DPCH-Information-RL-ReconfPrepTDDItem	INTEGER ::= 211
id-UL-DPCH-Information-RL-SetupReqTDDItem	INTEGER ::= 212
id-UL-DPCH-InformationItem-RL-ReconfReqFDD	INTEGER ::= 213
id-UL-DPCH-InformationItem-RL-SetupReqFDD	INTEGER ::= 214
id-UL-DPCH-InformationItemIE	INTEGER ::= 215
id-USCH-Information-ResourceStatIndItem	INTEGER ::= 216
id-USCH-InformationItem	INTEGER ::= 217
id-USCH-ListItem-CTCHsetup-Req-TDD	INTEGER ::= 218
id-Unsuccessful-RL-InformationResponse	INTEGER ::= 219
id-Unsuccessful-RL-InformationResponse-RL-SetupFailFDDItem	INTEGER ::= 220
id-Unsuccessful-RL-InformationResponseItem	INTEGER ::= 221
id-Unsuccessful-RL-InformationResponseItem-RL-SetupFailTDD	INTEGER ::= 222
id-Unsuccessful-RL-InformationResponseList	INTEGER ::= 223
id-Unsuccessful-RL-InformationResponseList-RL-SetupFailFDD	INTEGER ::= 224

END

3GPP TSG-RAN Working Group Meeting #11
Nice, France, 28th February – 3rd March 2000

Document **R3-000494**

e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.433 CR 19 R1

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **TSG RAN #7**

list expected approval meeting # here

↑

for approval

for information

Strategic

non-strategic (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: RAN-WG3 **Date:** Feb , 2000

Subject: Update of System Information procedure description text and correction of Information Element is SYSTEM INFORMATION UPDATE message. This CR is used to make necessary updates to align with TS 25.331.

Work item:

Category: F Correction **Release:** Phase 2
(only one category shall be marked with an X) A Corresponds to a correction in an earlier release Release 96
B Addition of feature Release 97
C Functional modification of feature Release 98
D Editorial modification Release 99
Release 00

Reason for change: Revision 19 R1:
25.331 v 3.1.0 replaces the Expiration timer with a timer equal to the repetition period. SIBs for ANSI-41 and TDD specific information has been added. Update needed on value range for IEs *IB_SG_REP* and *IB_SG_POS*.

Revision 19:
Further extension of CR19 to include a description on the order of the segments included in the lub message and optimise the message size.
All changes made in 19.2 to 19.1 are marked with yellow.

Clauses affected: 8.2.16, 9.1.32, 9.2.1.29, 9.2.1.30, 9.2.1.31, 9.2.1.32, 9.2.1.49, 9.3.3., 9.3.4

Other specs affected: Other 3G core specifications → List of CRs:
Other GSM core specifications → List of CRs:
MS test specifications → List of CRs:
BSS test specifications → List of CRs:
O&M specifications → List of CRs:

Other comments:

8.2.16 System Information Update

8.2.16.1 General

The System Information Update procedure performs the scheduling and provision of system information segments broadcast on the BCCH, to the Node B.

8.2.16.2 Successful Operation

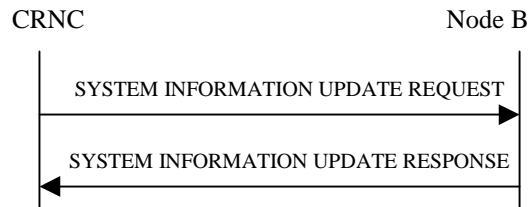


Figure 1: System Information Update: Successful Case

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

If the SYSTEM INFORMATION UPDATE REQUEST message includes segments of a certain MIB/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).

If the SYSTEM INFORMATION UPDATE message includes the BCCH Modification Time IE, the new segments provided 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 new segments shall be applied as soon as possible.

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 SIB SG REP IE and SIB SG POS IE such that:

$$- \text{SFN mod IB_SG_REP} = \text{IB_SG_POS}$$

If the SYSTEM INFORMATION UPDATE REQUEST message contains Master Information Block (MIB) segments in addition to SIB segments, the MIB segments shall be updated last in the physical channel scheduling cycle by the Node B.

The Segment Type IE shall be used by the Node B to concatenate several segments into one BCH transport block. The allowed combinations of concatenation are specified in TS 25.331.

If the SIB Deletion Indicator IE value is set to 'Deletion' the Node B shall delete the SIB of the type indicated by the SIB Type IE from the transmission schedule on BCCH.

If the SIB Originator IE value is set to 'NodeB' 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 NodeB can obtain on its own, ~~and use the expiration timer feature.~~

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

8.2.16.3 Unsuccessful Operation

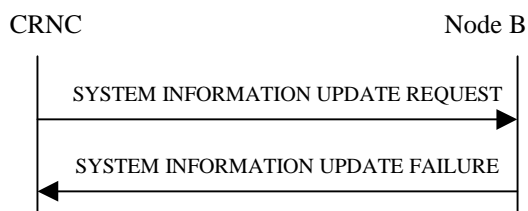


Figure 2: System Information Update: Unsuccessful Case

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. 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.

-Possible cause values are:

- Insufficient physical channel resources
- Hardware failure
- Processor overload
- C-ID not defined
- O&M Intervention
- Unspecified failure
- SIB origination in Node B not supported

In this 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

-

9.1.32 SYSTEM INFORMATION UPDATE REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator	M			
Message Type	M			
Transaction ID	M			
C-ID	M			
BCCH Modification Time	O			
MIB/SIBInformation		1.. maxIB		
IB Type	M			In one message, every IB Type can only be indicated once.
SIB Deletion Indicator	C-NotMIB			
CHOICE <i>DeletionIndicator</i> <i>NoDeletion</i>				
SIB Originator	C-NotMIB			
Segment Information		1.. maxIBSEG		
Segment Type	M			
IB SG REP	M			
IB SG POS	M			
IB SG DATA	C – CRNCOrig ination			

Range bound	Explanation
1..maxIB	Maximum number of information Blocks supported in a physical channel scheduling cycle
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'
NotMIB	This IE shall be present if the IB Type is not equal to "MIB"

9.2.1.29 IB_SG_DATA

Segment which is part of an Information Block.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
IB SG DATA			Bit String	"SIB data" in segment as Contents defined in ref:25.331.

9.2.1.30 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.. $2^{12}-1$ 2046)	Only even positions allowed. Reference TS 25.331

9.2.1.31 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			INTEGER (4, 8, 16, 32, 64, 128, 256, 512, 1024,2048)	Repetition period for the IB segment in frames

9.2.1.32 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, SIB1, SIB2,... SIB12,... SIB3, SIB4, SIB5, SIB6, SIB7, SIB8, SIB9, SIB10, SIB11, SIB12, SIB13, SIB13.1 SIB13.2, SIB13.3, SIB13.4, SIB14,...)	Complete R99 SIB range still TBD.

9.2.1.49 Segment Type

Indicates the type of segment of the SIB.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Segment Type	■	■	Enumerated (First, Subsequent, Last, Complete)	

9.3.3 NBAP PDU Content Definitions

```

-- *****
--
-- 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 ignore          TYPE C-ID          PRESENCE
    mandatory }|
    { ID id-BCCH-ModificationTime          CRITICALITY ignore          TYPE BCCH-ModificationTime
    PRESENCE mandatory }|
    { ID id-MIB-SIB-InformationList-SystemInfoUpdate          CRITICALITY ignore          TYPE MIB-SIB-
    InformationList-SystemInfoUpdate
    PRESENCE optional
    },
    ...
}

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

MIB-SIB-InformationList-SystemInfoUpdate ::= SEQUENCE (SIZE (1..maxIB)) OF
    ProtocolIE-Container{{ MIB-SIB-InformationList-SystemInfoUpdateItemIE }}

MIB-SIB-InformationList-SystemInfoUpdateItemIE NBAP-PROTOCOL-IES ::= {
    { ID id-MIB-SIB-InformationList-SystemInfoUpdateItem          CRITICALITY          ignore          TYPE          MIB-
    SIB-InformationList-SystemInfoUpdateItem          PRESENCE          optional
    },
    ...
}

MIB-SIB-InformationList-SystemInfoUpdateItem ::= SEQUENCE {
    iB-Type          IB-Type,
    sIB-DeletionIndicator          SIB-DeletionIndicator-SystemInfoUpdate
}

SIB-DeletionIndicator-SystemInfoUpdate ::= ENUMERATED {
    no-Delition          No-Delitionist-SystemInfoUpdate
}

No-DelitionList-SystemInfoUpdate ::= SEQUENCE (SIZE (1..maxIBSEG)) OF
    ProtocolIE-Container{{ No-DelitionList-SystemInfoUpdateItemIE }}

No-DelitionList-SystemInfoUpdateItemIE NBAP-PROTOCOL-IES ::= {
    { ID id- No-DelitionList-SystemInfoUpdate          CRITICALITY ignore          TYPE No-DelitionList-
    SystemInfoUpdate          PRESENCE optional
    },
    ...
}

No-DelitionList-SystemInfoUpdate ::= SEQUENCE {
    sIB-Originator          sIB-Originator          OPTIONAL,
    segmentInformation          SegmentInformation-SystemInfoUpdate
}

SegmentInformation-SystemInfoUpdate ::= SEQUENCE (SIZE (1..maxIBSEG)) OF
    ProtocolIE-Container{{ SegmentInformation-SystemInfoUpdateItemIE }}

SegmentInformation-SystemInfoUpdateItemIE NBAP-PROTOCOL-IES ::= {
    { ID id- SegmentInformation-SystemInfoUpdateItem          CRITICALITY ignore          TYPE
    SegmentInformation-SystemInfoUpdateItem          PRESENCE          optional
    },
    ...
}

```

```
| SegmentInformation-SystemInfoUpdateItem ::= SEQUENCE {  
| segmentType SegmentType,  
| iB-SG-REP IB-SG-REP,  
| iB-SG-POS IB-SG-POS,  
| iB-SG-DATA IB-SG-DATA OPTIONAL  
| }
```

9.3.4 NBAP Information Elements

```

--*****
--
-- Information Element Definitions
--
--*****

-----
-- I
-----

-- to do
| IB-SG-DATA ::= BIT STRING
| IB-SG-POS ::= INTEGER (0..40952046) -- Only even positions allowed
| IB-SG-REP ::= ENUMERATEDINTEGER {rep4, rep8, rep(16), rep(32), rep(64), rep(128), rep(256),
| rep(512), rep(1024), rep(2048)}
| IB-Type :: ENUMERATEDEnumerated {
MIB,
SIB1,
SIB2,
SIB3,
SIB4,
SIB5,
SIB6,
SIB7,
SIB8,
SIB9,
SIB10,
SIB11,
SIB12,
SIB13,
SIB13.1,
SIB13.2,
SIB13.3,
SIB13.4,
SIB14,
...}

IndicationType ::= ENUMERATED {
noFailure,
serviceImpacting,
cellControl,
...
}

```

```

-----
-- S
-----

ScramblingCodeChange ::= ENUMERATED {
change,
no-change
}

Scrambling Code Word Number ::= INTEGER (0..255)

SecondaryCCPCH-SlotFormat ::= INTEGER(0..8)

SegmentType ::= ENUMERATED {
first,
subsequent,
last,
complete
}

SemiStaticTransportFormatInformation ::= SEQUENCE {
transmissionTimeInterval      TransmissionTimeInterval,
typeOfChannelCoding          TypeOfChannelCoding,
codingRate                    CodingRate      OPTIONAL
-- This IE is only present if IE Type of channel coding is Convolutional or Turbo --,
rateMatchingAttribute        RateMatchingAttribute,
cRC-Size                      CRC-Size,
mode-semistatic              Mode-SemiStatic
}

S-FieldLength ::= ENUMERATED {
s-length1,
s-length2
}

SIB-DeletionIndicator ::= ENUMERATED {
noDeletion,
deletion
}

SIB-Originator ::= ENUMERATED {
nodeB,
cRNC
}

--** TODO. -10..10 is transformed to 0..10. 0.1 steps gives 0..200 **
-- sir-error-value1 indicates 0 dB
SIR-ErrorValue ::= ENUMERATED {
sir-error-value1,
sir-error-value2,
...
}

--** TODO. -10..20 is transformed to 0..30. 0.1 steps gives 0..300 **
-- sir-value1 indicates 0 dB
SIR-Value ::= ENUMERATED {
sir-value1,
sir-value2,
...
}

SSDT-CellIdentity ::= ENUMERATED {a, b, c, d, e, f, g, h}

SSDT-Indication ::= ENUMERATED {
ssdtActiveInTheUE,
ssdtNotActiveInTheUE
}

STTD-Indicator ::= ENUMERATED {
active,
inactive
}

SSDT-SupportIndicator ::= ENUMERATED {
sSDT-not-supported,
sSDT-Supported
}

```

```
}
```

```
ShutdownTimer ::= INTEGER (1..3600)
```

```
SynchronisationMethod ::= ENUMERATED {  
external-reference,  
locked-toMaster-cell,  
one-time-synchronisation  
}
```