

ETSI TS 125 433 V3.1.0 (2000-03)

Technical Specification

Universal Mobile Telecommunications System (UMTS); UTRAN Iub interface NBAP signalling (3G TS 25.433 version 3.1.0 Release 1999)



Reference

RTS/TSGR-0325433UR1

Keywords

UMTS

ETSI

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Sous-Préfecture de Grasse (06) N° 7803/88

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Contents

Foreword.....	11
1 Scope.....	12
2 References.....	12
3 Definitions, symbols and abbreviations.....	12
3.1 Definitions.....	12
3.2 Symbols.....	13
3.3 Abbreviations.....	13
4 General.....	14
4.1 Procedure Specification Principles.....	14
4.2 Forwards and Backwards Compatibility.....	14
5 NBAP Services.....	14
5.1 Parallel Transactions.....	14
6 Services Expected from Signalling Transport.....	14
7 Functions of NBAP.....	14
8 NBAP Procedures.....	16
8.1 Elementary Procedures.....	16
8.2 NBAP Common Procedures.....	18
8.2.1 Common Transport Channel Setup.....	18
8.2.1.1 General.....	18
8.2.1.2 Successful Operation.....	18
8.2.1.3 Unsuccessful Operation.....	19
8.2.1.4 Abnormal Conditions.....	20
8.2.2 Common Transport Channel Reconfiguration.....	20
8.2.2.1 General.....	20
8.2.2.2 Successful Operation.....	20
8.2.2.3 Unsuccessful Operation.....	21
8.2.2.4 Abnormal Conditions.....	22
8.2.3 Common Transport Channel Deletion.....	22
8.2.3.1 General.....	22
8.2.3.2 Successful Operation.....	22
8.2.3.3 Unsuccessful Operation.....	23
8.2.3.4 Abnormal Conditions.....	23
8.2.4 Block Resource.....	23
8.2.4.1 General.....	23
8.2.4.2 Successful Operation.....	23
8.2.4.3 Unsuccessful Operation.....	24
8.2.4.4 Abnormal Conditions.....	25
8.2.5 Unblock Resource.....	25
8.2.5.1 General.....	25
8.2.5.2 Successful Operation.....	25
8.2.5.3 Abnormal Conditions.....	25
8.2.6 Audit Required.....	25
8.2.6.1 General.....	25
8.2.6.2 Successful Operation.....	25
8.2.6.3 Abnormal Conditions.....	26
8.2.7 Audit.....	26
8.2.7.1 General.....	26
8.2.7.2 Successful Operation.....	26
8.2.7.3 Unsuccessful Operation.....	26
Abnormal Conditions.....	27
8.2.8 Common Measurement Initiation.....	27
8.2.8.1 General.....	27
8.2.8.2 Successful Operation.....	27

8.2.8.3	Unsuccessful Operation.....	28
	Abnormal Conditions.....	29
8.2.9	Common Measurement Reporting	29
8.2.9.1	General	29
8.2.9.2	Successful Operation	29
8.2.9.3	Abnormal Conditions	29
8.2.10	Common Measurement Termination.....	29
8.2.10.1	General	29
8.2.10.2	Successful Operation	29
8.2.10.3	Abnormal Conditions	30
8.2.11	Common Measurement Failure.....	30
8.2.11.1	General	30
8.2.11.2	Successful Operation	30
8.2.11.3	Abnormal Conditions	30
8.2.12	Cell Setup	30
8.2.12.1	General	30
8.2.12.2	Successful Operation	30
8.2.12.3	Unsuccessful Operation.....	31
8.2.12.4	Abnormal Conditions	31
8.2.13	Cell Reconfiguration	31
8.2.13.1	General	31
8.2.13.2	Successful Operation	32
8.2.13.3	Unsuccessful Operation.....	33
8.2.13.4	Abnormal Conditions	33
8.2.14	Cell Deletion	33
8.2.14.1	General	33
8.2.14.2	Successful Operation	33
8.2.14.3	Unsuccessful Operation.....	34
8.2.14.4	Abnormal Conditions	34
8.2.15	Resource Status Indication	34
8.2.15.1	General	34
8.2.15.2	Successful Operation	34
8.2.15.3	Abnormal Conditions	35
8.2.16	System Information Update	35
8.2.16.1	General	35
8.2.16.2	Successful Operation	35
8.2.16.3	Unsuccessful Operation.....	36
8.2.16.4	Abnormal Conditions	36
8.2.17	Radio Link Setup.....	37
8.2.17.1	General	37
8.2.17.2	Successful Operation	37
8.2.17.3	Unsuccessful Operation.....	39
8.2.17.4	Abnormal Conditions	39
8.2.18	Physical Shared Channel Reconfiguration [TDD]	39
8.2.18.1	General	39
8.2.18.2	Successful Operation	40
8.2.18.3	Unsuccessful Operation.....	40
8.2.18.4	Abnormal Conditions	41
8.3	NBAP Dedicated Procedures.....	41
8.3.1	Radio Link Addition.....	41
8.3.1.1	General	41
8.3.1.2	Successful Operation	41
8.3.1.3	Unsuccessful Operation.....	42
8.3.1.4	Abnormal conditions	43
8.3.2	Synchronised Radio Link Reconfiguration Preparation.....	43
8.3.2.1	General	43
8.3.2.2	Successful Operation	43
8.3.2.3	Unsuccessful Operation.....	46
8.3.2.4	Abnormal Conditions	46
8.3.3	Synchronised Radio Link Reconfiguration Commit	47
8.3.3.1	General	47
8.3.5.2	Successful Operation	47
8.3.5.3	Abnormal Conditions	47

8.3.4	Synchronised Radio Link Reconfiguration Cancellation	47
8.3.4.1	General	47
8.3.4.2	Successful Operation	47
8.3.4.3	Abnormal Conditions	47
8.3.5	Unsynchronised Radio Link Reconfiguration	48
8.3.5.1	General	48
8.3.5.2	Successful Operation	48
8.3.5.3	Unsuccessful Operation	50
8.3.5.4	Abnormal Conditions	51
8.3.6	Radio Link Deletion	51
8.3.6.1	General	51
8.3.6.2	Successful Operation	51
8.3.6.3	Unsuccessful Operation	51
8.3.6.4	Abnormal Conditions	51
8.3.7	Downlink Power Control [FDD]	51
8.3.7.1	General	51
8.3.7.2	Successful Operation	52
8.3.7.3	Abnormal Conditions	52
8.3.8	Dedicated Measurement Initiation	52
8.3.8.1	General	52
8.3.8.2	Successful Operation	52
8.3.8.3	Unsuccessful Operation	54
8.3.8.4	Abnormal Conditions	55
8.3.9	Dedicated Measurement Reporting	55
8.3.9.1	General	55
8.3.9.2	Successful Operation	55
8.3.9.3	Abnormal Conditions	55
8.3.10	Dedicated Measurement Termination	55
8.3.10.1	General	55
8.3.10.2	Successful Operation	55
8.3.10.3	Abnormal Conditions	56
8.3.11	Dedicated Measurement Failure	56
8.3.11.1	General	56
8.3.11.2	Successful Operation	56
8.3.11.3	Abnormal Conditions	56
8.3.12	Radio Link Failure	56
8.3.12.1	General	56
8.3.12.2	Successful Operation	56
8.3.12.3	Abnormal Conditions	57
8.3.13	Radio Link Restoration	57
8.3.13.1	General	57
8.3.13.2	Successful Operation	57
8.3.13.3	Abnormal Condition	58
8.3.14	Compressed Mode Preparation [FDD]	58
8.3.14.1	General	58
8.3.14.2	Successful Operation	58
8.3.14.3	Unsuccessful Operation	58
8.3.14.4	Abnormal Conditions	58
8.3.15	Compressed Mode Commit [FDD]	59
8.3.15.1	General	59
8.3.15.2	Successful Operation	59
8.3.15.3	Abnormal Conditions	59
8.3.16	Compressed Mode Cancellation [FDD]	59
8.3.16.1	General	59
8.3.16.2	Successful Operation	59
8.3.16.3	Abnormal Conditions	59
8.4	Error Handling Procedures	60
8.4.1	Error Indication	60
8.4.1.1	General	60
8.4.1.2	Successful Operation	60
8.4.1.3	Abnormal Conditions	60

9	Elements for NBAP communication	61
9.1	Message functional definition and content	61
9.1.1	Message Contents.....	61
9.1.1.1	Presence.....	61
9.1.1.2	Criticality	61
9.1.2	COMMON TRANSPORT CHANNEL SETUP REQUEST	62
9.1.2.1	FDD Message	62
9.1.2.2	TDD Message.....	64
9.1.3	COMMON TRANSPORT CHANNEL SETUP RESPONSE	66
9.1.4	COMMON TRANSPORT CHANNEL SETUP FAILURE	66
9.1.5	COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST.....	67
9.1.5.1	FDD Message	67
9.1.5.2	TDD Message.....	68
9.1.6	COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE.....	69
9.1.7	COMMON TRANSPORT CHANNEL RECONFIGURATION FAILURE.....	69
9.1.8	COMMON TRANSPORT CHANNEL DELETION REQUEST	69
9.1.9	COMMON TRANSPORT CHANNEL DELETION RESPONSE.....	70
9.1.10	BLOCK RESOURCE REQUEST	70
9.1.11	BLOCK RESOURCE RESPONSE.....	70
9.1.12	BLOCK RESOURCE FAILURE.....	70
9.1.13	UNBLOCK RESOURCE INDICATION	70
9.1.14	AUDIT REQUIRED INDICATION.....	71
9.1.15	AUDIT REQUEST	71
9.1.16	AUDIT RESPONSE	72
9.1.17	COMMON MEASUREMENT INITIATION REQUEST.....	75
9.1.18	COMMON MEASUREMENT INITIATION RESPONSE.....	75
9.1.19	COMMON MEASUREMENT INITIATION FAILURE.....	75
9.1.20	COMMON MEASUREMENT REPORT	76
9.1.21	COMMON MEASUREMENT TERMINATION REQUEST.....	76
9.1.22	COMMON MEASUREMENT FAILURE INDICATION.....	76
9.1.23	CELL SETUP REQUEST.....	77
9.1.23.1	FDD Message	77
9.1.23.2	TDD Message.....	78
9.1.24	CELL SETUP RESPONSE.....	78
9.1.25	CELL SETUP FAILURE.....	79
9.1.26	CELL RECONFIGURATION REQUEST	79
9.1.26.1	FDD Message	79
9.1.26.2	TDD Message.....	80
9.1.27	CELL RECONFIGURATION RESPONSE	80
9.1.28	CELL RECONFIGURATION FAILURE	80
9.1.29	CELL DELETION REQUEST	80
9.1.30	CELL DELETION RESPONSE	81
9.1.31	RESOURCE STATUS INDICATION	82
9.1.32	SYSTEM INFORMATION UPDATE REQUEST.....	85
9.1.33	SYSTEM INFORMATION UPDATE RESPONSE.....	86
9.1.34	SYSTEM INFORMATION UPDATE FAILURE.....	86
9.1.35	RADIO LINK SETUP REQUEST	87
9.1.35.1	FDD message.....	87
9.1.35.2	TDD message	89
9.1.36	RADIO LINK SETUP RESPONSE.....	91
9.1.36.1	FDD message.....	91
9.1.36.2	TDD Message.....	92
9.1.37	RADIO LINK SETUP FAILURE.....	93
9.1.37.1	FDD Message	93
9.1.37.2	TDD Message.....	94
9.1.38	RADIO LINK ADDITION REQUEST	95
9.1.38.1	FDD Message	95
9.1.38.2	TDD Message.....	96
9.1.39	RADIO LINK ADDITION RESPONSE	97
9.1.39.1	FDD message.....	97
9.1.39.2	TDD Message.....	98
9.1.40	RADIO LINK ADDITION FAILURE	99
9.1.40.1	FDD Message	99

9.1.40.2	TDD Message	99
9.1.41	RADIO LINK RECONFIGURATION PREPARE	100
9.1.41.1	FDD Message	100
9.1.41.2	TDD Message	102
9.1.42	RADIO LINK RECONFIGURATION READY	105
9.1.43	RADIO LINK RECONFIGURATION FAILURE	106
9.1.44	RADIO LINK RECONFIGURATION COMMIT	106
9.1.45	RADIO LINK RECONFIGURATION CANCEL	106
9.1.46	RADIO LINK RECONFIGURATION REQUEST	107
9.1.46.1	FDD Message	107
9.1.46.2	TDD Message	109
9.1.47	RADIO LINK RECONFIGURATION RESPONSE	111
9.1.48	RADIO LINK DELETION REQUEST	113
9.1.49	RADIO LINK DELETION RESPONSE	113
9.1.50	DL POWER CONTROL REQUEST [FDD]	113
9.1.51	DEDICATED MEASUREMENT INITIATION REQUEST	115
9.1.52	DEDICATED MEASUREMENT INITIATION RESPONSE	116
9.1.53	DEDICATED MEASUREMENT INITIATION FAILURE	116
9.1.54	DEDICATED MEASUREMENT REPORT	117
9.1.55	DEDICATED MEASUREMENT TERMINATION REQUEST	117
9.1.56	DEDICATED MEASUREMENT FAILURE INDICATION	118
9.1.57	RADIO LINK FAILURE INDICATION	118
9.1.58	RADIO LINK RESTORE INDICATION	119
9.1.59	COMPRESSED MODE PREPARE [FDD]	120
9.1.60	COMPRESSED MODE READY [FDD]	120
9.1.61	COMPRESSED MODE COMMIT [FDD]	121
9.1.62	COMPRESSED MODE FAILURE [FDD]	121
9.1.63	COMPRESSED MODE CANCEL [FDD]	121
9.1.64	ERROR INDICATION	122
9.1.65	PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST [TDD]	122
9.1.66	PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE [TDD]	124
9.1.67	PHYSICAL SHARED CHANNEL RECONFIGURATION FAILURE [TDD]	124
9.2	Information Element Functional Definition and Contents	124
9.2.1	Common parameters	124
9.2.1.1	Add/Delete Indicator	124
9.2.1.2	Availability Status	124
9.2.1.3	BCCH Modification Time	125
9.2.1.4	Binding ID	125
9.2.1.5	Blocking Priority Indicator	125
9.2.1.6	Cause	126
9.2.1.7	CFN	126
9.2.1.8	C-ID	127
9.2.1.9	Common Measurement Object Type	127
9.2.1.10	Common Measurement Type	127
9.2.1.11	Common Measurement Value	127
9.2.1.12	Common Physical Channel Id	128
9.2.1.13	Common Transport Channel Id	128
9.2.1.14	Communication Control Port ID	128
9.2.1.15	Configuration Generation ID	128
9.2.1.16	Criticality diagnostics	129
9.2.1.17	CRNC Communication Context ID	129
9.2.1.18	DCH Combination Indicator	129
9.2.1.19	DCH ID	130
9.2.1.20	DL Power	130
9.2.1.21	Dedicated Measurement Object Type	130
9.2.1.22	Dedicated Measurement Type	130
9.2.1.23	Dedicated Measurement Value	130
9.2.1.24	DSCH ID	131
9.2.1.25	DSCH Transport Format Set	131
9.2.1.26	DSCH Transport Format Combination Set	131
9.2.1.27	Frame Handling Priority	131
9.2.1.28	Frame Offset	132
9.2.1.29	IB_SG_DATA	132

9.2.1.30	IB_SG_POS.....	132
9.2.1.31	IB_SG_REP.....	132
9.2.1.32	IB Type.....	132
9.2.1.33	Indication Type.....	133
9.2.1.34	Local Cell ID.....	133
9.2.1.35	Maximum DL Power Capability.....	133
9.2.1.36	Maximum Transmission Power.....	133
9.2.1.37	Measurement ID.....	134
9.2.1.39	Report Characteristics.....	134
9.2.1.40	Message discriminator.....	136
9.2.1.41	Message Type.....	136
9.2.1.42	Minimum Spreading Factor.....	137
9.2.1.43	Node B Communication Context ID.....	138
9.2.1.44	Payload CRC presence Indicator.....	138
9.2.1.45	Puncture limit.....	138
9.2.1.46	Resource Operational State.....	138
9.2.1.47	Limited Power Increase.....	138
9.2.1.48	RL ID.....	139
9.2.1.49	SIB Deletion Indicator.....	139
9.2.1.50	SIB Originator.....	139
9.2.1.51	Shutdown Timer.....	139
9.2.1.52	TFCI Presence.....	139
9.2.1.53	TFCS (Transport Format Combination Set).....	140
9.2.1.54	Transport Format Set.....	142
9.2.1.55	ToAWE.....	143
9.2.1.56	ToAWS.....	144
9.2.1.57	Transaction ID.....	144
9.2.1.58	Transport Layer Address.....	144
9.2.1.59	UARFCN.....	144
9.2.1.60	UL FP mode.....	144
9.2.1.61	UL interference level.....	145
9.2.1.62	CFN Offset <new section>.....	145
9.2.1.63	TSTD Indicator.....	145
9.2.1.64	Diversity Control Field.....	145
9.2.1.65	Diversity Indication.....	145
9.2.1.66	Measurement Filter Coefficient.....	146
9.2.1.67	Measurement Threshold.....	146
9.2.1.68	Measurement Increase/Decrease Threshold.....	146
9.2.2	FDD specific parameters.....	147
9.2.2.1	AICH Transmission Timing.....	147
9.2.2.2	Chip Offset.....	147
9.2.2.3	Compressed mode method.....	148
9.2.2.4	D-Field Length.....	148
9.2.2.5	Diversity mode.....	148
9.2.2.6	DL DPCH Slot Format.....	148
9.2.2.7	DL frame type.....	148
9.2.2.8	DL Scrambling Code.....	149
9.2.2.9	Multiplexing Position.....	149
9.2.2.10	FDD DL Channelisation Code Number.....	149
9.2.2.11	FDD TPC DL step size.....	149
9.2.2.12	FDD S-CCPCH Offset.....	149
9.2.2.13	150	
9.2.2.14	Gap Period.....	150
9.2.2.15	Gap Position Mode.....	150
9.2.2.16	Maximum Number of UL DPDCHs.....	150
9.2.2.17	Minimum UL Channelisation Code Length.....	150
9.2.2.18	Pattern Duration (PD).....	150
9.2.2.19	PICH Mode.....	150
9.2.2.20	Power Control Mode.....	151
9.2.2.21	Power Offset.....	151
9.2.2.22	Power Resume Mode.....	151
9.2.2.23	Preamble Signature.....	151
9.2.2.24	Primary Scrambling code.....	151

9.2.2.25	Primary CPICH Power	151
9.2.2.26	Propagation Delay	152
9.2.2.27	RACH Slot Format	152
9.2.2.28	RACH sub Channel numbers	152
9.2.2.29	Scrambling code change.....	152
9.2.2.30	Scrambling Code Word Number	152
9.2.2.31	Secondary CCPCH Slot Format	152
9.2.2.32	S-Field Length.....	153
9.2.2.33	SSDT Cell Identity	153
9.2.2.34	SSDT Cell ID Length	153
9.2.2.35	SSDT Support Indicator	153
9.2.2.36	SSDT Indication	153
9.2.2.37	STTD Indicator.....	153
9.2.2.38	T_Cell.....	154
9.2.2.39	TFCI signalling mode.....	154
9.2.2.40	TGD.....	155
9.2.2.41	TGL	155
9.2.2.42	Transmit Diversity Indicator	155
9.2.2.43	UL/DL compressed mode selection:	155
9.2.2.44	UL delta SIR.....	155
9.2.2.45	UL delta SIR after	155
9.2.2.46	UL DPCCCH Slot Format.....	156
9.2.2.47	UL SIR	156
9.2.2.48	UL Scrambling Code.....	156
9.2.2.49	Preamble threshold	156
9.2.2.50	PDSCH code mapping.....	156
9.2.2.51	Power Adjustment Type.....	159
9.2.2.52	Max Adjustment Step	159
9.2.2.53	Max Adjustment Period.....	159
9.2.2.54	DL or Global Capacity Credit.....	159
9.2.2.55	UL Capacity Credit.....	160
9.2.2.56	Common Channels Capacity Consumption Law.....	160
9.2.2.57	Dedicated Channels Capacity Consumption Law.....	160
9.2.2.58	QE-Selector	161
9.2.2.59	RL Set ID.....	161
9.2.3	TDD specific Parameters	161
9.2.3.1	Burst Type	161
9.2.3.2	CCTrCH ID	161
9.2.3.3	Cell Parameter ID	162
9.2.3.4	DPCH ID	162
9.2.3.5	Max PRACH Midamble shift	162
9.2.3.6	Midamble shift.....	162
9.2.3.7	Paging Indicator Length	162
9.2.3.8	PCCPCH Power.....	162
9.2.3.9	PRACH Midamble	163
9.2.3.10	SCH Time Slot	163
9.2.3.11	Repetition Length	163
9.2.3.12	Repetition Period	163
9.2.3.13	Sync case	163
9.2.3.14	TDD Channelisation Code.....	163
9.2.3.15	TDD Physical Channel Offset	164
9.2.3.16	TDD TPC DL step size.....	164
9.2.3.17	TFCI Coding.....	164
9.2.3.18	Time Slot	164
9.2.3.19	Time Slot Direction	164
9.2.3.20	Time Slot Status	165
9.2.3.21	Transmission Diversity Applied.....	165
9.2.3.22	USCH ID	165
9.2.3.23	Block STTD Indicator	165
9.2.3.24	PDSCH Set Id.....	165
9.2.3.25	PUSCH Set Id.....	165
9.2.3.26	PDSCH ID	165
9.2.3.27	PUSCH ID	166

9.3	Message and Information element abstract syntax (with ASN.1).....	167
9.3.1	Usage of Private Message mechanism for non-standard use.....	167
9.3.2	PDU Description for NBAP.....	167
9.3.3	NBAP PDU Content Definitions.....	181
9.3.4	NBAP Information Elements	326
9.3.5	NBAP Common Data Type Definitions.....	352
9.3.6	NBAP Extension Definitions	353
9.3.7	Constant Definitions for NBAP	357
9.4	Message Transfer Syntax.....	367
9.5	Timers.....	367
10	Handling of unknown, unforeseen and erroneous protocol data	367
10.1	General.....	367
10.2	Transfer Syntax Error	367
10.3	Abstract Syntax Error	368
10.3.1	General.....	368
10.3.2	Definition of Criticality Information.....	368
10.3.3	Handling of the Criticality Information at Reception.....	368
10.3.3.1	Procedure Code	368
10.3.3.2	IEs other than the Procedure Code	369
10.4	Logical Error.....	369
Annex A (informative):	Change history.....	371

Foreword

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- 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"
- [14] 3G TS 25.104: "UTRA (BS) FDD; Radio Transmission and Reception".
- [15] 3G TS 25.105: "UTRA (BS) TDD; Radio Transmission and Reception".

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 be sorted out when discussing the details of the error cases.

Class 2 EPs are considered always successful.

Radio Link Set: A set of one or more Radio Links that has a common generation of Transmit Power Control (TPC) commands in the DL.

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

3.2 Symbols

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
DPCCH	Dedicated Physical Control Channel
DPCH	Dedicated Physical Channel
DPDCH	Dedicated Physical Data Channel
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
PDSCH	Physical Downlink Shared Channel
PUSCH	Physical Uplink Shared Channel
RL	Radio Link
RLS	Radio Link Set
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
TFCS	Transport Format Combination Set
TFS	Transport Format Set
TPC	Transmit Power Control
UE	User Equipment
UL	Uplink
USCH	Uplink Shared Channel
UTRAN	UMTS Terrestrial Radio Access Network

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:

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

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

- Compressed Mode Control [FDD]. This function allows the CRNC to control the usage of compressed mode in a Node B.
- Measurements on Dedicated Resources. This function allows the CRNC to initiate measurements in the 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 of 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)
Cell Configuration Management	a) Cell Setup b) Cell Reconfiguration c) Cell Deletion
Common Transport Channel Management	a) Common Transport Channel Setup b) Common Transport Channel Reconfiguration c) Common Transport Channel Deletion
System Information Management	System Information Update
Resource Event Management	a) Block Resource b) Unblock Resource c) Resource Status Indication
Configuration Alignment	a) Audit Required b) Audit
Measurements on Common Resources	a) Common Measurement Initiation b) Common Measurement Reporting c) Common Measurement Termination d) Common Measurement Failure
Radio Link Management.	a) RL Setup b) RL Addition c) RL Deletion d) Unsynchronised RL Reconfiguration e) Synchronised RL Reconfiguration Preparation f) Synchronised RL Reconfiguration Commit g) Synchronised RL Reconfiguration Cancellation
Radio Link Supervision.	a) RL Failure b) RL Restoration
Compressed Mode Control [FDD]	a) Compressed Mode Preparation b) Compressed Mode Commit c) Compressed Mode Cancellation
Measurements on Dedicated Resources	a) Measurement Request b) Measurement Reporting c) Measurement Termination d) Measurement Failure
DL Power Drifting Correction [FDD]	Downlink Power Control
Reporting of General Error Situations	Error Indication

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 DELETION REQUEST	CELL DELETION RESPONSE		
Common Transport Channel Setup	COMMON TRANSPORT CHANNEL SETUP REQUEST	COMMON TRANSPORT CHANNEL SETUP RESPONSE	COMMON TRANSPORT CHANNEL SETUP FAILURE	
Common Transport Channel Reconfiguration	COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST	COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE	COMMON TRANSPORT CHANNEL RECONFIGURATION FAILURE	
Common Transport Channel Deletion	COMMON TRANSPORT CHANNEL DELETION REQUEST	COMMON TRANSPORT CHANNEL DELETION RESPONSE		
Physical Shared Channel Reconfigure [TDD]	PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST	PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE	PHYSICAL SHARED CHANNEL RECONFIGURATION FAILURE	
Audit	AUDIT REQUEST	AUDIT RESPONSE		
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 [FDD]	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

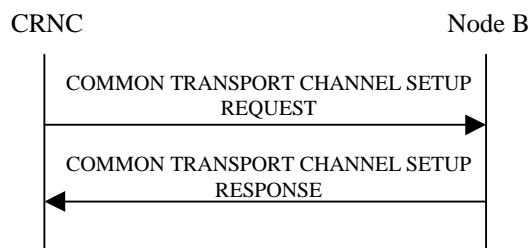


Figure 1: Common Transport Channel Setup procedure, Successful Operation

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

One message can configure only one of the following combinations:

- [FDD-one Secondary CCPCH, and FACHes, PCH and PICH related to that Secondary CCPCH], or
- [TDD- Secondary CCPCHes and FACHes, PCH 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.

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. The handling of the optional *STTD* IE is FFS.]

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

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

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

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

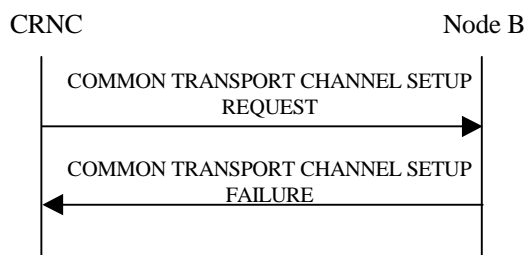


Figure 2: Common Transport Channel Setup procedure, Unsuccessful Operation

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 value of *Configuration Generation ID* IE from the COMMON TRANSPORT CHANNEL SETUP REQUEST message shall not be stored.

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

Typical cause values are as follows:

Radio Network Layer Cause

- Cell not available
- Unknown C-ID
- Power level not supported
- Node B Resources unavailable

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error

Miscellaneous Cause

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

8.2.1.4 Abnormal Conditions

-

8.2.2 Common Transport Channel Reconfiguration

8.2.2.1 General

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

8.2.2.2 Successful Operation

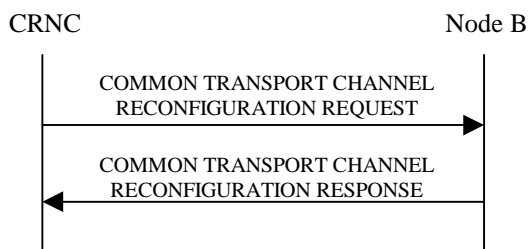


Figure 3: Common Transport Channel Reconfiguration, Successful Operation

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

[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 FACHs are present Node B reconfigures the indicated FACHs.

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

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

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

PCH: When the PCH is present Node B reconfigures the indicated PCH.

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

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

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

PICH: When a PICH is present Node B 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 value of *Configuration Generation ID* IE, and the Node B shall respond with the COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE message.

8.2.2.3 Unsuccessful Operation

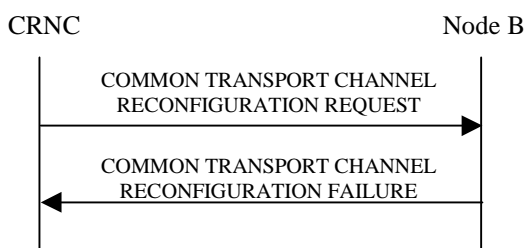


Figure 4: Common Transport Channel Reconfiguration procedure, Unsuccessful Operation

If the Node B is not able to support all 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 value of *Configuration Generation ID* IE from the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message shall not be stored.

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

Typical cause values are as follows:

Radio Network Layer Cause

- Cell not available
- Unknown C-ID
- Power level not supported
- Node B Resources unavailable

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error

Miscellaneous Cause

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

8.2.2.4 Abnormal Conditions

-

8.2.3 Common Transport Channel Deletion

8.2.3.1 General

This procedure is used for deleting common physical channels and common transport channels setup by the Common Transport Channel Setup procedure in a cell.

8.2.3.2 Successful Operation

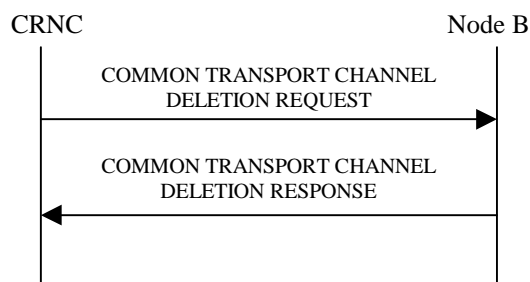


Figure 5: Common Transport Channel Deletion procedure, Successful Operation

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

Secondary CCPCH: When the COMMON TRANSPORT CHANNEL DELETION REQUEST message contains a Secondary CCPCH, Node B shall delete the indicated channel and the 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.

Unsuccessful Operation

-

8.2.3.4 Abnormal Conditions

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

8.2.4 Block Resource

8.2.4.1 General

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

The logical resource that can be blocked is cell.

8.2.4.2 Successful Operation

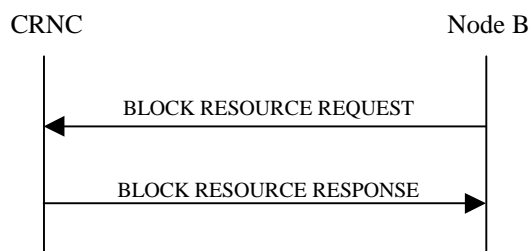


Figure 6: Block Resource procedure, Successful Operation

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

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

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

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

allowed to use the logical resources while the CRNC waits for the resources to become idle and once the resources are blocked.

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

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

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

Interactions with the Unblock Resource procedure:

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

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

8.2.4.3 Unsuccessful Operation

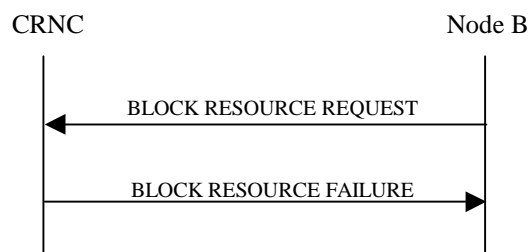


Figure 7: Block Resource procedure, Unsuccessful Operation

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

Typical cause values are as follows:

Protocol Cause

- Semantic error

Miscellaneous Cause

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

Radio Network Layer Cause

- Priority transport channel established

8.2.4.4 Abnormal Conditions

-

8.2.5 Unblock Resource

8.2.5.1 General

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

The logical resource that can be unblocked is cell.

8.2.5.2 Successful Operation

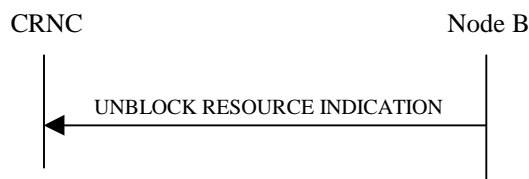


Figure 8: Unblock Resource procedure, Successful Operation

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

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

8.2.5.3 Abnormal Conditions

-

8.2.6 Audit Required

8.2.6.1 General

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

8.2.6.2 Successful Operation

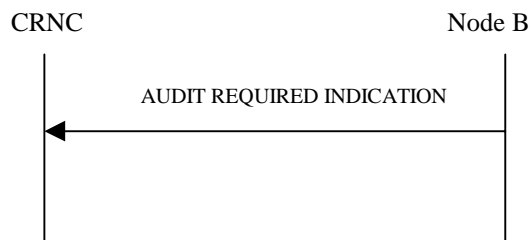


Figure 9: Audit Required procedure, Successful Operation

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

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

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

8.2.6.3 Abnormal Conditions

-

8.2.7 Audit

8.2.7.1 General

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

8.2.7.2 Successful Operation

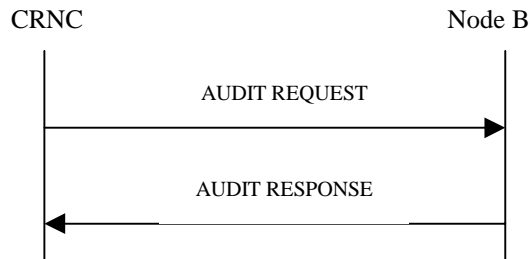


Figure 10: Audit procedure, Successful Operation

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

If 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 *Maximum DL Power Capability* IE if the value is known by the Node B.

The Node B shall include the Node B internal resource capability and consumption laws with the "NodeB Information IE group". If the "UL Capacity Credit" IE is not present, then the internal resource capabilities of the Node B are modelled as shared resources between Uplink and Downlink.

The Node B shall include for each local cell present in the node B the Node B internal resource capability and consumption laws within the "Local Cell Information IE group". If the "UL Capacity Credit" IE is not present, then the internal resource capabilities of the local cell are modelled as shared resources between Uplink and Downlink.

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 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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Abnormal Conditions

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8.2.8 Common Measurement Initiation

8.2.8.1 General

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

8.2.8.2 Successful Operation

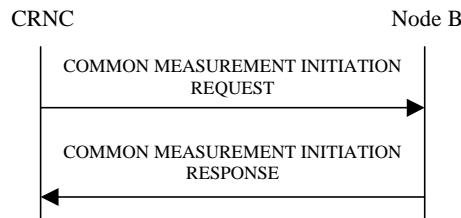


Figure 11: Common Measurement Initiation procedure: Successful Operation

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

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

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

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

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

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

If the *Report Characteristics IE* is set to '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 '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 '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 '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 '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 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 '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* 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.

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 initialise 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 when the *Report Characteristics* IE is set to "On-Demand", the COMMON MEASUREMENT INITIATION RESPONSE message shall contain the measurement result.

8.2.8.3 Unsuccessful Operation

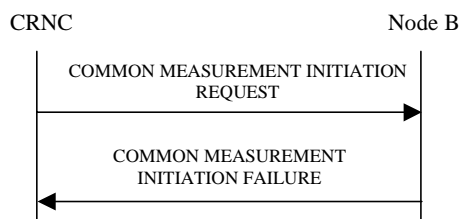


Figure 12: Common Measurement Initiation procedure: Unsuccessful Operation

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

Typical cause values are as follows:

Radio Network Layer Cause

- Measurement not supported for the object.

Abnormal Conditions

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8.2.9 Common Measurement Reporting

8.2.9.1 General

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

8.2.9.2 Successful Operation

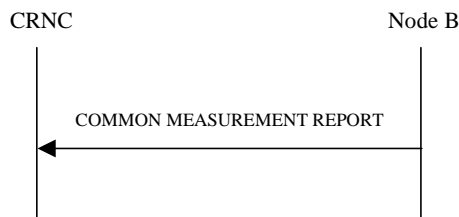


Figure 13: Common Measurement Reporting procedure: Successful Operation

If the requested measurement reporting criteria are met, the Node B shall initiate 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

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8.2.10 Common Measurement Termination

8.2.10.1 General

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

8.2.10.2 Successful Operation



Figure 14: Common Measurement Termination procedure: Successful Operation

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

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

8.2.10.3 Abnormal Conditions

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8.2.11 Common Measurement Failure

8.2.11.1 General

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

8.2.11.2 Successful Operation



Figure 15: Common Measurement Failure procedure: Successful Operation

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

8.2.11.3 Abnormal Conditions

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8.2.12 Cell Setup

8.2.12.1 General

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

8.2.12.2 Successful Operation

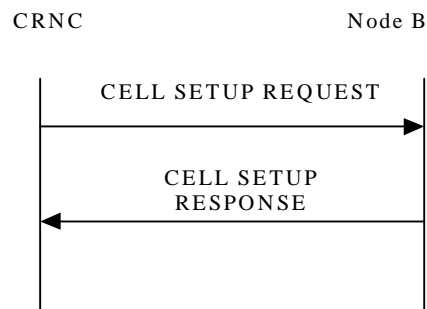


Figure 16: Cell Setup procedure: Successful Operation

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

[FDD - If the CELL SETUP REQUEST message includes one or more *Secondary CPICH Information* IE 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 SCH, Primary CCPCH and BCH exist and the switching-points for the TDD frame structure are defined.]

8.2.12.3 Unsuccessful Operation

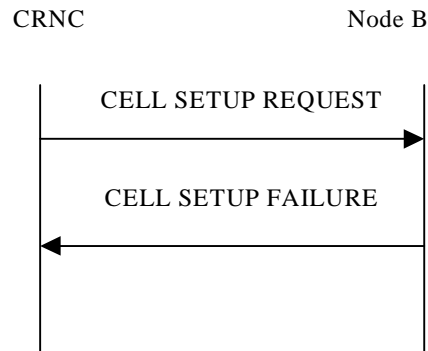


Figure 17: Cell Setup procedure: Unsuccessful Operation

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

In this case the cell is 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

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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

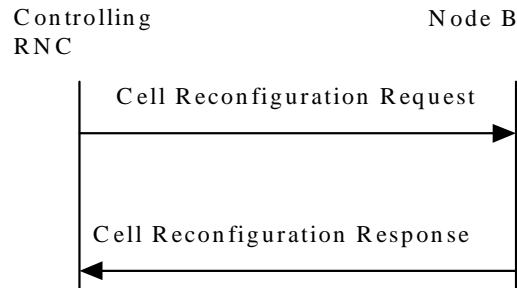


Figure 18: Cell Reconfiguration procedure: Successful Operation

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 shall adjust all the transmitted power levels relative to the Primary CPICH power according to the new value]

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

[TDD - If the CELL RECONFIGURATION REQUEST message includes the *SCH Information* IE group the Node B shall reconfigure SCH power in the cell according to the *SCH 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. Node B shall adjust all the transmitted power levels relative to the Primary CCPCH 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

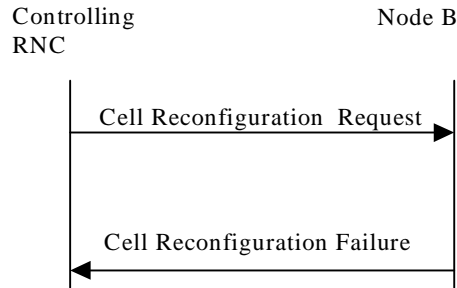


Figure 19: Cell Reconfiguration procedure: Unsuccessful Operation

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

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8.2.14 Cell Deletion

8.2.14.1 General

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

8.2.14.2 Successful Operation

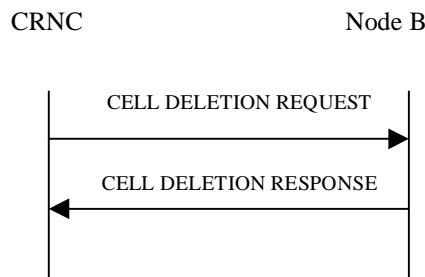


Figure 10: Cell Deletion procedure: Successful Operation

The procedure is initiated with a CELL DELETION REQUEST message sent from CRNC to Node B. Upon Reception, the Node B shall remove the cell and any 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 Operation

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8.2.14.4 Abnormal Conditions

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

8.2.15 Resource Status Indication

8.2.15.1 General

This procedure is used in the following cases:

1. When a Local Cell becomes Existing at the Node B, it shall be made available to the CRNC
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 change at the Node B
4. When a cell has changed its capability and/or its resource operational state at Node B
5. When common physical channels and/or common transport channels have changed their capabilities at a Node B
6. When a communication control port changed its resource operational state at the Node B
7. When a Node B has changed its resource capability at the Node B and/or the local cells

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

8.2.15.2 Successful Operation



Figure 21: Resource Status Indication procedure: Successful Operation

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

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.

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

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

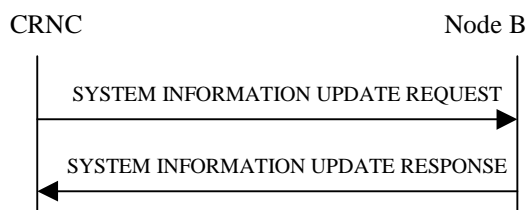


Figure 22: System Information Update procedure: Successful Operation

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:

- SFN mod IB_SG_REP = IB_SG_POS

If the SYSTEM INFORMATION UPDATE REQUEST message contains Master Information Block (MIB) segments in addition to SIB 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.

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

8.2.16.3 Unsuccessful Operation

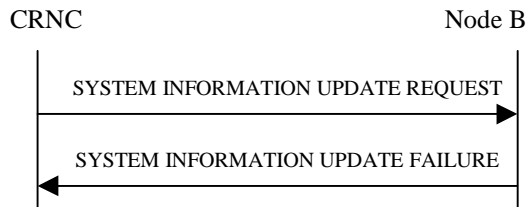


Figure 23: System Information Update procedure: Unsuccessful Operation

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

Radio Network Layer Cause

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

Miscellaneous Cause

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

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

8.2.16.4 Abnormal Conditions

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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

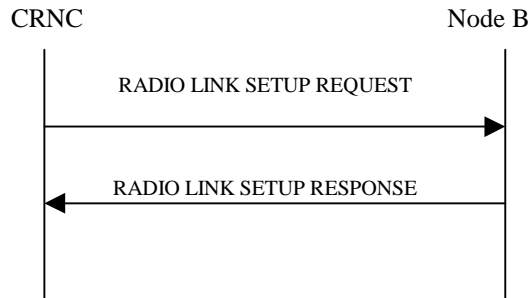


Figure 11: Radio Link Setup procedure: Successful Operation

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

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

[FDD – The RL Setup procedure can be used to 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 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

[FDD - For DCHs with a unique or no "DCH Combination Ind" and the *QE-Selector* IE set to "selected DCH", the Transport channel BER from that DCH shall be the base for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [25.427]. If the *QE-Selector* is set to "non-selected DCH", the Physical channel BER shall be used for the QE in the UL data frames, ref. [25.427]].

[FDD - For DCHs with the same "DCH Combination Ind" the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected DCH" shall be used for the QE in the UL data frames, ref. [25.427]. If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [25.427]. If all DCHs have *QE-Selector* IE set to "non-selected DCH" the Physical channel BER shall be used for the QE, ref. [25.427]].

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 included, the Node B may use this information to speed up the detection of L1 synchronisation.]

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

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

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

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

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

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

[TDD -If the USCH Information Group is present, the Node B shall configure the new USCH(s) according to the parameters given in the 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 shall include in the RADIO LINK SETUP RESPONSE the *Binding ID* IE and *Transport Layer Address* IE for the transport bearer to be established for each DCH of this RL.]

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

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

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

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

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

8.2.17.3 Unsuccessful Operation

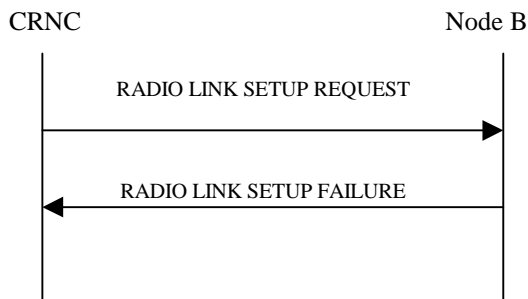


Figure 12: Radio Link Setup procedure: Unsuccessful Operation

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.

[FDD - If more than one DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected DCH" the DRNS shall regard the Radio Link Setup procedure as failed and shall respond with a RADIO LINK SETUP FAILURE message]

Typical cause values are as follows:

Radio Network Layer Cause

- RL Already Activated/allocated

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error

Miscellaneous Cause

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

8.2.17.4 Abnormal Conditions

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8.2.18 Physical Shared Channel Reconfiguration [TDD]

8.2.18.1 General

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

Adding new PDSCH Sets and/or PUSCH Sets,

Modifying these, and

Deleting them.

8.2.18.2 Successful Operation

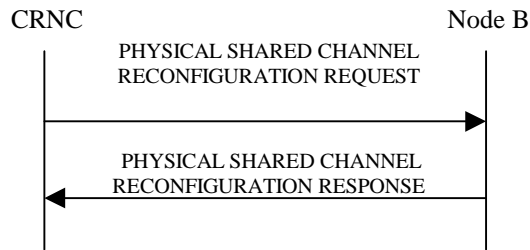


Figure 26: Physical Shared Channel Reconfiguration: Successful Operation

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

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

8.2.18.3 Unsuccessful Operation

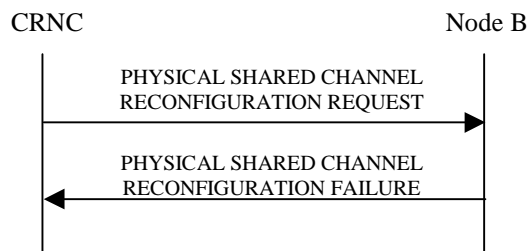


Figure 137: Physical Shared Channel Reconfiguration procedure: Unsuccessful Operation

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

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

Typical cause values are as follows:

Radio Network Layer Cause

- Cell not available
- Node B Resources unavailable

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error

Miscellaneous Cause

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

- HW failure

8.2.18.4 Abnormal Conditions

If the C-ID in the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message is not existing in the Node B, it shall respond with the PHYSICAL SHARED CHANNEL RECONFIGURATION FAILURE message with the *Cause IE* = 'unknown C-ID'.

8.3 NBAP Dedicated Procedures

8.3.1 Radio Link Addition

8.3.1.1 General

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

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

8.3.1.2 Successful Operation

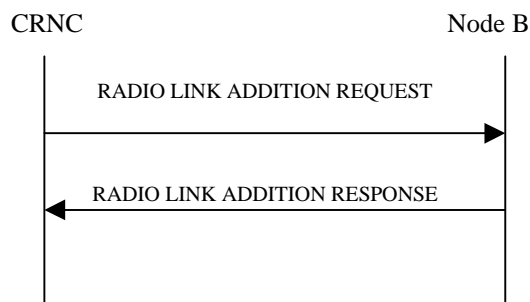


Figure: 28 Radio Link Addition procedure: Successful Operation

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

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

The *Diversity Control Field IE* indicates for each RL whether the Node B shall combine the new RL with existing RL(s) or not. If the *Diversity Control Field IE* 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 – For each RL not having a common generation of the TPC commands in the DL with another RL, the Node B shall assign the *RL Set ID* IE included in the RADIO LINK ADDITION RESPONSE message a value that uniquely identifies the RL Set within the Node B Communication context.]

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

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

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

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

[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.]

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 DL user plane as specified in 25.427.

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

8.3.1.3 Unsuccessful Operation

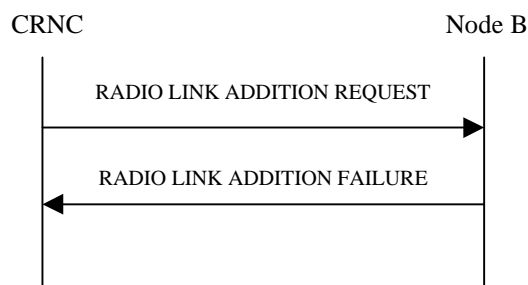


Figure 29: Radio Link Addition procedure: Unsuccessful Operation

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

Typical cause values are as follows:

Radio Network Layer Cause

- RL Already Activated/allocated

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error

Miscellaneous Cause

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

8.3.1.4 Abnormal conditions

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8.3.2 Synchronised Radio Link Reconfiguration Preparation**8.3.2.1 General**

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

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

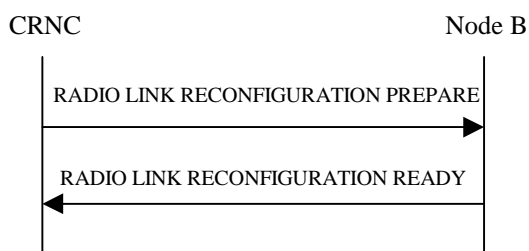
8.3.2.2 Successful Operation

Figure 30: Synchronised Radio Link Reconfiguration procedure, Successful Operation

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

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

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* 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* 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 FP Mode* IE for a DCH to be modified, the Node B shall apply the new 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

[FDD - For DCHs with a unique or no "DCH Combination Ind" and the *QE-Selector* IE set to "selected DCH", the Transport channel BER from that DCH shall be the base for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [25.427]. If the *QE-Selector* is set to "non-selected DCH", the Physical channel BER shall be used for the QE in the UL data frames, ref. [25.427]].

[FDD - For DCHs with the same "DCH Combination Ind" the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected DCH" shall be used for the QE in the UL data frames, ref. [25.427]. If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [25.427]. If all DCHs have *QE-Selector* IE set to "non-selected DCH" the Physical channel BER shall be used for the QE, ref. [25.427]].

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

The Node B shall use the included *UL FP Mode* IE for a DCH to be added as the new 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 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* IE for the UL when reserving resources for the uplink of the new configuration. The 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* IE for the DL when reserving resources for the downlink of the new configuration. The 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.

[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 *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.]

[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:

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

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *PDSCH code mapping* IE then the Node B shall apply the defined mapping between TFCI values and PDSCH channelisation codes.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *PDSCH RL ID* IE then the Node B shall infer that the PDSCH for the specified user will be transmitted on the defined radio link.]

[TDD - USCH Addition/Modification/Deletion:]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes USCH information for the USCHs to be added/modified/deleted then the NodeB shall use this information to add/modify/delete the indicated USCH channels to/from the radio link, in the same way as the DCH info is used to add/modify/release DCHs. – It shall include in the RADIO LINK RECONFIGURATION READY message the Transport Layer Address and the Binding ID of the 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. When this procedure has been completed successfully there exist a Prepared Reconfiguration, as defined in chapter 3.1.

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

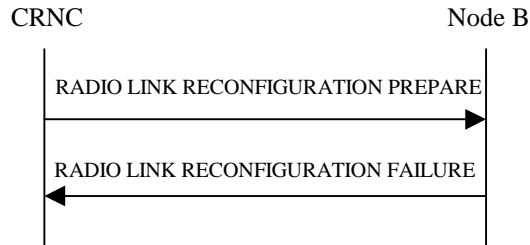


Figure 31: Synchronised Radio Link Reconfiguration procedure, Unsuccessful Operation

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.

[FDD - If more than one DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected DCH" the DRNS shall regard the Radio Link Setup procedure as failed and shall respond with a RADIO LINK RECONFIGURATION FAILURE 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
- 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.

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

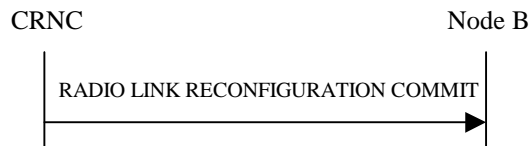


Figure 32: Synchronised Radio Link Reconfiguration Commit procedure, Successful Operation

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

8.3.5.3 Abnormal Conditions

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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 33: Synchronised Radio Link Reconfiguration Cancellation procedure, Successful Operation

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

8.3.4.3 Abnormal Conditions

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8.3.5 Unsynchronised Radio Link Reconfiguration

8.3.5.1 General

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

The Unsynchronised 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.

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

8.3.5.2 Successful Operation

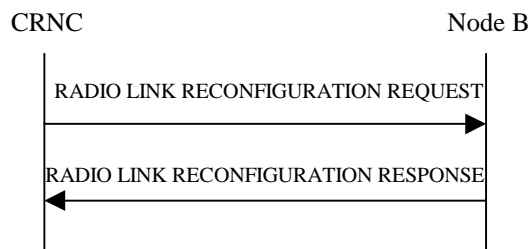


Figure 34: Unsynchronised Radio Link Reconfiguration Procedure, Successful Operation

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

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

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.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *Transport Format Set* 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* IE for the DL 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 FP Mode* IE for a DCH to be modified, the Node B shall apply the new 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 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.

[FDD - For DCHs with a unique or no "DCH Combination Ind" and the *QE-Selector* IE set to "selected DCH", the Transport channel BER from that DCH shall be the base for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [25.427]. If the *QE-Selector* is set to "non-selected DCH", the Physical channel BER shall be used for the QE in the UL data frames, ref. [25.427]].

[FDD - For DCHs with the same "DCH Combination Ind" the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected DCH" shall be used for the QE in the UL data frames, ref. [25.427]. If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [25.427]. If all DCHs have *QE-Selector* IE set to "non-selected DCH" the Physical channel BER shall be used for the QE, ref. [25.427]].

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

The Node B shall use the included *UL FP Mode* IE for a DCH to be added as the new 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.

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:

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

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *PDSCH code mapping* IE then the Node B shall apply the defined mapping between TFCI values and PDSCH channelisation codes.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *PDSCH RL ID* IE then the Node B shall infer that the PDSCH for the specified user will be transmitted on the defined radio link.]

[TDD - USCH Addition/Modification/Deletion:]

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

8.3.5.3 Unsuccessful Operation

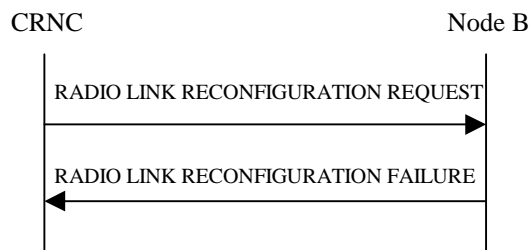


Figure 35: Unsynchronised Radio Link Reconfiguration procedure, Unsuccessful Operation

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

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

[FDD - If more than one DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to “selected DCH” the DRNS shall regard the Radio Link Setup procedure as failed and shall respond with a RADIO LINK RECONFIGURATION FAILURE 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

- Control processing overload
- HW failure

8.3.5.4 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 Unsynchronised Radio Link Reconfiguration procedure as having failed and shall send the RADIO LINK RECONFIGURATION FAILURE message to the CRNC.

8.3.6 Radio Link Deletion

8.3.6.1 General

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

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

8.3.6.2 Successful Operation

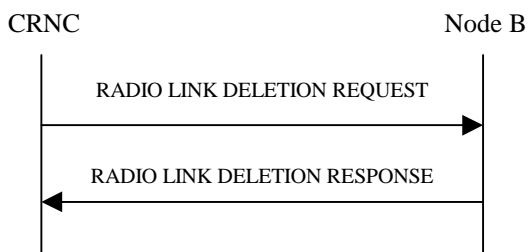


Figure 36: Radio Link Deletion procedure: Successful Operation

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

Upon receipt of this message, the Node B shall delete the radio link(s) identified 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 [FDD]

8.3.7.1 General

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

8.3.7.2 Successful Operation



Figure 37: Downlink Power Control procedure: Successful Operation

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

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

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

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

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

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

Power Adjustment

The Node B performs the power balancing by using the received *DL Reference Power* IE as a reference for adjusting the applied DL power.

The adjustment of the power shall be done with constrains given by the included parameters *Max Adjustment Step* IE and *Adjustment Period* IE. The Power adjustment is repeated for every adjustment period.

Node B shall suspend on going power adjustment operations at the reception of a new DL POWER CONTROL REQUEST message, and then performs the adjustment based on the new parameters.

8.3.7.3 Abnormal Conditions

-

8.3.8 Dedicated Measurement Initiation

8.3.8.1 General

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

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

8.3.8.2 Successful Operation

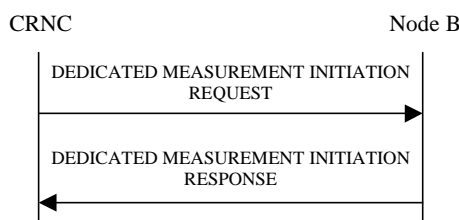


Figure 38: Dedicated Measurement Initiation procedure: Successful Operation

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

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

If the Node B Communication Context Id IE equals the reserved value 'All NBCC', this measurement request shall apply for all current and future Node B Communication Contexts 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 the *Dedicated Measurement Object* IE is set to "RL", the measurement reports shall give the measurement result for each of the indicated Radio Links.

[FDD - If the *Dedicated Measurement Object* IE is set to "RLS", the measurement reports shall give the measurement result for each of the indicated Radio Link Sets.]

If the *Dedicated Measurement Object* IE is set to "ALL RL", the measurement reports shall give the measurement result for each of the current and future Radio Links within the Node B Communication Context.

[FDD - If the *Dedicated Measurement Object* IE is set to "ALL RLS", the measurement reports shall give the measurement result for each of the existing and future Radio Link Sets within the Node B Communication Context.]

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

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

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

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

If the *Report Characteristics* IE is set to 'Event A', the Node B shall initiate 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 '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 '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 '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 '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* 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 '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* 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 DEDICATED MEASUREMENT INITIATION REQUEST message.

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 initialise 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 DEDICATED MEASUREMENT INITIATION RESPONSE message using the communication control port assigned to the Node B communication context. The message shall include the same Measurement Id that was used in the measurement request.

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

8.3.8.3 Unsuccessful Operation

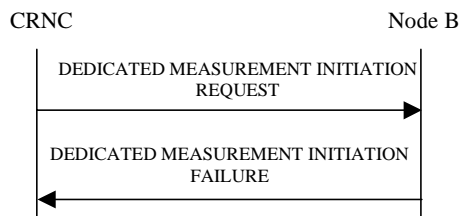


Figure 39: Dedicated Measurement Request procedure: Unsuccessful Operation

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

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 may initiate the Dedicated Measurement Reporting procedure at any time after establishing a Radio Link, as long as the Node B communication context exists.

8.3.9.2 Successful Operation



Figure 40: Dedicated Measurement Reporting procedure: Successful Operation

If the requested measurement reporting criteria are met, the Node B shall initiate 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

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8.3.10 Dedicated Measurement Termination

8.3.10.1 General

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

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

8.3.10.2 Successful Operation

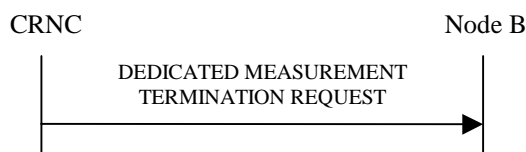


Figure 41: Dedicated Measurement Termination procedure: Successful Operation

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

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

8.3.10.3 Abnormal Conditions

-

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 42: Dedicated Measurement Failure procedure: Successful Operation

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

8.3.11.3 Abnormal Conditions

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8.3.12 Radio Link Failure

8.3.12.1 General

This procedure is used by Node B to indicate a failure in one or more Radio Links or Radio Link Sets.

8.3.12.2 Successful Operation



Figure 43: Radio Link Failure procedure: Successful Operation

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

When the Radio Link Failure procedure is used to notify the loss of UL synchronisation, the message shall be sent when indicated by the UL out-of-sync algorithm defined in [TS25.214 and TS25.224].

[TDD - 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 a newly established Radio Link is not achieved at RL Setup, or RL Addition, or it is lost during an active connection.]

Typical cause values are:

Radio Network Layer Causes:

- Synchronisation Failure

Miscellaneous Causes:

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

8.3.12.3 Abnormal Conditions

-

8.3.13 Radio Link Restoration

8.3.13.1 General

This procedure is used by the Node B to notify the achievement and re-achievement of uplink synchronisation of one or more Radio Links or Radio Link Sets.

8.3.13.2 Successful Operation

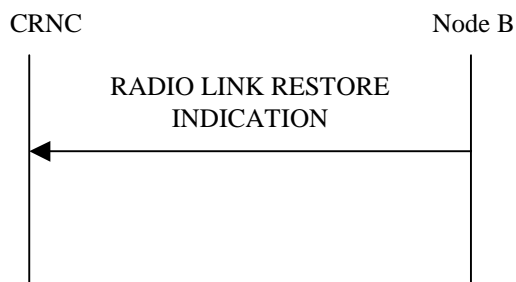


Figure 44: Radio Link Restoration procedure: Successful Operation

The Node B shall send the RADIO LINK RESTORE INDICATION message to the CRNC when indicated by the UL sync detection algorithm defined in [TS25.214 and TS25.224].

[TDD - If the re-established synchronisation concerns one or more individual Radio Links the Node B shall indicate the affected Radio Link(s) using the *RL Information IE* group.] [FDD - If the re-established synchronisation concerns one or more Radio Link Sets the Node B shall indicate the affected Radio Link Set(s) using the *RL Set Information IE* group.]

8.3.13.3 Abnormal Condition

-

8.3.14 Compressed Mode Preparation [FDD]

8.3.14.1 General

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

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

8.3.14.2 Successful Operation

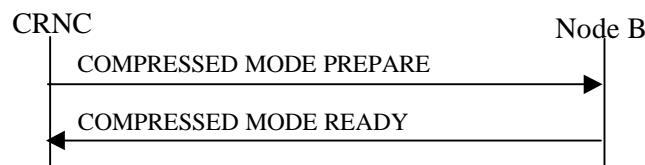


Figure 45 Compressed Mode Preparation procedure, Successful Operation

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

If the *PD* IE is set to 'infinite', the Node B shall continue with the compressed mode until it is requested to terminate the compressed mode.

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

If the *Compressed Mode Method* IE is set to 'None', the 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

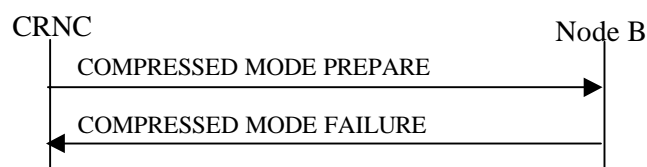


Figure 46: Compressed Mode Preparation procedure, Unsuccessful Operation

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 [FDD]

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.

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

8.3.15.2 Successful Operation



Figure 47: Compressed Mode Commit procedure, Successful Operation

The 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

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8.3.16 Compressed Mode Cancellation [FDD]

8.3.16.1 General

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

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

8.3.16.2 Successful Operation

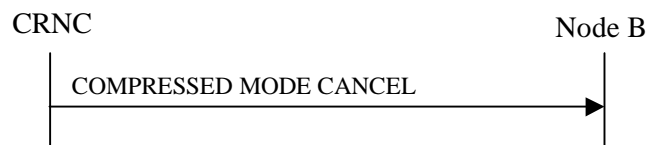


Figure 48: Compressed Mode Cancellation procedure, Successful Operation

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

8.3.16.3 Abnormal Conditions

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8.4 Error Handling Procedures

8.4.1 Error Indication

8.4.1.1 General

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

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

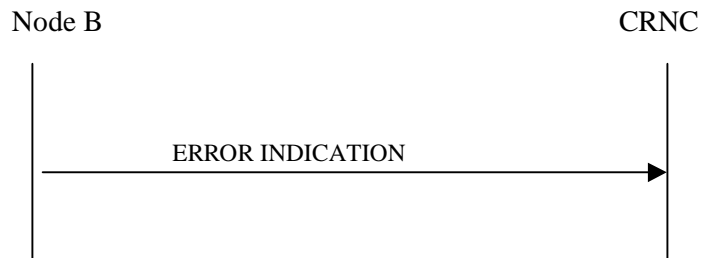


Figure 49: Error Indication procedure (Node B to CRNC): Successful Operation

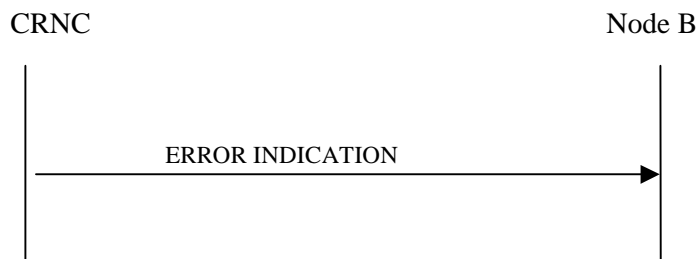


Figure 50: Error Indication procedure (CRNC to Node B): Successful Operation

8.4.1.3 Abnormal Conditions

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9 Elements for NBAP communication

9.1 Message functional definition and content

9.1.1 Message Contents

9.1.1.1 Presence

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

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

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

9.1.1.2 Criticality

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

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

9.1.2 COMMON TRANSPORT CHANNEL SETUP REQUEST

9.1.2.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
Transaction ID	M				–	
C-ID	M				YES	reject
Configuration Generation ID	M				YES	reject
CHOICE common physical channel to be configured					YES	ignore
>Secondary CCPCH					YES	reject
>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				–	
>>>TFCI Presence	C - SlotFormat				–	
>>Multiplexing Position	M				–	
>>STTD Indicator	M				–	
>>FACH Parameters	C-choiceCh	0..<maxnoofFACHs>			GLOBAL	reject
>>>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			YES	reject
>>>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	M				–	

Channelisation Code Number						
>>>>PICH Power	M		DL Power	Power to be used on the PICH.	-	
>>>>PICH Mode	M			Number of PI per frame	-	
>>>>STTD Indicator	M				-	
>PRACH					YES	reject
>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	-	
>Preamble threshold	M				-	
>>RACH Parameters		1			YES	reject
>>>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
SlotFormat	This IE is present only if the Secondary CCPCH Slot Format is equal to any of the value 8 to 17
ChoiceCh	One of the channels FACH or PCH or both must be present.

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

9.1.2.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
Transaction ID	M				–	
C-ID	M				YES	reject
Configuration Generation ID	M				YES	reject
CHOICE <i>common physical channels to be configured</i>					YES	ignore
<i>Secondary CCPCHs</i>					YES	reject
>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>			GLOBAL	reject
>>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		–	
>>FACH	C ChoiceCh	0..<maxnoofFACHs>			GLOBAL	reject
>>>Common transport channel ID	M				–	
>>>Transport Format Set	M			For the DL.	–	
>>>ToAWS	M				–	
>>>ToAWE	M				–	
>>PCH	C ChoiceCh	0..1			GLOBAL	reject
>>>Common transport channel ID	M				–	
>>>Transport Format	M			For the DL.	–	

Set						
>>>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		DL Power		YES	reject
PRACH						
>PRACH	M	1				
>>Common physical channel ID	M					
>>Time Slot	M					
>>TDD Channelisation Code	M					
>>Max PRACH Midamble Shifts	O					
>>PRACH Midamble	M					
>>RACH					-	
>>>Common transport channel ID	M				-	

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

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

9.1.3 COMMON TRANSPORT CHANNEL SETUP RESPONSE

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

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

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

9.1.5 COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST

9.1.5.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
Transaction ID	M				–	
C-ID	M				YES	reject
Configuration Generation ID	M				YES	reject
FACH parameters		<i>0..<maxFA CHCell></i>			GLOBAL	reject
>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>			YES	reject
>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>			YES	reject
>Common Physical Channel ID	M				–	
>PICH Power	M		DL Power	Power to be used on the PICH.	–	
PRACH Parameters		<i>0..<maxno ofPRACHs ></i>			GLOBAL	reject
>Common Physical Channel ID	M				–	
>Preamble Signatures	M				–	
>Allowed Slot Format Information		<i>0..<maxSF ></i>			–	
>>RACH Slot Format	M				–	
>RACH Sub Channel Numbers	O				–	
AICH Parameters		<i>0..<maxno ofPRACHs ></i>			GLOBAL	reject
>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
maxnoofPRACHs	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

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
Transaction ID	M				–	
C-ID	M				YES	reject
Configuration Generation ID	M				YES	reject
Secondary CCPCH parameters		0 .. 1			YES	reject
>CCTrCH ID	M			For DL CCTrCH supporting one or several Secondary CCPCHs	–	
>Secondary CCPCHs to be configured		0.. <MaxnoofS CCPCHs>			GLOBAL	reject
>>Common physical channel ID	M				–	
>>S-CCPCH Power	M			DL power	–	
PICH Parameters		0 .. 1			YES	reject
>Common physical channel ID	M				–	
>PICH Power	M				–	
FACH parameters		0..<Maxno ofFACHs>			GLOBAL	reject
>Common Transport Channel ID	M				–	
>ToAWS	O				–	
>ToAWE	O				–	
PCH parameters		0 .. 1			GLOBAL	reject
>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

9.1.6 COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE

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

9.1.7 COMMON TRANSPORT CHANNEL RECONFIGURATION FAILURE

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

9.1.8 COMMON TRANSPORT CHANNEL DELETION REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
Transaction ID	M				–	
C-ID	M				YES	reject
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.	YES	reject
Configuration Generation ID	M				YES	reject

9.1.9 COMMON TRANSPORT CHANNEL DELETION RESPONSE

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

9.1.10 BLOCK RESOURCE REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
Transaction ID	M				–	
C-ID	M				YES	reject
Blocking Priority Indicator	M				YES	reject
Shutdown Timer	C- <i>BlockNormal</i>				YES	reject

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

9.1.11 BLOCK RESOURCE RESPONSE

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

9.1.12 BLOCK RESOURCE FAILURE

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

9.1.13 UNBLOCK RESOURCE INDICATION

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

9.1.14 AUDIT REQUIRED INDICATION

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

9.1.15 AUDIT REQUEST

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

9.1.16 AUDIT RESPONSE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M				-	
Message Type	M				YES	reject
Transaction ID	M				-	
Node B Information		1				
>DL or Global Capacity Credit	M					
>UL Capacity Credit	O					
>Common Channels Capacity Consumption Law	M					
>Dedicated Channels Capacity Consumption Law	M					
Cell Information		0.. < maxCellin NodeB >			EACH	ignore
>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			YES	ignore
>>Common Physical Channel ID	M				-	
>>Resource Operational State	M				-	
>>Availability Status	M				-	
>Secondary SCH Information		0..1			YES	ignore
>>Common Physical Channel ID	M				-	
>>Resource Operational State	M				-	
>>Availability Status	M				-	
>Primary CPICH Information		0..1			YES	ignore
>>Common Physical Channel ID	M				-	
>>Resource Operational State	M				-	
>>Availability Status	M				-	
>Secondary CPICH Information		0..<maxSC PICHCell>			EACH	ignore
>>Common Physical Channel ID	M				-	
>>Resource Operational State	M				-	
>>Availability Status	M				-	

>Primary CCPCH Information		0..1			YES	ignore
>>Common Physical Channel ID	M				-	
>>Resource Operational State	M				-	
>>Availability Status	M				-	
>BCH Information		0..1			YES	ignore
>>Common Transport Channel ID	M				-	
>>Resource Operational State	M				-	
>>Availability Status	M				-	
>Secondary CCPCH Information		0..<maxSC CPCHCell >			EACH	ignore
>>Common Physical Channel ID	M				-	
>>Resource Operational State	M				-	
>>Availability Status	M				-	
>PCH Information		0..1			EACH	ignore
>>Common Transport Channel ID	M				-	
>>Resource Operational State	M				-	
>>Availability Status	M				-	
>PICH Information		0..1			YES	ignore
>>Common Physical Channel ID	M				-	
>>Resource Operational State	M				-	
>>Availability Status	M				-	
>FACH Information		0..<maxFA CHCell>			EACH	ignore
>>Common Transport Channel ID	M				-	
>>Resource Operational State	M				-	
>>Availability Status	M				-	
>PRACH Information		0..<maxPR ACHCell>			EACH	ignore
>>Common Physical Channel ID	M				-	
>>Resource Operational State	M				-	
>>Availability Status	M				-	
>RACH Information		0..<maxRA CHCell>			EACH	ignore
>>Common Transport Channel ID	M				-	
>>Resource Operational State	M				-	
>>Availability Status	M				-	
>AICH Information		0..<maxRA CHCell>			EACH	ignore
>>Common Physical Channel ID	M				-	
>>Resource Operational State	M				-	

>>Availability Status	M				–	
>SCH Information		0..1			YES	ignore
>>Common Transport Channel ID	M				–	
>>Resource Operational State	M				–	
>>Availability Status	M				–	
Communication Control Port Information		0.. <maxCCPi nNodeB>			EACH	ignore
>Communication Control Port ID	M				–	
>Resource Operational State	M				–	
>Availability Status	M				–	
Local Cell Information		0.. <maxLocal CellinNode B>			EACH	ignore
>Local Cell ID	M				–	
>DL or Global Capacity Credit	M					
>UL Capacity Credit	O					
>Common Channels Capacity Consumption Law	M					
>Dedicated Channels Capacity Consumption Law	M					
>Maximum DL Power Capability	O				–	
Criticality diagnostics	O				YES	ignore

Range bound	Explanation
maxCellinNodeB	Maximum number of Cell that can be configured in Node B
maxCCPinNodeB	Maximum number of communication control ports that can exist in the Node B
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

9.1.17 COMMON MEASUREMENT INITIATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
Transaction Id	M				–	
Measurement Id	M				YES	reject
Common Measurement Object Type	M				YES	reject
CHOICE Common Measurement Object Type					YES	ignore
>"Cell"					YES	reject
>>C-ID	M				–	
>>Time Slot	O			TDD only	–	
>"RACH"					YES	reject
>>C-ID	M				–	
>>Common transport channel ID	M				–	
Common Measurement Type	M				YES	reject
Measurement Filter Coefficient	O				YES	reject
Report Characteristics	M				YES	reject

9.1.18 COMMON MEASUREMENT INITIATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
Transaction Id	M				–	
Measurement Id	M				YES	ignore
CHOICE Common Measurement Object Type					YES	ignore
>"Cell"					YES	ignore
>>Common Measurement value	M				–	
>"RACH"					YES	ignore
>>Common Measurement Value	M				–	
SFN	O			Common Measurement Time Reference	YES	ignore
Criticality Diagnostics	O				YES	ignore

9.1.19 COMMON MEASUREMENT INITIATION FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
Transaction Id	M				–	
Measurement Id	M				YES	ignore
Cause	M				YES	ignore
Criticality diagnostics	O				YES	ignore

9.1.20 COMMON MEASUREMENT REPORT

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	ignore
Transaction Id	M				–	
Measurement Id	M				YES	ignore
CHOICE Common <i>Measurement Object Type</i>					YES	ignore
>"Cell"					YES	ignore
>>Common Measurement value	M				–	
>"RACH"					YES	ignore
>>Common Measurement Value	M				–	
SFN	O			Common Measuremen t Time Reference	YES	ignore

9.1.21 COMMON MEASUREMENT TERMINATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	ignore
Transaction Id	M				–	
Measurement Id	M				YES	ignore

9.1.22 COMMON MEASUREMENT FAILURE INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	ignore
Transaction Id	M				–	
Measurement Id	M				YES	ignore
Cause	M				YES	ignore

9.1.23 CELL SETUP REQUEST

9.1.23.1 FDD Message

IE/Group Name	Presence	Range	IE type and Reference	Semantics description	Criticality	Assigned Criticality
Message discriminator	M				–	
Message Type	M				YES	reject
Transaction ID	M				–	
Local Cell Id	M				YES	reject
C-Id	M				YES	reject
Configuration Generation Id	M				YES	reject
T Cell	M				YES	reject
UARFCN	M			Corresponds to Nu [TS25.104]	YES	reject
UARFCN	M			Corresponds to Nd [TS25.104]		
Maximum transmission power	M				YES	reject
Primary scrambling code	M				YES	reject
Primary SCH Information		1			YES	reject
>Common Physical Channel ID	M				–	
>Primary SCH Power	M		DL Power		–	
>TSTD Indicator	M				–	
Secondary SCH Information		1			YES	reject
>Common Physical Channel ID	M				–	
>Secondary SCH power	M		DL Power		–	
>TSTD Indicator	M				–	
Primary CPICH Information		1			YES	reject
>Common Physical Channel ID	M				–	
>Primary CPICH power	M				–	
>Transmit Diversity Indicator	M				–	
Secondary CPICH Information		0..<maxSC PICHCell>			YES	reject
>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			YES	reject
>Common Physical Channel ID	M				–	
>BCH Information		1			–	
>>Common Transport Channel ID	M				–	
>>BCH Power	M		DL Power		–	
>STTD Indicator	M				–	

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

9.1.23.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message discriminator	M				–	
Message Type	M				YES	reject
Transaction ID	M				–	
Local Cell Id	M				YES	reject
C-Id	M				YES	reject
Configuration Generation Id	M				YES	reject
UARFCN	M			Corresponds to Nt [TS25.105]	YES	reject
Cell Parameter ID	M				YES	reject
Maximum Transmission Power	M				YES	reject
Transmission Diversity Applied	M			On DCHs	YES	reject
Sync Case	M				YES	reject
SCH Information		1			YES	reject
>Common physical channel ID	M				–	
>CHOICE <i>Sync Case</i>						
>>Case 1					YES	reject
>>>Time Slot	M				–	
>>Case 2					YES	reject
>>>SCH Time Slot	M				–	
>SCH Power	M		DL Power		–	
>TSTD Indicator	M				–	
PCCPCH Information		1			YES	reject
>Common physical channel ID	M				–	
>TDD Physical Channel Offset	M				–	
>Repetition Period	M				–	
>Repetition Length	M				–	
>PCCPCH Power	M				–	
>Block STTD Indicator	M				–	
Time Slot Configuration		1 .. 15			GLOBAL	reject
>Time Slot	M				–	
>Time Slot Status	M				–	
>Time Slot Direction	M				–	

9.1.24 CELL SETUP RESPONSE

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

9.1.25 CELL SETUP FAILURE

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

9.1.26 CELL RECONFIGURATION REQUEST

9.1.26.1 FDD Message

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

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

9.1.26.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message discriminator	M				–	
Message Type	M				YES	reject
Transaction ID	M				–	
C-Id	M				YES	reject
Configuration Generation ID	M				YES	reject
SCH Information		0,1			YES	reject
>Common Physical Channel ID	M				–	
>SCH Power	M		DL Power		–	
PCCPCH Information		0,1			YES	reject
>Common Physical Channel ID	M				–	
>PCCPCH Power	M				–	
Maximum Transmission Power	O				YES	reject
Time Slot Configuration		1..15			GLOBAL	reject
>Time Slot	M				–	
>Time Slot Status	M				–	
>Time Slot Direction	M				–	

9.1.27 CELL RECONFIGURATION RESPONSE

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

9.1.28 CELL RECONFIGURATION FAILURE

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

9.1.29 CELL DELETION REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message discriminator	M				–	
Message Type	M				YES	reject
Transaction ID	M				–	
C-ID	M				YES	reject

9.1.30 CELL DELETION RESPONSE

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

9.1.31 RESOURCE STATUS INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	ignore
Transaction ID	M				–	
Indication Type	M				YES	ignore
CHOICE Indication Type					YES	ignore
>"No Failure"					YES	ignore
>>Node B Information		1				
>>>DL or Global Capacity Credit	M					
>>>UL Capacity Credit	O					
>>>Common Channels Capacity Consumption Law	M					
>>>Dedicated Channels Capacity Consumption Law	M					
>>Local Cell Information		1.. <max LocalCellin NodeB >			EACH	ignore
>>>Local Cell ID	M				–	
>>>Add/Delete Indicator	M				–	
>>>DL or Global Capacity Credit	C-add					
>>>UL Capacity Credit	O					
>>>Common Channels Capacity Consumption Law	C-add					
>>>Dedicated Channels Capacity Consumption Law	C-add					
>>>Maximum DL Power Capability	M				–	
>"Service Impacting"					YES	ignore
>>Node B Information		0..1				
>>>DL or Global Capacity Credit	O					
>>>UL Capacity Credit	O					
>>Local Cell Information		0.. <maxLocal CellinNode B>			EACH	ignore
>>>Local Cell ID	M				–	
DL or Global Capacity Credit	O					
UL Capacity Credit	O					
>>>Maximum DL Power Capability	O				–	
>>Communication Control Port Information		0.. <maxCCPi nNodeB>			EACH	ignore

>>>Communication Control Port ID	M				-	
>>>Resource Operational State	M				-	
>>>Availability Status	M				-	
>>Cell Information		<i>0.. <maxCellin NodeB></i>			EACH	ignore
>>>C-ID	M				-	
>>>Resource Operational State	M				-	
>>>Availability Status	M				-	
>>>Maximum DL Power Capability	FFS				-	
>>>Minimum Spreading Factor	FFS				-	
>>Primary SCH Information		<i>0..1</i>			YES	ignore
>>>Common Physical Channel ID	M				-	
>>>Resource Operational State	M				-	
>>>Availability Status	M				-	
>>Secondary SCH Information		<i>0..1</i>			YES	ignore
>>>Common Physical Channel ID	M				-	
>>>Resource Operational State	M				-	
>>>Availability Status	M				-	
>>Primary CPICH Information		<i>0..1</i>			YES	ignore
>>>Common Physical Channel ID	M				-	
>>>Resource Operational State	M				-	
>>>Availability Status	M				-	
>>Secondary CPICH Information		<i>0..<maxSC PICHCell></i>			EACH	ignore
>>>Common Physical Channel ID	M				-	
>>>Resource Operational State	M				-	
>>>Availability Status	M				-	
>>Primary CCPCH Information		<i>0..1</i>			YES	ignore
>>>Common Physical Channel ID	M				-	
>>>Resource Operational State	M				-	
>>>Availability Status	M				-	
>>BCH Information		<i>0.. 1</i>			YES	ignore

>>>Common Transport Channel ID	M				–	
>>>Resource Operational State	M				–	
>>>Availability Status	M				–	
>>Secondary CCPCH Information		<i>0..<maxSC CPCHCell ></i>			EACH	ignore
>>>Common Physical Channel ID	M				–	
>>>Resource Operational State	M				–	
>>>Availability Status	M				–	
>>PCH Information		<i>0..1</i>			EACH	ignore
>>>Common Transport Channel ID	M				–	
>>>Resource Operational State	M				–	
>>>Availability Status	M				–	
>>PICH Information		<i>0..1</i>			YES	ignore
>>>Common Physical Channel ID	M				–	
>>>Resource Operational State	M				–	
>>>Availability Status	M				–	
>>FACH Information		<i>0.. <maxFAC HCell></i>			EACH	ignore
>>>Common Transport Channel ID	M				–	
>>>Resource Operational State	M				–	
>>>Availability Status	M				–	
>>PRACH Information		<i>0.. <maxPR ACHCell></i>			EACH	ignore
>>>Common Physical Channel ID	M				–	
>>>Resource Operational State	M				–	
>>>Availability Status	M				–	
>>RACH Information		<i>0.. <maxPRA CHCell></i>			EACH	ignore
>>>Common Transport Channel ID	M				–	
>>>Resource Operational State	M				–	
>>>Availability Status	M				–	
>>AICH Information		<i>0.. <maxPRA</i>			EACH	ignore

		<i>CHCell</i> >				
>>>Common Physical Channel ID	M				-	
>>>Resource Operational State	M				-	
>>>Availability Status	M				-	
>>SCH Information		0..1			YES	ignore
>>>Common Transport Channel ID	M				-	
>>>Resource Operational State	M				-	
>>>Availability Status	M				-	
Cause	O				YES	ignore

Condition	Explanation
C-add	This IE is present only if "Add/Delete Indicator" equals to add

Range bound	Explanation
<i>maxLocalCellinNodeB</i>	Maximum number of Local Cells that can exist in the Node B
<i>maxCellinNodeB</i>	Maximum number of C 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>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
<i>maxConsumptionLaws</i>	Maximum number of credit consumption laws.

9.1.32 SYSTEM INFORMATION UPDATE REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M				-	
Message Type	M				YES	reject
Transaction ID	M				-	

C-ID	M				YES	reject
BCCH Modification Time	O				YES	reject
MIB/SIBInformation		1.. <i>maxIB</i>			GLOBAL	reject
>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>					YES	reject
>>SIB Originator	C-NotMIB				–	
>>IB SG REP	M				–	
>>Segment Information		1.. <i>maxIBSEG</i>			GLOBAL	reject
>>>IB SG POS	M				–	
>>>IB SG DATA	C – CRNCOrigination				–	

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

Condition	Explanation
CRNCOrigination	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	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
Transaction ID	M				–	
Criticality diagnostics	O				YES	ignore

9.1.34 SYSTEM INFORMATION UPDATE FAILURE

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

9.1.35 RADIO LINK SETUP REQUEST

9.1.35.1 FDD message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
CRNC Communication Context ID	M				YES	reject
Transaction ID	M				–	
UL DPCH Information		1			YES	reject
>UL Scrambling Code	M				–	
>Min UL Channelisation Code length	M				–	
>Max Number of UL DPDCHs	C – CodeLen				–	
>puncture limit	M			For UL	–	
>TFCS	M			for UL	–	
>UL DPCCH Slot Format	M				–	
> UL SIR Target	M		UL SIR		–	
>Diversity mode	M				–	
>D Field Length	C – FB				–	
>SSDT cell ID Length	O				–	
>S Field Length	O				–	
DL DPCH Information					YES	reject
>TFCS	M			For DL	–	
>DL DPCH Slot Format	M				–	
>TFCI signalling mode	M				–	
>TFCI presence	C- SlotFormat				–	
>Multiplexing Position	M				–	
>PDSCH RL ID	C-DSCH		RL ID		–	
>PDSCH code mapping	C-DSCH				–	
>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	–	
>FDD TPC DL Step Size	M				–	
DCH Information		1 to <maxnoof DCHs>			GLOBAL	reject
>DCH ID	M				–	
>DCH Combination Ind	O				–	
>Limited Power Increase	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				–	
>QE-Selector	M				–	

>ToAWS	M				-	
>ToAWE	M				-	
DSCH Information		0 to <maxnoof DSCHs>			GLOBAL	reject
>DSCH ID	M				-	
>Transport Format Set	M			For DSCH	-	
>Frame handling Priority	M				-	
>ToAWS	M				-	
>ToAWE	M				-	
RL Information		1 to <maxnoof RLs>			EACH	notify
>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				-	
>Transmit Diversity Indicator	C – Diversity mode					

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.
DSCH	This IE is present only if the DSCH Information group is present
SlotFormat	This IE is only present if the DL DPCH slot format is equal to any of the value 12 to 16.
Diversity mode	This IE is present unless <i>Diversity Mode</i> IE in <i>UL DPCH Information</i> group is "none"

Range bound	Explanation
MaxnoofDSCHs	Maximum number of DSCHs for one UE.
MaxnoofDCHs	Maximum number of DCHs for one UE.
MaxnoofRLs	Maximum number of RLs for one UE.
MaxnoofDLCodes	Maximum number of DL code information.

9.1.35.2 TDD message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
CRNC Communication Context ID	M				YES	reject
Transaction ID	M				–	
UL CCTrCH Information		0 to <maxno CCTrCH>			EACH	notify
>CCTrCH ID	M				–	
>TFCS	M				–	
>TFCI Coding	M				–	
>Puncture Limit	M				–	
UL DPCH Information		0 to <maxnoOf DPCH>			GLOBAL	notify
>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>			EACH	notify
>CCTrCH ID	M				–	
>TFCS	M				–	
>TFCI Coding	M				–	
>Puncture Limit	M				–	
>TDD TPC DL Step Size	M				–	
DL DPCH information		0 to <maxnoOf DPCH>			GLOBAL	notify
>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		0 to <maxnoof DCHs>			GLOBAL	reject
>DCH ID	M				–	
>Limited Power Increase	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 <Maxnoof DSCHs>			GLOBAL	reject
>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 <Maxnoof USCHs>			GLOBAL	reject
>USCH ID	M				–	
>CCTrCH ID	M			UL CCTrCH in which the USCH is mapped	–	
>Transport Format Set	M			For USCH	–	
RL Information		1			YES	reject
>RL ID	M				–	
>C-ID	M				–	
>Frame 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 number of DCHs for one UE
maxnoOfDPCH	Maximum number of DPCH in one CCTrCH
maxnoCCTrCH	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	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
CRNC Communication Context ID	M				YES	ignore
Transaction ID	M				–	
Node B Communication Context ID	M				YES	ignore
Communication Control Port ID	M				YES	ignore
RL Information Response		1 to <maxnoofRLs>			EACH	ignore
>RL ID	M				–	
>RL Set ID	M					
>UL interference level	M				–	
>Diversity Indication	C- NotFirstRL				–	
>CHOICE <i>diversity Indication</i>						
>>Combining					YES	ignore
>>>RL ID	M			Reference RL ID for the combining	–	
>>Non Combining or IE not present					YES	ignore
>>>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>			GLOBAL	ignore
>>DSCH ID	M				–	
>>Binding ID	M				–	
>>Transport Layer Address	M				–	
>SSDT Support Indicator	M				–	
Criticality diagnostics	O				YES	ignore

Condition	Explanation
NotFirstRL	This IE is present only if the RL is not the first one in the RL Information.

Range bound	Explanation
MaxnoofRLs	Maximum number of RLs for one UE.
MaxnoofDCHs	Maximum number of DCH per UE.
MaxnoofDSCHs	Maximum number of DSCHs for one UE.

9.1.36.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
CRNC Communication Context ID	M				YES	ignore
Transaction ID	M				–	
Node B Communication Context ID	M				YES	ignore
Communication Control Port ID	M				YES	ignore
RL Information Response		1			YES	ignore
>RL ID	M				–	
>UL Interference per Time Slot		1 .. <maxnoofULts>		Interference Level for each UL time slot within the Radio Link		
>Time Slot	M					
>UL interference level	M					
>DCH Information Response		1 to <maxnoofDCH>		Only one DCH per set of coordinated DCH shall be included.	GLOBAL	ignore
>>DCH ID	M				–	
>>Binding ID	M				–	
>>Transport Layer Address	M				–	
>DSCH Information Response		0 .. <MaxnoofDSCHs>			GLOBAL	ignore
>>DSCH ID	M				–	
>>Binding ID	M				–	
>>Transport Layer Address	M				–	
>USCH Information Response		0 .. <MaxnoofUSCHs>			GLOBAL	ignore
>>USCH ID	M				–	
>>Binding ID	M				–	
>>Transport Layer Address	M				–	
Criticality diagnostics	O				YES	ignore

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCH per UE
MaxnoofDSCHs	Maximum number of DSCHs for one UE
MaxnoofUSCHs	Maximum number of USCHs for one UE
MaxnoofULts	Maximum number of Uplink time slots per Radio Link

9.1.37 RADIO LINK SETUP FAILURE

9.1.37.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
CRNC Communication Context ID	M				YES	ignore
Transaction ID	M				–	
Node B Communication Context ID	M				YES	ignore
Communication Control Port ID	O				YES	ignore
Unsuccessful RL Information Response		1 to <maxnoo fRLs>			EACH	ignore
>RL ID	M				–	
>Cause	M				–	
Successful RL Information Response		0 to <maxnoo fRLs-1>			EACH	ignore
>RL ID	M				–	
>RL Set ID	M				–	
>UL interference level	M				–	
>Diversity Indication	C-NotFirstRL				–	
>CHOICE <i>diversity Indication</i>					–	
>>Combining					YES	ignore
>>>RL ID	M			Reference RL ID for the combining	–	
>>Non Combining or IE not present					YES	ignore
>>>DCH Information Response		0 to <maxnoo fDCHs>		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>			GLOBAL	Ignore
>>DSCH ID	M				–	
>>Binding ID	M				–	
>>Transport Layer Address	M				–	
>SSDT Support Indicator	M				–	
Criticality diagnostics	O				YES	ignore

Condition	Explanation
Success	This IE is present if at least one of the radio links has been successfully set up.
NotFirstRL	This IE is present only if the RL is not the first one in the RL Information.

Range bound	Explanation
MaxnoofRLs	Maximum number of RLs for one UE.
MaxnoofDCHs	Maximum 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	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
CRNC Communication Context ID	M				YES	ignore
Transaction ID	M				–	
Unsuccessful RL Information Response		1			YES	ignore
>RL ID	M				–	
>Cause	M				–	
Criticality diagnostics	O				YES	ignore

9.1.38 RADIO LINK ADDITION REQUEST

9.1.38.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
Node B Communication Context ID	M				YES	reject
Transaction ID	M				–	
RL Information		1..<maxnoofRL-1>			EACH	notify
>RL ID	M				–	
>C-Id	M				–	
>Frame Offset	M				–	
>Chip Offset	M				–	
>Diversity Control Field	M				–	
>DL Code Information		1..maxnoofDL Codes			–	
>>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				–	
>Transmit Diversity Indicator	C – Diversity mode					

Condition	Explanation
Diversity mode	This IE is present unless <i>Diversity Mode</i> IE in <i>UL DPCH Information</i> group is "none"

Range bound	Explanation
<i>MaxnoofRL</i>	Maximum number of RLs for one UE
<i>MaxnoofDL Codes</i>	Maximum number of DL code information

9.1.38.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
Node B Communication Context ID	M				YES	reject
Transaction ID	M				–	
UL CCTrCH Information		0 to <maxnoOfCCTrCH>			GLOBAL	reject
>CCTrCH ID	M				–	
UL DPCH Information		0 to <maxnoOfDPCH>			EACH	notify
>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 <maxnoOfCCTrCH>			GLOBAL	reject
>CCTrCH ID	M				–	
DL DPCH information		0 to <maxnoOfDPCH>			EACH	notify
>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			YES	reject
>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 CCTrCH
MaxnoCCTrCH	number of CCTrCH 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	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
CRNC Communication Context ID	M				YES	ignore
Transaction ID	M				–	
RL Information Response		1..<maxno ofRL-1>			EACH	ignore
>RL ID	M				–	
>RL Set ID	M					
>UL interference level	M				–	
>Diversity Indication	M				–	
>CHOICE <i>diversity indication</i>					–	
>>Combining					YES	ignore
>>>RL ID	M			Reference RL	–	
>>Non combining					YES	ignore
>>>DCH Information Response		1..<maxno ofDCHs>			–	
>>>>DCH ID	M				–	
>>>>Binding ID	M				–	
>>>>Transport Layer Address	M				–	
>SSDT support indicator	M				–	
Criticality diagnostics	O				YES	ignore

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	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
CRNC Communication Context ID	M				YES	ignore
Transaction ID	M				–	
RL Information response		1			YES	ignore
>RL ID	M				–	
>UL Interference per Time Slot	M	1 .. <maxn oofULts >		Interference Level for each UL time slot within the Radio Link		
>>Time Slot	M					
>>UL interference level	M				–	
>Diversity Indication	M				–	
>CHOICE <i>diversity indication</i>						
>Combining				In TDD it indicates whether the old Transport Bearer shall be reused or not	YES	ignore
>>RL ID	M			Reference RL	–	
>Non combining					YES	ignore
>>DCH Information Response		0..<maxnoofDCHs>			–	
>>>DCH ID	M				–	
>>>Binding ID	M				–	
>>>Transport Layer Address	M				–	
>DSCH Information Response		0 .. <MaxnoofDSCHs>			GLOBAL	ignore
>>DSCH ID	M				–	
>>Binding ID	M				–	
>>Transport Layer Address	M				–	
>USCH Information Response		0 .. <MaxnoofUSCHs>			GLOBAL	ignore
>>USCH ID	M				–	
>>Binding ID	M				–	
>>Transport Layer Address	M				–	
Criticality diagnostics	O				YES	ignore

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
<i>MaxnoofULts</i>	Maximum number of Uplink time slots per Radio Link

9.1.40 RADIO LINK ADDITION FAILURE

9.1.40.1 FDD Message

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

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	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
CRNC Communication Context ID	M				YES	ignore
Transaction ID	M				–	
Unsuccessful RL Information Response		1			YES	ignore
>RL ID	M				–	
>Cause	M				–	
Criticality diagnostics	O				YES	ignore

9.1.41 RADIO LINK RECONFIGURATION PREPARE

9.1.41.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
Node B Communication Context ID	M				YES	reject
Transaction ID	M				–	
UL DPCH Information		0..1			YES	reject
>UL Scrambling code	O				–	
>UL SIR Target	O		UL SIR			
>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			YES	reject
>TFCS	O				–	
>DL DPCH Slot Format	O				–	
>TFCI Signalling Mode	O				–	
>TFCI presence	C-Slot Format				–	
>Multiplexing Position	O				–	
>PDSCH code mapping	O					
>PDSCH RL ID	O		RL ID			
DCHs to Modify		0..<max noofDC Hs>			GLOBAL	reject
>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..<max noofDC Hs>			GLOBAL	reject
>DCH ID	M				–	
>DCH Combination Ind	O				–	
>Limited Power Increase	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				–	
>QE-Selector	M				–	
>ToAWS	M				–	
>ToAWE	M				–	
DCHs to Delete		0..<max			GLOBAL	reject

		<i>noofDC Hs></i>				
>DCH ID	M				–	
DSCH to modify		<i>0..<max noofDS CHs></i>			YES	reject
>DSCH ID	M				–	
>Transport Format Set	O			For the DL.	–	
>Frame Handling Priority	O				–	
>ToAWS	O				–	
>ToAWE	O				–	
DSCH to add		<i>0..<max noofDS CHs></i>			YES	reject
>DSCH ID	M				–	
>Transport Format Set	M			For the DL.	–	
>Frame Handling Priority	M				–	
>ToAWS	M				–	
>ToAWE	M				–	
DSCH to Delete		<i>0..<max noofDS CHs></i>			YES	reject
>DSCH ID	M				–	
RL Information		<i>0..<max noofRLs ></i>			EACH	reject
>RL ID	M				–	
>DL Code Information		<i>0..<max noofDL Codes<</i>			–	
>>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>MaxnoofDSCHs</i>	Maximum number of DSCHs for a UE.
<i>MaxnoofRLs</i>	Maximum number of RLs for a UE.
<i>MaxnoofDLCodes</i>	Maximum number of Downlink Channelisation Codes.

9.1.41.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
Node B Communication Context ID	M				YES	reject
Transaction ID	M				–	
UL CCTrCH Information		0.. <maxno of CCTrC Hs>			GLOBAL	reject
>CCTrCH ID	M				–	
>TFCS	O				–	
>TFCI Coding	O				–	
>Puncture Limit	O				–	
>UL DPCH Information		0.. <maxno of DPCHs >			GLOBAL	reject
>>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				–	
DL CCTrCH Information		0.. <maxno of CCTrC Hs			GLOBAL	reject
>CCTrCH ID	M				–	
>TFCS	O				–	
>TFCI Coding	O				–	
>PunctureLimit					–	
>DL DPCH Information		0.. <maxno of DPCHs >			GLOBAL	reject
>>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..<max noofDC			GLOBAL	reject

		<i>Hs></i>				
>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		<i>0..<max noofDC Hs></i>			GLOBAL	reject
>DCH ID	M				–	
>Limited Power Increase	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		<i>0..<max noofDC Hs></i>			GLOBAL	reject
>DCH ID	M				–	
DSCH Information to modify		<i>0 .. <Maxno of DSCHs ></i>			GLOBAL	reject
>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		<i>0 .. <Maxno of DSCHs ></i>			GLOBAL	reject
>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 .. <Maxno of DSCHs >			GLOBAL	reject
>DSCH ID	M				–	
USCH Information to modify		0 .. <Maxno of USCHs >			GLOBAL	reject
>USCH ID	M				–	
>Transport Format Set	O				–	
>CCTrCH ID	O			UL CCTrCH in which the USCH is mapped	–	
USCH Information to add		0 .. <Maxno of USCHs >			GLOBAL	reject
>USCH ID	M				–	
>CCTrCH ID	M			UL CCTrCH in which the USCH is mapped	–	
>Transport Format Set	M				–	
USCH Information to delete		0 .. <Maxno of USCHs >			GLOBAL	reject
>USCH ID	M				–	
RL Information		0..1			YES	reject
>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	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
CRNC Communication Context ID	M				YES	ignore
Transaction ID	M				–	
RL Information Response		<i>0..<max noofRLs ></i>		Only one RL information response group for one group of combined RLs shall be present	EACH	ignore
>RL ID	M				–	
>DCH to be Added		<i>0..<max noofDC Hs></i>		Only one DCH per set of co-ordinated DCHs shall be included.	GLOBAL	ignore
>>DCH ID	M				–	
>>Binding ID	M				–	
>>Transport Layer Address	M				–	
>DCH to be Modified		<i>0..<max noofDC Hs></i>		Only one DCH per set of co-ordinated DCHs shall be included.	GLOBAL	ignore
>>DCH ID	M				–	
>>Binding ID	M				–	
>>Transport Layer Address	M				–	
>DSCH to be Setup		<i>0..<Max noofDS CHs></i>			GLOBAL	ignore
>>DSCH ID	M				–	
>>Binding ID	M				–	
>>Transport Layer Address	M				–	
>DSCH to be Modified		<i>0..<Max noofDS CHs></i>			GLOBAL	ignore
>>DSCH ID	M				–	
>>Binding ID	M				–	
>>Transport Layer Address	M				–	
>USCH to be setup		<i>0 .. <Maxno of USCHs ></i>			GLOBAL	ignore
>>USCH ID	M				–	
>>Binding ID	M				–	
>>Transport Layer Address	M				–	
>USCH to be modified		<i>0 .. <Maxno of USCHs ></i>			GLOBAL	ignore
>>USCH ID	M				–	
>>Binding ID	M				–	

>>Transport Layer Address	M				–	
Criticality diagnostics	O				YES	ignore

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	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
CRNC Communication Context ID	M				YES	ignore
Transaction ID	M				–	
Cause	M				YES	ignore
RLs Causing Reconfiguration Failure		<i>0..<maxnoofRLs></i>			EACH	ignore
>RL ID	M				–	
>Cause	M				–	
Criticality diagnostics	O				YES	ignore

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	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message type	M				YES	ignore
Node B Communication Context ID	M				YES	ignore
Transaction ID	M				–	
CFN	M				YES	ignore

9.1.45 RADIO LINK RECONFIGURATION CANCEL

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message type	M				YES	ignore
Node B Communication Context ID	M				YES	ignore
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	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
Node B Communication Context ID	M				YES	reject
Transaction ID	M				–	
UL DPCH Information		0..1			YES	reject
>TFCS	O			For the UL.	–	
DL DPCH Information		0..1			YES	reject
>TFCS	O			For the DL.	–	
>TFCI Signalling Mode	O				–	
>PDSCH code mapping	O					
>PDSCH RL ID	O		RL ID			
DCHs to Modify		0..<maxn oofDCHs >			GLOBAL	reject
>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..<maxn oofDCHs >			GLOBAL	reject
>DCH ID	M				–	
>DCH Combination Ind	O				–	
>Limited Power Increase	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				–	
>QE-Selector	M				–	
>ToAWS	M				–	
>ToAWE	M				–	
DCHs to Delete		0..<maxn oofDCHs >			GLOBAL	reject
>DCH ID	M				–	
DSCH to Modify		0..<maxn oofDSCH s>			YES	reject
>DSCH ID	M				–	
>Transport Format Set	O			For the DL.	–	
>Frame Handling Priority	O				–	
>ToAWS	O				–	
>ToAWE	O				–	
DSCH to Add		0..<maxn oofDSCH s>			YES	reject
>DSCH ID	M				–	

>Transport Format Set	M			For the DL.	–	
>Frame Handling Priority	M				–	
>ToAWS	M				–	
>ToAWE	M				–	
DSCH to Delete		0..1			YES	reject
>DSCH ID	M				–	
Radio Link Information		0..<maxnoofRLs>			EACH	reject
>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>MaxnoofDSCHs</i>	Maximum number of DSCHs 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	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
Node B Communication Context ID	M				YES	reject
Transaction ID	M				–	
UL CCTrCH Information		<i>0..<maxn oofCCTrCHs></i>			EACH	notify
>CCTrCH ID	M				–	
>TFCS	O				–	
>Puncture Limit	O				–	
DL CCTrCH Information		<i>0..<maxn oofCCTrCHs></i>			EACH	notify
>CCTrCH ID	M				–	
>TFCS	O				–	
>Puncture Limit	O				–	
DCHs to Modify		<i>0..<maxn oofDCHs ></i>			GLOBAL	reject
>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		<i>0..<maxn oofDCHs ></i>			GLOBAL	reject
>DCH ID	M				–	
>Limited Power Increase	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..<maxn oofDSCH s>			GLOBAL	reject
>DCH ID	M				–	
DSCH Information to modify		0 .. <Maxnoo f DSCHs>			GLOBAL	reject
>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 .. <Maxnoo f DSCHs>			GLOBAL	reject
>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 .. <Maxnoo f DSCHs>			GLOBAL	reject
>DSCH ID	M				–	
USCH Information to modify		0 .. <Maxnoo f USCHs>			GLOBAL	reject
>USCH ID	M				–	
>CCTrCH ID	O			UL CCTrCH in which the USCH is mapped	–	
>Transport Format Set	O				–	
USCH Information to add		0 .. <Maxnoo f USCHs>			GLOBAL	reject
>USCH ID	M				–	
>CCTrCH ID	M			UL CCTrCH in which the USCH is mapped	–	
>Transport Format Set	M				–	
USCH Information to delete		0 .. <Maxnoo f USCHs>			GLOBAL	reject
>USCH ID	M				–	
RL Information		0..1			YES	reject
>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

9.1.47 RADIO LINK RECONFIGURATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
CRNC Communication Context ID	M				YES	ignore
Transaction ID	M				–	
RL Information Response		0..<maxn oofRLs>		Only one RL information response group for one group of combined RLs shall be present	EACH	ignore
>RL ID	M				–	
>DCH to be Added		0..<maxn oofDCHs >		Only one DCH per set of co-ordinated DCHs shall be included.	GLOBAL	ignore
>>DCH ID	M				–	
>>Binding ID	M				–	
>>Transport Layer Address	M				–	
>DCH to be Modified		0..<maxn oofDCHs >		Only one DCH per set of co-ordinated DCHs shall be included.	GLOBAL	ignore
>>DCH ID	M				–	
>>Binding ID	M				–	
>>Transport Layer Address	M				–	
>DSCH to be Setup		0..<Maxn oofDSCH s>			GLOBAL	ignore
>>DSCH ID	M				–	
>>Binding ID	M				–	
>>Transport Layer Address	M				–	
>DSCH to be Modified		0..<Maxn oofDSCH s>			GLOBAL	ignore
>>DSCH ID	M				–	
>>Binding ID	M				–	
>>Transport Layer Address	M				–	
>USCH to be setup		0 .. <Maxn oofUSCHs>			GLOBAL	ignore
>>USCH ID	M				–	
>>Binding ID	M				–	
>>Transport Layer Address	M				–	
>USCH to be modified		0 .. <Maxn oofUSCHs>			GLOBAL	ignore
>>USCH ID	M				–	
>>Binding ID	M				–	
>>Transport Layer Address	M				–	
Criticality diagnostics	O				YES	ignore

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>MaxnoodUSCHs</i>	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	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
Node B Communication Context ID	M				YES	reject
Transaction ID	M				–	
RL Information		1..<maxnoofRLs>			EACH	notify
RL ID	M				–	

Range bound	Explanation
<i>MaxnoofRLs</i>	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	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
CRNC Communication Context ID	M				YES	ignore
Transaction ID	M				–	
Criticality diagnostics	O				YES	ignore

9.1.50 DL POWER CONTROL REQUEST [FDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M				-	
Message Type	M				YES	ignore
Node B Communication Context ID	M				YES	ignore
Transaction ID	M				-	
Power Adjustment Type	M				YES	ignore
DL Reference Power	C-Common		DL power		-	
DL Reference Power Information	C-Individual	1..<maxnoof RLs>			GLOBAL	ignore
>RL ID	M				-	
>DL Reference Power	M		DL power		-	
Max Adjustment Step	C-Common OrIndividual					
Max. Adjustment Period	C-Common OrIndividual					

Condition	Explanation
Common	This IE is present only "Adjustment Type " equals to 'Common'
Individual	This IE is present only "Adjustment Type " equals to 'Individual'
CommonOrIndividual	This IE is present only "Adjustment Type " equals to 'Common' or 'Individual'

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

9.1.51 DEDICATED MEASUREMENT INITIATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
Node B Communication Context Id	M				YES	reject
Transaction Id	M				–	
Measurement Id	M				YES	reject
Dedicated Measurement Object Type	M				YES	reject
CHOICE <i>Dedicated Measurement Object Type</i>					YES	ignore
>"RL"					YES	reject
>>RL Information		1..<maxnoofRLs>			EACH	reject
>>>RL-id	M				–	
>>>DPCH ID	O				–	
>"RLS"						
>>RL Set Information		1..<maxnoofRLSets>				
>>>RL Set ID	M					
Dedicated Measurement Type	M				YES	reject
Measurement Filter Coefficient	O				YES	reject
Report Characteristics	M				YES	reject

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

9.1.52 DEDICATED MEASUREMENT INITIATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
CRNC Communication Context Id	M				YES	ignore
Transaction Id	M				–	
Measurement Id	M				YES	ignore
CHOICE <i>Dedicated Measurement Object Type</i>				Dedicated Measurement Object Type the measurement was initiated with	YES	ignore
>"RL" or "ALL RL"					YES	ignore
>>RL Information		1..<maxnoofRLs>			EACH	ignore
>>>RL-id	M				–	
>>>DPCH ID	O				–	
>>>Dedicated Measurement Value	M					
>"RLS" or "ALL RLS"					YES	ignore
>>RL Set Information		1..<maxnoofRLSets>			–	
>>>RL Set ID	M					
>>>Dedicated Measurement Value	M					
CFN	O			Dedicated Measurement Time Reference	YES	ignore
Criticality diagnostics	O				YES	ignore

Range	Explanation
<i>MaxnoofRLs</i>	Maximum number of individual RL's the measurement can be started on.
<i>MaxnoofRLSets</i>	Maximum number of individual RL Sets a measurement can be started on.

9.1.53 DEDICATED MEASUREMENT INITIATION FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
CRNC Communication Context Id	M				YES	ignore
Transaction Id	M				–	
Measurement Id	M				YES	ignore
Cause	M				YES	ignore
Criticality diagnostics	O				YES	ignore

9.1.54 DEDICATED MEASUREMENT REPORT

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	ignore
CRNC Communication Context Id	M				YES	ignore
Transaction Id	M				–	
Measurement Id	M				YES	ignore
CHOICE <i>Dedicated Measurement Object Type</i>				Dedicated Measurement Object Type the measurement was initiated with	YES	ignore
>"RL" or "ALL RL"					YES	ignore
>>RL Information		1..<maxnoofRLs>			EACH	ignore
>>>RL-id	M				–	
>>>DPCH ID	O				–	
>>>Dedicated Measurement Value	M				–	
>"RLS" or "ALL RLS"						
>>RL Set Information		1..<maxnoofRLSets>				
>>>RL Set id	M					
>>>Dedicated Measurement Value	M					
CFN	O			Dedicated Measurement Time Reference	YES	ignore

Range	Explanation
<i>MaxnoofRLs</i>	Maximum number of individual RL's the measurement can be started on.
<i>MaxnoofRLSets</i>	Maximum number of individual RL Sets a measurement can be started on.

9.1.55 DEDICATED MEASUREMENT TERMINATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	ignore
Node B Communication Context Id	M				YES	ignore
Transaction Id	M				–	
Measurement Id	M				YES	ignore

9.1.56 DEDICATED MEASUREMENT FAILURE INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M				-	
Message Type	M				YES	ignore
CRNC Communication Context Id	M				YES	ignore
Transaction Id	M				-	
Measurement Id	M				YES	ignore
Cause	M				YES	ignore

9.1.57 RADIO LINK FAILURE INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M				-	
Message Type	M				YES	ignore
Transaction ID	M				-	
CRNC Communication Context ID	M				YES	ignore
CHOICE Reporting Object	M			Object for which the Failure shall be reported.		
>"RL"						
>>RL Information		1 to <MaxnoofRLs>			EACH	ignore
>>>RL ID	M				-	
>>>Cause	M				-	
>"RL Set"						
>>RL Set Information		1 to <MaxnoofRL Sets>				
>>>RL Set ID	M					
>>>Cause	M					

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

9.1.58 RADIO LINK RESTORE INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	ignore
Transaction ID	M				–	
CRNC Communication Context ID	M				YES	ignore
CHOICE <i>Reporting Object</i>	M			Object for which the Restoration shall be reported.		
>"RL"						
>>Radio Link Information		1 to <MaxnoofRLs>			EACH	ignore
>>>RL ID	M				–	
>"RL Set"						
>>RL Set Information		1 to <MaxnoofRLSets>				
>>>RL Set ID	M					

Range bound	Explanation
<i>MaxnoofRLs</i>	Maximum number of RLs for one UE.
<i>MaxnoofRLSets</i>	Maximum number of RL Sets for one UE.

9.1.59 COMPRESSED MODE PREPARE [FDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
Node B communication context ID	M				YES	reject
Transaction ID	M				–	
CM Pattern Information		1 to 8		Range defined ref. [4]		
>CFN Offset	M					
>TGP1	M		Gap Period	Refer to [4]	YES	reject
>TGP2	O		Gap Period	Refer to [4]	YES	reject
>TGL	M				YES	reject
>TGD	M				YES	reject
>PD	M				YES	reject
>UL/DL compressed mode selection	M				YES	reject
>Compressed mode method	M				YES	reject
>Gap Position Mode	M				YES	reject
>SN	C-Flex		TimeSlot		YES	reject
>Downlink Frame Type	M				YES	reject
>Scrambling Code Change	C-SF/2				YES	reject
>Power Control Mode	M				YES	reject
>Power Resume Mode	M				YES	reject
>UL delta SIR	M				YES	reject
>UL delta SIR after	M				YES	reject

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]

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

9.1.61 COMPRESSED MODE COMMIT [FDD]

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

9.1.62 COMPRESSED MODE FAILURE [FDD]

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

9.1.63 COMPRESSED MODE CANCEL [FDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M				–	
Message Type	M				YES	reject
Node B communication context ID	M				YES	ignore
Transaction ID	M				–	

9.1.64 ERROR INDICATION

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

Condition	Explanation
IfDL	This IE is only present when message is transmitted by the CRNC on a signalling bearer corresponding to a communication control port.
IfUL	This IE is only present when message is transmitted by the Node B on a signalling bearer corresponding to a communication control port.
Ifalone	At least either of Cause IE or Criticality Diagnostics IE shall be present.

9.1.65 PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST [TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M				-	
Message Type	M				YES	reject
Transaction ID	M				-	
C-ID	M				YES	reject
PDSCH Sets to add		<i>0..<maxnoof PDSCHSets ></i>			GLOBAL	reject
>PDSCH Set Id	M				-	
>PDSCH Information		<i>0..<maxnoof PDSCH></i>			GLOBAL	reject
>>PDSCH ID	M				-	
>>TDD Channelisation Code	M				-	
>>Burst Type	M				-	
>>Midamble Shift	M				-	
>>Time Slot	M				-	
>>Repetition Period	M				-	
>>TDD Physical Channel Offset	O				-	
>>Repetition Length	O				-	
>>TFCI Presence	M				-	
PDSCH Sets to Modify		<i>0..<maxnoof PDSCHSets ></i>			GLOBAL	reject
>PDSCH Set Id	M				-	
>PDSCH Information		<i>0..<maxnoof PDSCH></i>			GLOBAL	reject
>>PDSCH ID	M				-	

>>TDD Channelisation Code	M				-	
>>Burst Type	M				-	
>>Midamble Shift	M				-	
>>Time Slot	M				-	
>>Repetition Period	M				-	
>>TDD Physical Channel Offset	O				-	
>>Repetition Length	O				-	
>>TFCI Presence	M				-	
PDSCH Sets to Delete		<i>0..<maxnoof PDSCHSets ></i>			GLOBAL	reject
>PDSCH Set Id	M				-	
PUSCH Sets to add		<i>0..<maxnoof PUSCHSets ></i>			GLOBAL	reject
>PUSCH Set Id	M				-	
>PUSCH Information		<i>0..<maxnoof PUSCH></i>			GLOBAL	reject
>>PUSCH ID	M				-	
>>TDD Channelisation Code	M				-	
>>Burst Type	M				-	
>>Midamble Shift	M				-	
>>Time Slot	M				-	
>>Repetition Period	M				-	
>>TDD Physical Channel Offset	O				-	
>>Repetition Length	O				-	
>>TFCI Presence	M				-	
PUSCH Sets to Modify		<i>0..<maxnoof PUSCHSets ></i>			GLOBAL	reject
>PUSCH Set Id	M				-	
>PUSCH Information		<i>0..<maxnoof PUSCH></i>			GLOBAL	reject
>>PUSCH ID	M				-	
>>TDD Channelisation Code	M				-	
>>Burst Type	M				-	
>>Midamble Shift	M				-	
>>Time Slot	M				-	
>>Repetition Period	M				-	
>>TDD Physical Channel Offset	O				-	
>>Repetition Length	O				-	
>>TFCI Presence	M				-	
PUSCH Sets to Delete		<i>0..<maxnoof PUSCHSets ></i>			GLOBAL	reject
>PUSCH Set Id	M				-	

Range bound	Explanation
<i>Maxnoof PDSCH Sets</i>	Maximum number of PDSCH Sets in a cell.
<i>Maxnoof PDSCH</i>	Maximum number of PDSCH in a cell.
<i>Maxnoof PUSCH Sets</i>	Maximum number of PUSCH Sets in a cell.
<i>Maxnoof PUSCH</i>	Maximum number of PUSCH in a cell.

9.1.66 PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE [TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M				-	
Message Type	M				YES	reject
Transaction ID	M				-	
Criticality diagnostics	O				YES	ignore

9.1.67 PHYSICAL SHARED CHANNEL RECONFIGURATION FAILURE [TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M				-	
Message Type	M				YES	reject
Transaction ID	M				-	
Cause	M				YES	ignore
Criticality diagnostics	O				YES	ignore

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.

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.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Availability Status			ENUMERATED(empty, in test, failed, power off, off line, off duty, dependency, degraded, not installed, log full, ...)	

9.2.1.3 BCCH Modification Time

Indicates the time after which the new system information shall be applied on BCCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
BCCH Modification Time			Integer (0, 2, 4, ...,4094)	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.

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

9.2.1.6 Cause

IE/Group Name	Presence	Range	IE type and reference	Semantics description
<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, Priority transport channel established,SIB Origination in Node B not Supported, 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)	

9.2.1.7 CFN

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

IE/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.

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

9.2.1.10 Common Measurement Type

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Common Measurement Type			ENUMERATED (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.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
>Transmitted Carrier Power Value	C <i>MeasValue</i>		INTEGER(0..100)	According to mapping in 25.215/25.225
>RSSI Value	C <i>MeasValue</i>		INTEGER(0..63)	According to mapping in 25.215/25.225
>Acknowledged RA tries Value	C <i>MeasValue</i>		INTEGER(0..240, ...)	The number of L1 acknowledged random access tries per every 20 ms period.
>Timeslot ISCP (TDD only)	C <i>MeasValue</i>		INTEGER(0..81)	According to mapping in 25.225

Condition	Explanation
<i>MeasValue</i>	Only one measurement value can be present at the same time.

9.2.1.12 Common Physical Channel Id

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

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

9.2.1.13 Common Transport Channel Id

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

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

9.2.1.14 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.

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

9.2.1.16 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		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
>Repetition Number	O		INTEGER (0..255)	The repetition number of the not understood IE if applicable

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.

9.2.1.17 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.

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 [FDD-If referred to a DPCH, it indicates the power of the DPDCH symbols].

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

9.2.1.21 Dedicated Measurement Object Type

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

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

9.2.1.22 Dedicated Measurement Type

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dedicated Measurement Type			ENUMERATED (SIR, SIR Error, Transmitted Code Power, RSCP,...)	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.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dedicated measurement Value				
>SIR value	C <i>MeasValue</i>		INTEGER(0..63)	According to mapping in 25.215/25.225
>SIR error Value	C <i>MeasValue</i>		INTEGER(0..125)	SIR_Error=SIR-SIR_target 0: < -31.0 dB 1: -31.0dB ≤ SIR_Error < 30.5dB 2: -30.5dB ≤ SIR_Error < 30.0dB ... 62: -0.5dB ≤ SIR_Error < 0dB 63: 0dB ≤ SIR_Error < 0.5dB ... 124: 30.5dB ≤ SIR_Error < 31dB 125: ≥ 31dB
>Transmitted Code Power Value	C <i>MeasValue</i>		INTEGER(0..127)	According to mapping in 25.215/25.225
>RSCP	C <i>MeasValue</i>		INTEGER(0..81)	According to mapping in 25.225

Condition	Explanation
<i>MeasValue</i>	Only one measurement value can be present at the same time.

9.2.1.24 DSCH ID

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

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

9.2.1.25 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.

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

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 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.. 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 $SFN \bmod IB_SG_REP = IB_SG_POS$.

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, SIB3, SIB4, SIB5, SIB6, SIB7, SIB8, SIB9, SIB10, SIB11, SIB12, SIB13, SIB13.1, SIB13.2, SIB13.3, SIB13.4, SIB14, ...)	

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.

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

9.2.1.34 Local Cell ID

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

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

9.2.1.35 Maximum DL Power Capability

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

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.

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.

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

9.2.1.39 Report Characteristics

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Report characteristics				
>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		Measurement Threshold	The threshold for which the Node B shall trigger a measurement report.
>>Measurement Hysteresis Time	O		ENUMERATED (10ms...1min) step 10ms,...	
>Event B	C – Event B			
>>Measurement Threshold	M		Measurement Threshold	The threshold for which the Node B shall trigger a measurement report.
>>Measurement Hysteresis Time	O		ENUMERATED (10ms...1min) step 10ms,...	
>Event C	C – Event C			
>>Measurement Increase/Decrease Threshold	M		Measurement Increase/Decrease Threshold	
>>Measurement Change Time	M		ENUMERATED (10ms...1min) step 10ms,...	The time the measurement entity shall rise on (in ms), in order to trigger a measurement report.
>Event D	C – Event D			
>>Measurement Increase/Decrease Threshold	M		Measurement Increase/Decrease Threshold	
>>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		Measurement Threshold	
>>Measurement Threshold 2	O		Measurement Threshold	
>>Measurement Hysteresis Time	O		ENUMERATED (10ms...1min) step 10ms,...	The hysteresis time in ms
>>Report Periodicity	O		ENUMERATED (10ms...1min) step 10ms, (1min...1hr) step 1min	The frequency with which the Node B shall send measurement reports.
>Event F	C – Event F			
>>Measurement Threshold 1	M		Measurement Threshold	
>>Measurement Threshold 2	O		Measurement Threshold	
>>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.

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

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

9.2.1.42 Minimum Spreading Factor

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Minimum Spreading Factor			Enumerated(4, 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 Indicator

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

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

9.2.1.45 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
Puncture limit			INTEGER (0..15)	0: 40% 1: 44 % ... 14: 96% 15: 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.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Resource Operational State			ENUMERATED (Enabled, Disabled)	When a resource is marked as disabled, then its child resources are implicitly disabled. Cell Resource hierarchy can be referred to [6].

9.2.1.47 Limited Power Increase

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

If the limited power increase is used, Node B shall not increase the DL power of the RL if it exceeds by more than *Power_Raise_Limit* dB the averaged DL power used in the last *DL_power_averaging_window_size* timeslots of the same RL.

Power_Raise_Limit and *DL_power_averaging_window_size* are parameters configured in the Node B.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Limited Power Increase			ENUMERATED(Used, Not used)	

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 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)	

9.2.1.50 SIB Originator

Indicates if the Node B shall fill in the SIB information or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SIB Originator			Enumerated(Node B, CRNC)	

9.2.1.51 Shutdown Timer

The shutdown timer shall indicate the length of time available to the CRNC to perform the block of a resource when a Normal priority block is requested.

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

9.2.1.52 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)	

9.2.1.53 TFCS (Transport Format Combination Set)

The Transport Format Combination Set is defined as a set of Transport Format Combinations on a Coded Composite Transport Channel. It is the allowed Transport Format Combinations of the corresponding Transport Channels. The DL Transport Format Combination Set is applicable for DL Transport Channels.

[FDD - Where the UE is assigned access to one or more DSCH transport channels then the UTRAN has the choice of two methods for signalling the mapping between TFCI(field 2) values and the corresponding TFC:

Method #1 - TFCI range

The mapping is described in terms of a number of groups, each group corresponding to a given transport format combination (value of CTFC_DSCH). The CTFC_DSCH value specified in the first group applies for all values of TFCI(field 2) between 0 and the specified 'Max TFCI(field2) value'. The CTFC_DSCH value specified in the second group applies for all values of TFCI(field 2) between the 'Max TFCI(field2) value' specified in the last group plus one and the specified 'Max TFCI(field2) value' in the second group. The process continues in the same way for the following groups with the TFCI(field 2) value used by the UE in constructing its mapping table starting at the largest value reached in the previous group plus one.

Method #2 - Explicit

The mapping between TFCI(field 2) value and CTFC_DSCH is spelt out explicitly for each value of TFCI (field2)

]

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Method #2 - Explicit

The mapping between TFCI(field 2) value and CTFC_DSCH is spelt out explicitly for each value of TFCI (field2)

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE <i>DSCH</i>				
> <i>No split in TFCI</i>				This choice is made if : a) The TFCS refers to the uplink OR b) The mode is FDD and none of the Node B communication contexts are assigned any DSCH transport channels OR c) The mode is TDD
>>TFCS		1 to <maxnoofTFCs>		The first instance of the parameter corresponds to TFC zero, the second to 1 and so on.
>>>CTFC	M		INTEGER(0..MaxCTFC-1)	Integer number calculated according to TS 25.331
>>>>CHOICE Gain Factors	C-PhysChan			
>>>>>Signalled Gain Factors				
>>>>>>Gain Factor β_c	M		Integer (0..15)	For UL DPCCH or control part of PRACH in FDD; mapping in accordance to TS 25.213
>>>>>>Gain Factor β_D	M		Integer (0..15)	For UL DPDCH or data part of PRACH in FDD; mapping in accordance to TS 25.213
>>>>>>Reference TFC nr	O		Integer (0..15)	If this TFC is a reference TFC, this IE indicates the reference number
>>>>>>Computed Gain Factors				
>>>>>>>Reference TFC nr	M		Integer (0..15)	Indicates the reference TFC to be used to calculate the gain factors for this TFC
> <i>There is a split in the TFCI</i>				This choice is made if : a) The TFCS refers to the downlink AND b) The mode is FDD and one of the Node B communication contexts is assigned one or more DSCH transport channels
>>>Transport format combination_DCH		1 to <MaxTFCI_1_Comb>		The first instance of the parameter <i>Transport format combination_DCH</i> corresponds to TFCI (field 1) = 0, the second to TFCI (field 1) = 1 and so on.
>>>>CTFC_DCH	M		Integer(0..MaxCTFC_DCH-1)	Integer number calculated according to TS 25.331. The calculation of CTFC ignores any DSCH transport channels which may be assigned
>>>>>Choice Signalling method				
>>>>>>TFCI range				
>>>>>>>TFC mapping on DSCH		1 to <MaxNoTFCIGroups>		
>>>>>>>>Max TFCI(field2) value	M		Integer(1..1023)	This is the Maximum value in the range of TFCI(field2) values for which the specified CTFC_DSCH applies
>>>>>>>>>CTFC_DSCH	M		Integer(0..MaxCTFC_DSCH-1)	Integer number calculated according to TS 25.331. The calculation of CTFC ignores any DCH transport channels which may be assigned

>>>Explicit				
>>>>Transport format combination_DS CH		1 to <MaxTFCI_2_Combs>		The first instance of the parameter <i>Transport format combination_DSCH</i> corresponds to TFCI (field2) = 0, the second to TFCI (field 2) = 1 and so on.
>>>>>CTFC_DSCH	M		Integer(0..MaxCTFC_DSCH-1)	Integer number calculated according to TS 25.331. The calculation of CTFC ignores any DCH transport channels which may be assigned

Condition	Explanation
PhysChan	The choice shall be present if the TFCS concerns a UL DPCH or PRACH channel in FDD, not when the TFCS is used for other physical channels.

Range bound	Explanation
MaxnoofTFCs	The maximum number of Transport Format Combinations (1024).
MaxTFCI_1_Combs	Maximum number of TFCI (field 1) combinations (given by 2 raised to the power of the length of the TFCI (field 1))
MaxTFCI_2_Combs	Maximum number of TFCI (field 2) combinations (given by 2 raised to the power of the length of the TFCI (field 2))
MaxNoTFCIGroups	Maximum number of groups, each group described in terms of a range of TFCI(field 2) values for which a single value of CTFC_DSCH applies
MaxCTFC	Maximum number of the CTFC value is calculated according to the following: $\sum_{i=1}^I (L_i - 1)P_i$ with the notation according to TS 25.331
MaxCTFC_DCH	Maximum value of CTFC_DCH is calculated according to the following: $\sum_{i=1}^I (L_i - 1)P_i$ with the notation according to TS25.331 where only the DCH transport channels are taken into account in the calculation.
MaxCTFC_DSCH	Maximum value of CTFC_DSCH is calculated according to the following: $\sum_{i=1}^I (L_i - 1)P_i$ with the notation according to TS 25.331 where only the DSCH transport channels are taken into account in the calculation..

9.2.1.54 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
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.

9.2.1.55 ToAWE

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
ToAWE			INTEGER (0..2559)	msec.

9.2.1.56 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.

9.2.1.57 Transaction ID

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

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transaction ID			CHOICE INTEGER (0..127) or INTEGER (0..32767)	

9.2.1.58 Transport Layer Address

Transport Layer Address defines the transport address of the NodeB. 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, ...)	

9.2.1.59 UARFCN

Designate the central frequency of the channel number.

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
UARFCN			INTEGER (0..16383, ...)	corresponds to 0.0Hz.. 3276.6MHz (25.104, section 5.4 and 25.105)

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

9.2.1.60 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)	

9.2.1.61 UL interference level

The UL interference level indicates the UL interference at a certain cell[FDD]/time slot[TDD] 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.

9.2.1.62 CFN Offset <new section>

Activation time for the compressed mode pattern.

IE/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.

9.2.1.63 TSTD Indicator

Indicates if TSTD shall be active or not.

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

9.2.1.64 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)	

9.2.1.65 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 ED (Combined, not combined)	

9.2.1.66 Measurement Filter Coefficient

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Measurement Filter Coefficient			INTEGER (1..256)	

9.2.1.67 Measurement Threshold

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

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
RSSI	<i>C – Threshold</i>		INTEGER(0..63)	According to mapping in 25.215/25.225
Transmitted Carrier Power	<i>C – Threshold</i>		INTEGER(0..100)	According to mapping in 25.215/25.225
Acknowledged RA tries	<i>C – Threshold</i>		INTEGER(0..240,...)	The number of L1 acknowledged random access tries per every 20 ms period.
Timeslot ISCP	<i>C – Threshold</i>		INTEGER(0..81)	According to mapping in 25.225 (TDD only)
SIR	<i>C – Threshold</i>		INTEGER(0..63)	According to mapping in 25.215/25.225
SIR Error	<i>C – Threshold</i>		INTEGER(0..125)	SIR_Error=SIR-SIR_target 0: < -31.0 dB 1: -31.0dB ≤ SIR_Error < 30.5dB 2: -30.5dB ≤ SIR_Error < 30.0dB ... 62: -0.5dB ≤ SIR_Error < 0dB 63: 0dB ≤ SIR_Error < 0.5dB ... 124: 30.5dB ≤ SIR_Error < 31dB 125: ≥ 31dB
Transmitted Code Power	<i>C – Threshold</i>		INTEGER(0..127)	According to mapping in 25.215/25.225
RSCP	<i>C – Threshold</i>		INTEGER(0..81)	According to mapping in 25.225 (TDD only)

Condition	Explanation
<i>Threshold</i>	Only one measurement threshold can be present at the same time.

9.2.1.68 Measurement Increase/Decrease Threshold

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

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
RSSI	<i>C – Threshold</i>		INTEGER(0..62)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 62: 31dB
Transmitted Carrier Power	<i>C – Threshold</i>		INTEGER(0..100)	According to mapping in 25.215/25.225
Acknowledged RA tries	<i>C – Threshold</i>		INTEGER(0..240,...)	The number of L1 acknowledged random access tries per every 20 ms period.
Timeslot ISCP	<i>C – Threshold</i>		INTEGER(0..80)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 80: 40dB
SIR	<i>C – Threshold</i>		INTEGER(0..62)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 62: 31dB
SIR Error	<i>C – Threshold</i>		INTEGER(0..124)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 124: 62 dB
Transmitted Code Power	<i>C – Threshold</i>		INTEGER(0..112,...)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 112: 56 dB
RSCP	<i>C – Threshold</i>		INTEGER(0..80)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 80: 40dB

Condition	Explanation
<i>Threshold</i>	Only one measurement threshold can be present at the same time.

9.2.2 FDD specific parameters

9.2.2.1 AICH Transmission Timing

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, Higher Layer Scheduling)	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 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)	

9.2.2.6 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)	

9.2.2.7 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)	

9.2.2.8 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

9.2.2.9 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)	

9.2.2.10 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 Channelisation Code Number			INTEGER(0.. 255)	The maximum value is equal to the DL spreading factor -1

9.2.2.11 FDD TPC DL step size

This parameter indicates step size for the DL power adjustment.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
FDD TPC Downlink step size			ENUMERATED (0.5, 1)	

9.2.2.12 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.

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]

9.2.2.13

-deleted.

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 If the value is set to '0', the Pattern Duration shall be interpreted as 'infinite'

9.2.2.19 PICH Mode

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

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

9.2.2.20 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,..)	

9.2.2.21 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

9.2.2.22 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

9.2.2.23 Preamble Signature

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

9.2.2.24 Primary Scrambling code

The Primary scrambling code to be used in the cell.

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

9.2.2.25 Primary CPICH Power

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

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

9.2.2.26 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, ...

9.2.2.27 RACH Slot Format

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

9.2.2.28 RACH sub Channel numbers

IE/Group Name	Presence	Range	IE type and reference	Semantics description
RACH Sub Channel Numbers			BIT STRING (12)	Bit 0=Sub Channel Number 0 Bit 1=Sub Channel Number 1 ... Bit 11=Sub Channel Number 11

9.2.2.29 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)	

9.2.2.30 Scrambling Code Word Number

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

9.2.2.31 Secondary CCPCH Slot Format

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Secondary CCPCH Slot Format			INTEGER(0..17)	

9.2.2.32 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)	

9.2.2.33 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)	

9.2.2.34 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)	

9.2.2.35 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).	

9.2.2.36 SSdT Indication

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

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

9.2.2.37 STTD Indicator

Indicates if STTD shall be active or not.

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

9.2.2.38 T_Cell

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
T Cell			Enumerated (0, 1, ..,9)	0: 0 chip 1: 256 chip .. 9: 2304 chip [TS 25.402]

9.2.2.39 TFCI signalling mode

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TFCI signalling option	M		ENUMERATED (Normal, Split)	'Normal' : meaning no split in the TFCI field (either 'Logical' or 'Hard') 'Split' : meaning there is a split in the TFCI field (either 'Logical' or 'Hard')
Split type	C-IfSplit		Enumerated (Hard, Logical)	'Hard' : meaning that TFCI (field 1) and TFCI (field 2) are each 5 bits long and each field is block coded separately. 'Logical' : meaning that on the physical layer TFCI (field 1) and TFCI (field 2) are concatenated, field 1 taking the most significant bits and field 2 taking the least significant bits). The whole is then encoded with a single block code.
Length of TFCI2	C-SplitType		Integer (1..10)	This IE indicates the length measured in number of bits of TFCI (field2).

Condition	Explanation
IfSplit	This IE is only present if 'TFCI signalling option' = 'split'
SplitType	This IE is only present if 'Split type' = 'Logical'

9.2.2.40 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..3839)	Slots

9.2.2.41 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

9.2.2.42 Transmit Diversity Indicator

The Transmit Diversity Indicator indicates whether transmit diversity shall be active or not.

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

9.2.2.43 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(UL only, DL only, both UL and DL)	

9.2.2.44 UL delta SIR

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Uplink Delta SIR			Enumerated (-6..+10dB)	Step 0.1 dB.

9.2.2.45 UL delta SIR after

The delta in uplink SIR target that shall be added to the SIR target used one frame after the compressed mode frames.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Uplink Delta SIR after			Enumerated (-6..+10dB)	Step 0.1 dB.

9.2.2.46 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)	

9.2.2.47 UL SIR

The UL SIR indicates a received UL SIR.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL SIR			ENUMERATED (-8.2 .. 17.3)	Step 0.1 dB

9.2.2.48 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)	

9.2.2.49 Preamble threshold

The IE sets the threshold for preamble detection. The threshold is set in dB over the interference level. A Preamble threshold equal to n dB means that the preamble power must be received n dB over the interference in order to be acknowledged.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Preamble threshold			INTEGER (0, 1, ..., 72)	0: 0 dB 1: 0.5 dB 2: 1 dB .. 72: 36.0 dB

9.2.2.50 PDSCH code mapping

This IE indicates the association between each possible value of TFCI(field 2) and the corresponding PDSCH channelisation code. There are three ways which the UTRAN must choose between in order to signal the mapping information, these are described below. The signalling capacity consumed by the different methods will typically vary depending on the way in which the UTRAN configures usage of the DSCH.

Method #1 - Using code range

The mapping is described in terms of a number of groups, each group associated with a given spreading factor. The UE maps TFCI(field 2) via start' of Group = 1. The PDSCH code used for TFCI(field 2) = 1, is given by the SF and code number = 'PDSCH code start' + 1. This continues, with unit increments in the value of TFC mapping to unit increments in code number up until the point that code number = 'PDSCH code stop'. The process continues in the same way for the next group with the TFCI(field 2) value used by the UE when constructing its mapping table starting at the largest value reached in the previous group plus one. In the event that 'PDSCH code start' = 'PDSCH code stop' the mapping between PDSCH codes in the following way. The PDSCH code used for TFCI(field 2) = 0, is given by the SF and code number = 'PDSCH code stop' (as may occur when mapping the PDSCH root code to a TFCI (field 2) value) then this is to be interpreted as defining the mapping between the channelisation code and a single TFCI (ie. TFCI(field 2) should not be incremented twice).

Note that each value of TFCI (field 2) maps to a given code number and when the 'multi-code info' parameter is greater than 1, then each value of TFCI (field 2) actually maps to a set of PDSCH codes. In this case contiguous codes are assigned, starting at the channelisation code denoted by the 'code number' parameter and including all codes with code numbers up to and including 'code number' - 1 + the value given in the parameter 'multi-code info'.

Method #2 - Using TFCI range

The mapping is described in terms of a number of groups, each group corresponding to a given PDSCH channelisation code. The PDSCH code specified in the first group applies for all values of TFCI(field 2) between 0 and the specified 'Max TFCI(field 2)'. The PDSCH code specified in the second group applies for all values of TFCI(field 2) between the 'Max TFCI(field 2) value' specified in the last group plus one and the specified 'Max TFCI(field 2)' in the second group. The process continues in the same way for the following groups with the TFCI(field 2) value starting at the largest value reached in the previous group plus one.

Method #3 - Explicit

The mapping between TFCI(field 2) value and PDSCH channelisation code is spelt out explicitly for each value of TFCI (field 2)

Information Element/Group name	Presence	Range	IE type and reference	Semantics description
DL Scrambling Code	M		INTEGER (0..15)	Scrambling code on which PDSCH is transmitted. 0= Primary scrambling code of the cell 1...15 = Secondary scrambling code

<i>Choice signalling method</i>				
<i>>code range</i>				
>>PDSCH code mapping			1 to <MaxNoCodeGroups>	
>>Spreading factor	M		Enumerated(4, 8, 16, 32, 64, 128, 256)	
>>multi-code info	M		Integer(1..16)	This parameter indicates the number of PDSCH transmitted to the UE. The PDSCH codes all have the same SF as denoted by the Spreading factor parameter. Contiguous codes are assigned, starting at the channelisation code denoted by the spreading factor and code number parameter and including all codes, with code numbers up to and including 'code number' - 1 + 'multi-code info'. Note that 'code number'-1+'multi-code info' will not be allowed to exceed 'maxCodeNumComp'-1
>>Code number	M		Integer(0..maxCodeNumComp-1)	PDSCH code start, Numbering as described in TS 25.331
>>Code number	M		Integer(0..maxCodeNumComp-1)	PDSCH code stop, Numbering as described in TS 25.331
<i>>TFCI range</i>				
>>DSCH mapping			1 to <MaxNoTFCIGroups>	
>>>Max TFCI(field2) value	M		Integer(1..1023)	This is the maximum value in the range of TFCI(field 2) values for which the specified PDSCH code applies
>>>Spreading factor	M		Enumerated(4, 8, 16, 32, 64, 128, 256)	SF of PDSCH code
>>>multi-code info	M		Integer(1..16)	Semantics as described for this parameter above
>>>Code number	M		Integer(0..maxCodeNumComp-1)	Code number of PDSCH code. Numbering as described in TS 25.331
<i>>Explicit</i>				
>>PDSCH code			1 to MaxTFCI_2_Combs	The first instance of the parameter PDSCH code corresponds to TFCI (field2) = 0, the second to TFCI(field 2) = 1 and so on.
>>>Spreading factor	M		Enumerated(4, 8, 16, 32, 64, 128, 256)	SF of PDSCH code
>>>multi-code info	M		Integer(1..16)	Semantics as described for this parameter above
>>>Code number	M		Integer(0..maxCodeNumComp-1)	Code number of PDSCH code. Numbering as described in TS 25.331

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

9.2.2.51 Power Adjustment Type

Defines the characteristic of the power adjustment.

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

9.2.2.52 Max Adjustment Step

Defines the maximum allowed value for the change of DL power level in one slot period that can be utilised by the Power drifting prevention algorithm. This value does not include the DL inner loop PC adjustment.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Maximum Adjustment Step			INTEGER (0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1)	dB

9.2.2.53 Max Adjustment Period

Adjustment Period IE defines the period at the end of which the DL transmitted power shall converge, [with an accuracy of ± 0.25 dB] to the reference power value assuming zero-sum alternating stream of DL PC commands received in that period of time.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Max Adjustment Period			INTEGER (10, 20, 30, 40, ..., 500)	Slots

9.2.2.54 DL or Global Capacity Credit

The capacity credit indicates to the CRNC the Downlink or global capacity of a node B or of a local cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL or Global Capacity Credit			INTEGER (0..65535)	

9.2.2.55 UL Capacity Credit

The capacity credit indicates to the CRNC the Uplink capacity of a node B or of a local cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL Capacity Credit			INTEGER (0..65535)	

9.2.2.56 Common Channels Capacity Consumption Law

The capacity consumption law indicates the CRNC how the Capacity Credit is consumed by NBAP set of procedures, depending on the allocated Spreading Factor.

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

Common Transport Channel Setup

In case of usage of the Common Transport Channel Deletion, the consumption cost given in the consumption law must be credited to the Capacity Credit.

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Common Channels Capacity Consumption Law				
SF allocation law		<maxNumberOfSF>		For each SF, cost of its allocation: the first instance corresponds to SF = 4, the second to SF = 8, the third to SF = 16 and so on.
DL cost	M		INTEGER (0..65535)	
UL cost	M		INTEGER (0..65535)	

9.2.2.57 Dedicated Channels Capacity Consumption Law

The capacity consumption law indicates the CRNC how the Capacity Credit is consumed by NBAP set of procedures, depending on the allocated Spreading Factor.

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

Radio Link Setup

Radio Link Addition

Radio Link Reconfiguration (case of increase of the SF)

In case of usage of the Radio Link Deletion or of the Radio Link Reconfiguration (case of decrease of the SF) procedure, the consumption cost given in the consumption law shall be credited to the Capacity Credit.

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Dedicated Channels Capacity Consumption Law				
>SF allocation law		<maxNumberOfSF>		For each SF, cost of its allocation: the first instance corresponds to SF = 4, the second to SF = 8, the third to SF = 16 and so on.
>>DL cost	M		INTEGER (0..65535)	
>>UL cost	M		INTEGER (0..65535)	

9.2.2.58 QE-Selector

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

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

9.2.2.59 RL Set ID

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
RL Set ID			INTEGER (0..31)	

9.2.3 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)

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

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.

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

9.2.3.7 Paging Indicator Length

IE/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

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

9.2.3.9 PRACH Midamble

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

9.2.3.10 SCH Time Slot

The SCH Time Slot is only applicable if the value of Sync Case IE is Case 2.

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

9.2.3.11 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.

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

9.2.3.12 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)	

9.2.3.13 Sync case

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

Case 1) SCH and PCCPCH allocated in a single TS#k

Case 2) SCH allocated in two TS: TS#k and TS#k+8
PCCPCH allocated in TS#k

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Sync Case			Integer (1..2)	

9.2.3.14 TDD Channelisation Code

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

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

9.2.3.15 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)	

9.2.3.16 TDD TPC DL step size

This parameter indicates step size for the DL power adjustment.

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

9.2.3.17 TFCI Coding

The TFCI Coding describes the way how the TFCI bits are coded. By default 1 TFCI bit is coded with 4 bits, 2 TFCI bits are coded with 8 bits, 3-5 TFCI bits are coded with 16 bits and 6-10 TFCI bits are coded with 32 bits.

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

9.2.3.18 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)	

9.2.3.19 Time Slot Direction

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

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

9.2.3.20 Time Slot Status

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

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

9.2.3.21 Transmission Diversity Applied

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

9.2.3.22 USCH ID

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

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

9.2.3.23 Block STTD Indicator

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

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

9.2.3.24 PDSCH Set Id

The PDSCH Set Id identifies unambiguously a PDSCH Set inside a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PDSCH Set Id			INTEGER (0..255)	See 25.430

9.2.3.25 PUSCH Set Id

The PUSCH Set Id identifies unambiguously a PUSCH Set inside a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PUSCH Set Id			INTEGER (0..255)	See 25.430

9.2.3.26 PDSCH ID

The PDSCH ID identifies unambiguously a PDSCH inside a cell.

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

9.2.3.27 PUSCH ID

The PUSCH ID identifies unambiguously a PUSCH inside a cell.

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

9.3 Message and Information element abstract syntax (with ASN.1)

This chapter is for the time being only **INFORMATIVE**.

In case of misalignment with the tabular format of the messages in chapter 9.1 the ASN.1 needs to be aligned with the tabular format.

The setting of the criticality field and the level on which criticality is set for the IEs and sequences of IEs is still to be decided upon.

9.3.1 Usage of Private Message mechanism for non-standard use

The private message mechanism for non-standard use may be used

- For special operator- (and/or vendor) specific features considered not to be part of the basic functionality, i.e. the functionality required for a complete and high-quality specification in order to guarantee multi-vendor inter-operability.
- By vendors for research purposes, e.g. to implement and evaluate new algorithms/features before such features are proposed for standardisation

The private message mechanism shall not be used for basic functionality. Such functionality shall be standardised.

9.3.2 PDU Description for NBAP

```
-- *****
--
-- Elementary Procedure definitions
--
-- *****

NBAP-PDU-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,
CellSetupRequestFDD,
CellSetupRequestTDD,
CellSetupResponse,
CellSetupFailure,
CellReconfigurationRequestFDD,
CellReconfigurationRequestTDD,
CellReconfigurationResponse,
CellReconfigurationFailure,
CellDeletionRequest,
CellDeletionResponse,
ResourceStatusIndication,
SystemInformationUpdateRequest,
SystemInformationUpdateResponse,
SystemInformationUpdateFailure,
RadioLinkSetupRequestFDD,
RadioLinkSetupRequestTDD,
RadioLinkSetupResponseFDD,
RadioLinkSetupResponseTDD,
RadioLinkSetupFailureFDD,
RadioLinkSetupFailureTDD,
RadioLinkAdditionRequestFDD,
RadioLinkAdditionRequestTDD,
RadioLinkAdditionResponseFDD,
RadioLinkAdditionResponseTDD,
RadioLinkAdditionFailureFDD,
RadioLinkAdditionFailureTDD,
RadioLinkReconfigurationPrepareFDD,

RadioLinkReconfigurationPrepareTDD,
RadioLinkReconfigurationReady,
RadioLinkReconfigurationFailure,
RadioLinkReconfigurationCommit,
RadioLinkReconfigurationCancel,
RadioLinkReconfigurationRequestFDD,
RadioLinkReconfigurationRequestTDD,
RadioLinkReconfigurationResponse,
RadioLinkDeletionRequest,
RadioLinkDeletionResponse,
DL-PowerControlRequest,
DedicatedMeasurementInitiationRequest,
DedicatedMeasurementInitiationResponse,
DedicatedMeasurementInitiationFailure,
DedicatedMeasurementReport,
DedicatedMeasurementTerminationRequest,
DedicatedMeasurementFailureIndication,
RadioLinkFailureIndication,
RadioLinkRestoreIndication,
CompressedModePrepare,
CompressedModeReady,
CompressedModeCommit,
CompressedModeFailure,
CompressedModeCancel,
ErrorIndication,
PrivateMessage,
PhysicalSharedChannelReconfigurationRequestTDD,
PhysicalSharedChannelReconfigurationResponseTDD,
PhysicalSharedChannelReconfigurationFailureTDD

FROM NBAP-PDU-Contents

id-audit,
id-auditRequired,
id-blockResource,
id-cellDeletion,
id-cellReconfiguration,
id-cellSetup,
id-commonMeasurementFailure,
id-commonMeasurementInitiation,
id-commonMeasurementReport,
id-commonMeasurementTermination,
id-commonTransportChannelDelete,
id-commonTransportChannelReconfigure,
id-commonTransportChannelSetup,
id-compressedModeCancellation,
id-compressedModeCommit,
id-compressedModePreparation,
id-dedicatedMeasurementFailure,
id-dedicatedMeasurementInitiation,
id-dedicatedMeasurementReport,
id-dedicatedMeasurementTermination,

```

id-downlinkPowerControl,
id-errorIndication,
id-physicalSharedChannelReconfiguration,
id-privateMessage,
id-radioLinkAddition,
id-radioLinkDeletion,
id-radioLinkFailure,
id-radioLinkRestoration,
id-radioLinkSetup,
id-resourceStatusIndication,
id-synchronisedRadioLinkReconfigurationCancellation,
id-synchronisedRadioLinkReconfigurationCommit,
id-synchronisedRadioLinkReconfigurationPreparation,
id-systemInformationUpdate,
id-unblockResource,
id-unSynchronisedRadioLinkReconfiguration
FROM NBAP-Constants;

-- *****
--
-- Interface Elementary Procedure Class
--
-- *****

NBAP-ELEMENTARY-PROCEDURE ::= CLASS {
    &InitiatingMessage          ,
    &SuccessfulOutcome          OPTIONAL,
    &UnsuccessfulOutcome       OPTIONAL,
    &Outcome                    OPTIONAL,
    &messageDiscriminator      MessageDiscriminator,
    &procedureID               ProcedureID    UNIQUE,
    &criticality                Criticality    DEFAULT ignore
}

WITH SYNTAX {
    INITIATING MESSAGE          &InitiatingMessage
    [SUCCESSFUL OUTCOME         &SuccessfulOutcome]
    [UNSUCCESSFUL OUTCOME      &UnsuccessfulOutcome]
    [OUTCOME                    &Outcome]
    MESSAGE DISCRIMINATOR      &messageDiscriminator
    PROCEDURE ID               &procedureID
    [CRITICALITY                &criticality]
}

-- *****
--
-- Interface PDU Definition
--
-- *****

NBAP-PDU ::= CHOICE {

```

```

    initiatingMessage      InitiatingMessage,
    succesfulOutcome      SuccessfulOutcome,
    unsuccessfulOutcome    UnsuccessfulOutcome,
    outcome                Outcome,
    ...
}

InitiatingMessage ::= SEQUENCE {
    procedureID            NBAP-ELEMENTARY-PROCEDURE.&procedureID   ( {NBAP-ELEMENTARY-PROCEDURES} ),
    criticality            NBAP-ELEMENTARY-PROCEDURE.&criticality   ( {NBAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
    messageDiscriminator  NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator ( {NBAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
    transactionID         TransactionID,
    value                  NBAP-ELEMENTARY-PROCEDURE.&InitiatingMessage ( {NBAP-ELEMENTARY-PROCEDURES} {@procedureID} )
}

SuccessfulOutcome ::= SEQUENCE {
    procedureID            NBAP-ELEMENTARY-PROCEDURE.&procedureID   ( {NBAP-ELEMENTARY-PROCEDURES} ),
    criticality            NBAP-ELEMENTARY-PROCEDURE.&criticality   ( {NBAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
    messageDiscriminator  NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator ( {NBAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
    transactionID         TransactionID,
    value                  NBAP-ELEMENTARY-PROCEDURE.&SuccessfulOutcome ( {NBAP-ELEMENTARY-PROCEDURES} {@procedureID} )
}

UnsuccessfulOutcome ::= SEQUENCE {
    procedureID            NBAP-ELEMENTARY-PROCEDURE.&procedureID   ( {NBAP-ELEMENTARY-PROCEDURES} ),
    criticality            NBAP-ELEMENTARY-PROCEDURE.&criticality   ( {NBAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
    messageDiscriminator  NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator ( {NBAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
    transactionID         TransactionID,
    value                  NBAP-ELEMENTARY-PROCEDURE.&UnsuccessfulOutcome ( {NBAP-ELEMENTARY-PROCEDURES} {@procedureID} )
}

Outcome ::= SEQUENCE {
    procedureID            NBAP-ELEMENTARY-PROCEDURE.&procedureID   ( {NBAP-ELEMENTARY-PROCEDURES} ),
    criticality            NBAP-ELEMENTARY-PROCEDURE.&criticality   ( {NBAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
    messageDiscriminator  NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator ( {NBAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
    transactionID         TransactionID,
    value                  NBAP-ELEMENTARY-PROCEDURE.&Outcome      ( {NBAP-ELEMENTARY-PROCEDURES} {@procedureID} )
}

-- *****
--
-- Interface Elementary Procedure List
--
-- *****

NBAP-ELEMENTARY-PROCEDURES NBAP-ELEMENTARY-PROCEDURE ::= {
    NBAP-ELEMENTARY-PROCEDURES-CLASS-1      |
    NBAP-ELEMENTARY-PROCEDURES-CLASS-2      ,
    ...
}

```

```

NBAP-ELEMENTARY-PROCEDURES-CLASS-1 NBAP-ELEMENTARY-PROCEDURE ::= {
  cellSetupFDD
  cellSetupTDD
  cellReconfigurationFDD
  cellReconfigurationTDD
  cellDeletion
  commonTransportChannelSetupFDD
  commonTransportChannelSetupTDD
  commonTransportChannelReconfigureFDD
  commonTransportChannelReconfigureTDD
  commonTransportChannelDelete
  audit
  blockResource
  radioLinkSetupFDD
  radioLinkSetupTDD
  systemInformationUpdate
  commonMeasurementInitiation
  radioLinkAdditionFDD
  radioLinkAdditionTDD
  radioLinkDeletion
  synchronisedRadioLinkReconfigurationPreparationFDD
  synchronisedRadioLinkReconfigurationPreparationTDD
  unSynchronisedRadioLinkReconfigurationFDD
  unSynchronisedRadioLinkReconfigurationTDD
  dedicatedMeasurementInitiation
  physicalSharedChannelReconfiguration
  compressedModePreparation
  ...
}

```

```

NBAP-ELEMENTARY-PROCEDURES-CLASS-2 NBAP-ELEMENTARY-PROCEDURE ::= {
  resourceStatusIndication
  auditRequired
  commonMeasurementReport
  commonMeasurementTermination
  commonMeasurementFailure
  synchronisedRadioLinkReconfigurationCommit
  synchronisedRadioLinkReconfigurationCancellation
  radioLinkFailure
  radioLinkRestoration
  dedicatedMeasurementReport
  dedicatedMeasurementTermination
  dedicatedMeasurementFailure
  downlinkPowerControlFDD
  compressedModeCommit
  compressedModeCancellation
  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             reject
}

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

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

-- *** CellReconfiguration(TDD) ***
cellReconfigurationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CellReconfigurationRequestTDD
    SUCCESSFUL OUTCOME      CellReconfigurationResponse
    UNSUCCESSFUL OUTCOME    CellReconfigurationFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-cellReconfiguration, ddMode tdd }
    CRITICALITY             reject
}

-- *** CellDeletion ***
cellDeletion NBAP-ELEMENTARY-PROCEDURE ::= {
```

```
INITIATING MESSAGE      CellDeletionRequest
SUCCESSFUL OUTCOME      CellDeletionResponse
MESSAGE DISCRIMINATOR   common
PROCEDURE ID            { procedureCode id-cellDeletion, ddMode common }
CRITICALITY             reject
}

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

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

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

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

-- *** CommonTransportChannelDelete ***
commonTransportChannelDelete NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      CommonTransportChannelDeletionRequest
  SUCCESSFUL OUTCOME      CommonTransportChannelDeletionResponse
```

```
MESSAGE DISCRIMINATOR    common
PROCEDURE ID              { procedureCode id-commonTransportChannelDelete, ddMode common }
CRITICALITY               reject
}

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

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

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

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

-- *** SystemInformationUpdate ***
systemInformationUpdate NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      SystemInformationUpdateRequest
  SUCCESSFUL OUTCOME       SystemInformationUpdateResponse
  UNSUCCESSFUL OUTCOME    SystemInformationUpdateFailure
  MESSAGE DISCRIMINATOR    common
  PROCEDURE ID             { procedureCode id-systemInformationUpdate, ddMode common }
}
```



```
    CRITICALITY          reject
  }

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

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

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

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

-- *** SynchronisedRadioLinkReconfigurationPreparation (FDD) ***
synchronisedRadioLinkReconfigurationPreparationFDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      RadioLinkReconfigurationPrepareFDD
  SUCCESSFUL OUTCOME      RadioLinkReconfigurationReady
  UNSUCCESSFUL OUTCOME    RadioLinkReconfigurationFailure
  MESSAGE DISCRIMINATOR   dedicated
  PROCEDURE ID            { procedureCode id-synchronisedRadioLinkReconfigurationPreparation, ddMode fdd }
  CRITICALITY            reject
}
```

```

-- *** SynchronisedRadioLinkReconfigurationPreparation (TDD) ***
synchronisedRadioLinkReconfigurationPreparationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      RadioLinkReconfigurationPrepareTDD
  SUCCESSFUL OUTCOME      RadioLinkReconfigurationReady
  UNSUCCESSFUL OUTCOME    RadioLinkReconfigurationFailure
  MESSAGE DISCRIMINATOR   dedicated
  PROCEDURE ID            { procedureCode id-synchronisedRadioLinkReconfigurationPreparation, ddMode tdd }
  CRITICALITY             reject
}

-- *** UnSynchronisedRadioLinkReconfiguration (FDD) ***
unSynchronisedRadioLinkReconfigurationFDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      RadioLinkReconfigurationRequestFDD
  SUCCESSFUL OUTCOME      RadioLinkReconfigurationResponse
  UNSUCCESSFUL OUTCOME    RadioLinkReconfigurationFailure
  MESSAGE DISCRIMINATOR   dedicated
  PROCEDURE ID            { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode fdd }
  CRITICALITY             reject
}

-- *** UnSynchronisedRadioLinkReconfiguration (TDD) ***
unSynchronisedRadioLinkReconfigurationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      RadioLinkReconfigurationRequestTDD
  SUCCESSFUL OUTCOME      RadioLinkReconfigurationResponse
  UNSUCCESSFUL OUTCOME    RadioLinkReconfigurationFailure
  MESSAGE DISCRIMINATOR   dedicated
  PROCEDURE ID            { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode tdd }
  CRITICALITY             reject
}

-- *** DedicatedMeasurementInitiation ***
dedicatedMeasurementInitiation NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      DedicatedMeasurementInitiationRequest
  SUCCESSFUL OUTCOME      DedicatedMeasurementInitiationResponse
  UNSUCCESSFUL OUTCOME    DedicatedMeasurementInitiationFailure
  MESSAGE DISCRIMINATOR   dedicated
  PROCEDURE ID            { procedureCode id-dedicatedMeasurementInitiation, ddMode common }
  CRITICALITY             reject
}

-- *** PhysicalSharedChannelReconfiguration (TDD only) ***
physicalSharedChannelReconfiguration NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      PhysicalSharedChannelReconfigurationRequestTDD
  SUCCESSFUL OUTCOME      PhysicalSharedChannelReconfigurationResponseTDD
  UNSUCCESSFUL OUTCOME    PhysicalSharedChannelReconfigurationFailureTDD
  MESSAGE DISCRIMINATOR   dedicated
  PROCEDURE ID            { procedureCode id-physicalSharedChannelReconfiguration, ddMode tdd }
  CRITICALITY             reject
}

```

```
-- *** CompressedModePreparation (FDD only) ***
compressedModePreparation NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      CompressedModePrepare
  SUCCESSFUL OUTCOME      CompressedModeReady
  UNSUCCESSFUL OUTCOME    CompressedModeFailure
  MESSAGE DISCRIMINATOR   dedicated
  PROCEDURE ID            { procedureCode id-compressedModePreparation, ddMode fdd }
  CRITICALITY             reject
}

-- Class 2

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

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

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

-- *** CommonMeasurementTermination ***
commonMeasurementTermination NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      CommonMeasurementTerminationRequest
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-commonMeasurementTermination, ddMode common }
  CRITICALITY             ignore
}

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

```
-- *** SynchronisedRadioLinkReconfirurationCommit ***
synchronisedRadioLinkReconfigurationCommit NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkReconfigurationCommit
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-synchronisedRadioLinkReconfigurationCommit, ddMode common }
    CRITICALITY             ignore
}

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

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

-- *** 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      ErrorIndication
  MESSAGE DISCRIMINATOR   dedicated
  PROCEDURE ID            { procedureCode id-errorIndication, 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

```

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
    AddorDeleteIndicator,
    AICH-TransmissionTiming,
    AvailabilityStatus,
    BCCH-ModificationTime,
    BindingID,
    BlockingPriorityIndicator,
    BlockSTTD-Indicator,
    BurstType,
    Cause,
    CTrCH-ID,
    CellParameterID,
    CFN,
    CFNOffset,
    ChipOffset,
    C-ID,
    CommonChannelsCapacityConsumptionLaw,
    CommonMeasurementType,
    CommonMeasurementValue,
    CommonPhysicalChannelID,
    CommonTransportChannelID,
    CommunicationControlPortID,
    CompressedModeMethod,

```

ConfigurationGenerationID,
CriticalityDiagnostics,
CRNC-CommunicationContextID,
DCH-CombinationInd,
DCH-ID,
DedicatedMeasurementObjectType,
DedicatedChannelsCapacityConsumptionLaw,
DedicatedMeasurementType,
DedicatedMeasurementValue,
D-FieldLength,
DiversityControlField,
DiversityMode,
DL-DPCH-SlotFormat,
DL-FrameType,
DL-or-Global-CapacityCredit,
DL-Power,
DL-ScramblingCode,
DPCH-ID,
DSCH-ID,
-- to do
DSCH-TFS,
FDD-DL-ChannelisationCodeNumber,
FDD-S-CCPCH-Offset,
FDD-TPC-DownlinkStepSize,
FrameHandlingPriority,
FrameOffset,
GapPeriod,
GapPositionMode,
IB-SG-DATA,
IB-SG-POS,
IB-SG-REP,
IB-Type,
IndicationType,
LimitedPowerIncrease,
Local-Cell-ID,
MaximumDL-PowerCapability,
MaximumTransmissionPower,
MaxNrOfUL-DPDCHs,
MaxPRACH-MidambleShifts,
MeasurementFilterCoefficient,
MeasurementID,
MidambleShift,
MinSpreadingFactor,
MinUL-ChannelisationCodeLength,
MultiplexingPosition,
NodeB-CommunicationContextID,
PagingIndicatorLength,
PayloadCRC-PresenceIndicator,
PCCPCH-Power,
PD,
PDSCH-CodeMapping,

PDSCHSet-ID,
PDSCH-ID,
PICH-Mode,
PowerAdjustmentType,
PowerControlMode,
PowerOffset,
PowerResumeMode,
PRACH-Midamble,
PreambleSignatures,
PreambleThreshold,
PrimaryCPICH-Power,
PrimaryScramblingCode,
PropagationDelay,
SCH-TimeSlot,
PunctureLimit,
PUSCHSet-ID,
PUSCH-ID,
QE-Selector,
RACH-SlotFormat,
RACH-SubChannelNumbers,
RepetitionLength,
RepetitionPeriod,
ReportCharacteristics,
ResourceOperationalState,
RL-Set-ID,
RL-ID,
ScaledMaxAdjustmentPeriod,
ScaledMaxAdjustmentStep,
ScramblingCodeChange,
ScramblingCodeWordNumber,
SecondaryCCPCH-SlotFormat,
S-FieldLength,
SFN,
ShutdownTimer,
SIB-DeletionIndicator,
SIB-Originator,
SSDT-Cell-Identity,
SSDT-CellID-Length,
SSDT-Indication,
STTD-Indicator,
SSDT-SupportIndicator,
SyncCase,
T-Cell,
TDD-ChannelisationCode,
TDD-TPC-DownlinkStepSize,
TDD-PhysicalChannelOffset,
TFCI-Coding,
TFCI-Presence,
TFCI-SignallingMode,
TFCS,
TGD,


```
TGL,
TimeSlot,
TimeSlotDirection,
TimeSlotStatus,
ToAWE,
ToAWS,
TransmissionDiversityApplied,
TransmitDiversityIndicator,
TransportFormatSet,
TransportLayerAddress,
TSTD-Indicator,
UARFCN,
UL-CapacityCredit,
UL-DL-CompressedModeSelection,
UL-DeltaSIR,
UL-DeltaSIR-after,
UL-DPCCCH-SlotFormat,
UL-SIR,
UL-FP-Mode,
UL-InterferenceLevel,
UL-ScramblingCode,
USCH-ID
FROM NBAP-IEs

PrivateIE-Container{ },
ProtocolExtensionContainer{ },
ProtocolIE-Container{ },
ProtocolIE-ContainerList{ },
NBAP-PRIVATE-IES,
NBAP-PROTOCOL-IES,
NBAP-PROTOCOL-EXTENSION
FROM NBAP-Containers

id-AICH-InformationItem-AuditRsp,
id-AICH-InformationItem-ResourceStatusInd,
id-AICH-ParametersList-CTCH-ReconfRqstFDD,
id-AllRLItem-DM-Rprt,
id-AllRLItem-DM-Rsp,
id-AllRLItem-Set-DM-Rprt,
id-AllRLItem-Set-DM-Rsp,
id-BCH-InformationItem-AuditRsp,
id-BCH-InformationItem-ResourceStatusInd,
id-BCCH-ModificationTime,
id-BlockingPriorityIndicator,
id-Case1Item-Cell-SetupRqstTDD,
id-Case2Item-Cell-SetupRqstTDD,
id-Cause,
id-CCP-InformationItem-AuditRsp,
id-CCP-InformationList-AuditRsp,
id-CCP-InformationItem-ResourceStatusInd,
id-Cell-InformationItem-AuditRsp,
```

id-Cell-InformationItem-ResourceStatusInd,
id-Cell-InformationList-AuditRsp,
id-CellItem-CM-Rprt,
id-CellItem-CM-Rqst,
id-CellItem-CM-Rsp,
id-CellParameterID,
id-CFN,
id-C-ID,
id-CombiningItem-RL-AdditionFailureFDD,
id-CombiningItem-RL-AdditionRspFDD,
id-CombiningItem-RL-AdditionRspTDD,
id-CombiningItem-RL-SetupFailureFDD,
id-CombiningItem-RL-SetupRspFDD,
id-CommonMeasurementObjectType-CM-Rprt,
id-CommonMeasurementObjectType-CM-Rqst,
id-CommonMeasurementObjectType-CM-Rsp,
id-CommonMeasurementType,
id-CommonPhysicalChannelID,
id-CommonPhysicalChannelType-CTCH-SetupRqstFDD,
id-CommonPhysicalChannelType-CTCH-SetupRqstTDD,
id-CommonTransportChannelType-CTCH-ReconfRqstTDD,
id-CommonTransportChannelType-CTCH-SetupRsp,
id-CommunicationControlPortID,
id-CM-PatternInformationItem-CompressedModePrep,
id-CM-PatternInformationList-CompressedModePrep,
id-ConfigurationGenerationID,
id-CRNC-CommunicationContextID,
id-CriticalityDiagnostics,
id-DCH-AddListIE-RL-ReconfReady,
id-DCH-AddListIE-RL-ReconfRsp,
id-DCH-AddList-RL-ReconfPrepFDD,
id-DCH-AddList-RL-ReconfPrepTDD,
id-DCH-AddList-RL-ReconfRqstFDD,
id-DCH-AddList-RL-ReconfRqstTDD,
id-DCH-DeleteList-RL-ReconfPrepFDD,
id-DCH-DeleteList-RL-ReconfPrepTDD,
id-DCH-DeleteList-RL-ReconfRqstFDD,
id-DCH-DeleteList-RL-ReconfRqstTDD,
id-DCH-InformationList-RL-SetupRqstFDD,
id-DCH-InformationList-RL-SetupRqstTDD,
id-DCH-InformationResponseItem-RL-SetupRspTDD,
id-DCH-InformationResponseListIE-RL-SetupRspTDD,
id-DCH-ModifyListIE-RL-ReconfReady,
id-DCH-ModifyListIE-RL-ReconfRsp,
id-DCH-ModifyList-RL-ReconfPrepFDD,
id-DCH-ModifyList-RL-ReconfPrepTDD,
id-DCH-ModifyList-RL-ReconfRqstFDD,
id-DCH-ModifyList-RL-ReconfRqstTDD,
id-DedicatedMeasurementObjectType,
id-DedicatedMeasurementObjectType-DM-Rprt,
id-DedicatedMeasurementObjectType-DM-Rqst,

id-DedicatedMeasurementObjectType-DM-Rsp,
id-DedicatedMeasurementType,
id-DL-CCTrCH-InformationItem-RL-ReconfRqstTDD,
id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD,
id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD,
id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD,
id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD,
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD,
id-DL-DPCH-InformationItem-RL-AdditionRqstTDD,
id-DL-DPCH-InformationList-RL-AdditionRqstTDD,
id-DL-DPCH-InformationList-RL-SetupRqstTDD,
id-DL-DPCH-InformationListIE-RL-ReconfPrepTDD,
id-DL-DPCH-Information-RL-ReconfPrepFDD,
id-DL-DPCH-Information-RL-ReconfRqstFDD,
id-DL-DPCH-Information-RL-SetupRqstFDD,
id-DL-ReferencePowerInformationItem-DL-PC-Rqst,
id-DLReferencePower,
id-DLReferencePowerList-DL-PC-Rqst,
id-DSCH-AddItem-RL-ReconfPrepFDD,
id-DSCH-AddItem-RL-ReconfRqstFDD,
id-DSCH-AddList-RL-ReconfPrepFDD,
id-DSCH-AddList-RL-ReconfRqstFDD,
id-DSCH-DeleteItem-RL-ReconfPrepFDD,
id-DSCH-DeleteItem-RL-ReconfRqstFDD,
id-DSCH-DeleteList-RL-ReconfPrepFDD,
id-DSCH-DeleteList-RL-ReconfRqstFDD,
id-DSCH-ID,
id-DSCH-information-AddList-RL-ReconfPrepTDD,
id-DSCH-Information-AddList-RL-ReconfRqstTDD,
id-DSCH-Information-DeleteList-RL-ReconfPrepTDD,
id-DSCH-Information-DeleteList-RL-ReconfRqstTDD,
id-DSCH-Information-ModifyList-RL-ReconfPrepTDD,
id-DSCH-Information-ModifyList-RL-ReconfRqstTDD,
id-DSCH-InformationResponseListIE-RL-AdditionRspTDD,
id-DSCH-InformationRespListIE-RL-SetupFailureFDD,
id-DSCH-InformationResponseListIE-RL-SetupRspFDD,
id-DSCH-InformationResponseListIE-RL-SetupRspTDD,
id-DSCH-InformationList-RL-SetupRqstFDD,
id-DSCH-InformationList-RL-SetupRqstTDD,
id-DSCH-ModifyItem-RL-ReconfPrepFDD,
id-DSCH-ModifyItem-RL-ReconfRqstFDD,
id-DSCH-ModifyListIE-RL-ReconfReady,
id-DSCH-ModifyListIE-RL-ReconfRsp,
id-DSCH-ModifyList-RL-ReconfPrepFDD,
id-DSCH-ModifyList-RL-ReconfRqstFDD,
id-DSCH-SetupListIE-RL-ReconfReady,
id-DSCH-SetupListIE-RL-ReconfRsp,
id-FACH-InformationItem-AuditRsp,
id-FACH-InformationItem-ResourceStatusInd,
id-FACHItem-CTCH-SetupRsp,
id-FACH-ParametersList-CTCH-ReconfRqstFDD,

id-FACH-ParametersList-CTCH-ReconfRqstTDD,
id-FACH-ParametersListIE-CTCH-SetupRqstFDD,
id-FACH-ParametersListIE-CTCH-SetupRqstTDD,
id-IndicationType-ResourceStatusInd,
id-Local-Cell-ID,
id-Local-Cell-InformationItem-AuditRsp,
id-Local-Cell-InformationItem-ResourceStatusInd,
id-Local-Cell-InformationItem2-ResourceStatusInd,
id-Local-Cell-InformationList-AuditRsp,
id-MaxAdjustmentPeriod,
id-MaxAdjustmentStep,
id-MaximumTransmissionPower,
id-MeasurementFilterCoefficient,
id-MeasurementID,
id-MIB-SIB-InformationList-SystemInfoUpdateRqst,
id-NodeBInformation-AuditRep,
id-No-DeletionItem-SystemInfoUpdate,
id-No-FailureItem-ResourceStatusInd,
id-Non-CombiningItem-RL-AdditionFailureFDD,
id-Non-CombiningItem-RL-AdditionRspFDD,
id-Non-CombiningItem-RL-AdditionRspTDD,
id-NonCombiningOrIENotPrsentItem-RL-SetupFailureFDD,
id-NonCombiningOrIENotPrsentItem-RL-SetupRspFDD,
id-NodeB-CommunicationContextID,
id-P-CCPCH-InformationItem-AuditRsp,
id-P-CCPCH-InformationItem-ResourceStatusInd,
id-P-CPICH-InformationItem-AuditRsp,
id-P-CPICH-InformationItem-ResourceStatusInd,
id-P-SCH-InformationItem-AuditRsp,
id-P-SCH-InformationItem-ResourceStatusInd,
id-PCCPCH-Information-Cell-ReconfRqstTDD,
id-PCCPCH-Information-Cell-SetupRqstTDD,
id-PCH-InformationItem-ResourceStatusInd,
id-PCHItem-CTCH-SetupRsp,
id-PCH-Parameters-CTCH-ReconfRqstFDD,
id-PCH-Parameters-CTCH-ReconfRqstTDD,
id-PCH-ParametersItem-CTCH-SetupRqstFDD,
id-PCH-ParametersItem-CTCH-SetupRqstTDD,
id-PCH-InformationItem-AuditRsp,
id-PICH-InformationItem-ResourceStatusInd,
id-PD,
id-PDSCH-Information-AddListIE-PSCH-ReconfRqst,
id-PDSCH-Information-ModifyListIE-PSCH-ReconfRqst,
id-PDSCHSets-AddList-PSCH-ReconfRqst,
id-PDSCHSets-DeleteList-PSCH-ReconfRqst,
id-PDSCHSets-ModifyList-PSCH-ReconfRqst,
id-PICH-InformationItem-AuditRsp,
id-PICH-Parameters-CTCH-ReconfRqstFDD,
id-PICH-Parameters-CTCH-ReconfRqstTDD,
id-PowerAdjustmentType,
id-PRACH-InformationItem-AuditRsp,

id-PRACH-InformationItem-ResourceStatusInd,
id-PRACHItem-CTCH-SetupRqstFDD,
id-PRACHItem-CTCH-SetupRqstTDD,
id-PRACH-ParametersList-CTCH-ReconfRqstFDD,
id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD,
id-PrimaryCCPCH-Information-Cell-SetupRqstFDD,
id-PrimaryCPICH-Information-Cell-ReconfRqstFDD,
id-PrimaryCPICH-Information-Cell-SetupRqstFDD,
id-PrimarySCH-Information-Cell-ReconfRqstFDD,
id-PrimarySCH-Information-Cell-SetupRqstFDD,
id-PrimaryScramblingCode,
id-ProcedureScopeType-DL-PC-Rqst,
id-SCH-Information-Cell-ReconfRqstTDD,
id-SCH-Information-Cell-SetupRqstTDD,
id-PUSCH-Information-AddListIE-PSCH-ReconfRqst,
id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst,
id-PUSCHSets-AddList-PSCH-ReconfRqst,
id-PUSCHSets-DeleteList-PSCH-ReconfRqst,
id-PUSCHSets-ModifyList-PSCH-ReconfRqst,
id-RACH-InformationItem-AuditRsp,
id-RACH-InformationItem-ResourceStatusInd,
id-RACHItem-CTCH-SetupRsp,
id-RACHItem-CM-Rprt,
id-RACHItem-CM-Rqst,
id-RACHItem-CM-Rsp,
id-RACH-ParametersItem-CTCH-SetupRqstFDD,
id-RACH-ParameterItem-CTCH-SetupRqstTDD,
id-ReportCharacteristics,
id-Reporting-Object-RL-FailureInd,
id-Reporting-Object-RL-RestoreInd,
id-RL-ID,
id-RL-InformationItem-DM-Rprt,
id-RL-InformationItem-DM-Rqst,
id-RL-InformationItem-DM-Rsp,
id-RL-InformationItem-RL-AdditionRqstFDD,
id-RL-informationItem-RL-DeletionRqst,
id-RL-InformationItem-RL-FailureInd,
id-RL-InformationItem-RL-ReconfPrepFDD,
id-RL-InformationItem-RL-ReconfRqstFDD,
id-RL-InformationItem-RL-RestoreInd,
id-RL-InformationItem-RL-SetupRqstFDD,
id-RL-InformationList-RL-AdditionRqstFDD,
id-RL-informationList-RL-DeletionRqst,
id-RL-InformationList-RL-ReconfPrepFDD,
id-RL-InformationList-RL-ReconfRqstFDD,
id-RL-InformationList-RL-SetupRqstFDD,
id-RL-InformationResponseItem-RL-AdditionRspFDD,
id-RL-InformationResponseItem-RL-ReconfReady,
id-RL-InformationResponseItem-RL-ReconfRsp,
id-RL-InformationResponseItem-RL-SetupRspFDD,
id-RL-InformationResponseList-RL-AdditionRspFDD,

id-RL-InformationResponseList-RL-ReconfReady,
id-RL-InformationResponseList-RL-ReconfRsp,
id-RL-InformationResponseList-RL-SetupRspFDD,
id-RL-InformationResponse-RL-AdditionRspTDD,
id-RL-InformationResponse-RL-SetupRspTDD,
id-RL-Information-RL-AdditionRqstTDD,
id-RL-Information-RL-ReconfRqstTDD,
id-RL-Information-RL-ReconfPrepTDD,
id-RL-Information-RL-SetupRqstTDD,
id-RLItem-DM-Rprt,
id-RLItem-DM-Rqst,
id-RLItem-DM-Rsp,
id-RLItem-RL-FailureInd,
id-RLItem-RL-RestoreInd,
id-RL-ReconfigurationFailureItem-RL-ReconfFailure,
id-RL-ReconfigurationFailureList-RL-ReconfFailure,
id-RL-Set-InformationItem-DM-Rprt,
id-RL-SetItem-DM-Rqst,
id-RL-Set-InformationItem-DM-Rsp,
id-RL-Set-InformationItem-RL-FailureInd,
id-RL-Set-InformationItem-RL-RestoreInd,
id-RL-SetItem-DM-Rprt,
id-RL-SetItem-DM-Rsp,
id-RL-SetItem-RL-FailureInd,
id-RL-SetItem-RL-RestoreInd,
id-S-CCPCH-InformationItem-AuditRsp,
id-S-CCPCH-InformationItem-ResourceStatusInd,
id-S-CPICH-InformationItem-AuditRsp,
id-S-CPICH-InformationItem-ResourceStatusInd,
id-SCH-InformationItem-AuditRsp,
id-SCH-InformationItem-ResourceStatusInd,
id-S-SCH-InformationItem-AuditRsp,
id-S-SCH-InformationItem-ResourceStatusInd,
id-Secondary-CCPCHItem-CTCH-SetupRqstFDD,
id-Secondary-CCPCHItem-CTCH-SetupRqstTDD,
id-Secondary-CCPCHListIE-CTCH-ReconfRqstTDD,
id-Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD,
id-Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD,
id-SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD,
id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD,
id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD,
id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD,
id-SecondarySCH-Information-Cell-ReconfRqstFDD,
id-SecondarySCH-Information-Cell-SetupRqstFDD,
id-SegmentInformationListIE-SystemInfoUpdate,
id-ServiceImpactingItem-ResourceStatusInd,
id-SFN,
id-ShutdownTimer,
id-Successful-RL-InformationRespItem-RL-AdditionFailureFDD,
id-Successful-RL-InformationRespItem-RL-SetupFailureFDD,
id-Successful-RL-InformationRespList-RL-AdditionFailureFDD,

id-Successful-RL-InformationRespList-RL-SetupFailureFDD,
id-SyncCase,
id-SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH,
id-T-Cell,
id-TimeSlotConfigurationList-Cell-ReconfRqstTDD,
id-TimeSlotConfigurationList-Cell-SetupRqstTDD,
id-TransmissionDiversityApplied,
id-UARFCNforNt,
id-UARFCNforNd,
id-UARFCNforNu,
id-UL-CCTrCH-InformationItem-RL-ReconfRqstTDD,
id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD,
id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD,
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD,
id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD,
id-UL-CCTrCH-InformationList-RL-SetupRqstTDD,
id-UL-DPCH-InformationItem-RL-AdditionRqstTDD,
id-UL-DPCH-InformationList-RL-AdditionRqstTDD,
id-UL-DPCH-InformationList-RL-SetupRqstTDD,
id-UL-DPCH-InformationListIE-RL-ReconfPrepTDD,
id-UL-DPCH-Information-RL-ReconfPrepFDD,
id-UL-DPCH-Information-RL-ReconfRqstFDD,
id-UL-DPCH-Information-RL-SetupRqstFDD,
id-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD,
id-Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD,
id-Unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD,
id-Unsuccessful-RL-InformationRespList-RL-SetupFailureFDD,
id-Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD,
id-Unsuccessful-RL-InformationResp-RL-SetupFailureTDD,
id-USCH-information-AddList-RL-ReconfPrepTDD,
id-USCH-Information-AddList-RL-ReconfRqstTDD,
id-USCH-Information-DeleteList-RL-ReconfPrepTDD,
id-USCH-Information-DeleteList-RL-ReconfRqstTDD,
id-USCH-Information-ModifyList-RL-ReconfPrepTDD,
id-USCH-Information-ModifyList-RL-ReconfRqstTDD,
id-USCH-InformationResponseListIE-RL-AdditionRspTDD,
id-USCH-InformationResponseListIE-RL-SetupRspTDD,
id-USCH-InformationList-RL-SetupRqstTDD,
id-USCH-ModifyListIE-RL-ReconfReady,
id-USCH-ModifyListIE-RL-ReconfRsp,
id-USCH-SetupListIE-RL-ReconfReady,
id-USCH-SetupListIE-RL-ReconfRsp,

maxNrOfCCTrCHs,
maxNrOfCodes,
maxNrOfCmpatterns,
maxNrOfDCHs,
maxNrOfDLCodes,
maxNrOfDPCHs,
maxNrOfDSCHs,
maxNrOfFACHs,

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maxNrOfRLs,
maxNrOfRLSets,
maxNrOfPRACHs,
maxNrOfPDSCHs,
maxNrOfPUSCHs,
maxNrOfPDSCHSets,
maxNrOfPUSCHSets,
maxNrOfSCCPCHs,
maxNrOfULTSs,
maxNrOfUSCHs,
maxFACHCell,
maxRACHCell,
maxPRACHCell,
maxSCCPCHCell,
maxSCPICHCell,
maxCellinNodeB,
maxCCPinNodeB,
maxLocalCellinNodeB,
maxSF,
maxIB,
maxIBSEG
FROM NBAP-Constants;

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

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

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

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

CommonPhysicalChannelType-CTCH-SetupRqstFDD ::= CHOICE {
    secondary-CCPCH-parameters      Secondary-CCPCH-CTCH-SetupRqstFDD,

```



```

    pRACH-parameters          PRACH-CTCH-SetupRqstFDD,
    ...
}

Secondary-CCPCH-CTCH-SetupRqstFDD ::= ProtocolIE-Container {{ Secondary-CCPCHIE-CTCH-SetupRqstFDD }}

Secondary-CCPCHIE-CTCH-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-Secondary-CCPCHItem-CTCH-SetupRqstFDD    CRITICALITY reject    TYPE Secondary-CCPCHItem-CTCH-SetupRqstFDD    PRESENCE mandatory },
    ...
}

Secondary-CCPCHItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    fdd-S-CCPCH-Offset           FDD-S-CCPCH-Offset,
    dl-ScramblingCode            DL-ScramblingCode,
    fdd-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    tFCS                          TFCS,
    secondary-CCPCH-SlotFormat    SecondaryCCPCH-SlotFormat,
    tFCI-Presence                 TFCI-Presence    OPTIONAL,
    -- This IE is present only if the Secondary CCPCH Slot Format is equal to any value 8 to 17
    multiplexingPosition          MultiplexingPosition,
    sTTD-Indicator                STTD-Indicator,
    fACH-Parameters               FACH-ParametersList-CTCH-SetupRqstFDD    OPTIONAL,
    -- One of the channels FACH or PCH or both must be present
    pCH-Parameters               PCH-Parameters-CTCH-SetupRqstFDD    OPTIONAL,
    -- One of the channels FACH or PCH or both must be present
    iE-Extensions                 ProtocolExtensionContainer { { Secondary-CCPCHItem-CTCH-SetupRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

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

FACH-ParametersList-CTCH-SetupRqstFDD ::= ProtocolIE-Container {{ FACH-ParametersListIEs-CTCH-SetupRqstFDD }}

FACH-ParametersListIEs-CTCH-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-FACH-ParametersListIE-CTCH-SetupRqstFDD    CRITICALITY reject    TYPE FACH-ParametersListIE-CTCH-SetupRqstFDD    PRESENCE mandatory },
    ...
}

FACH-ParametersListIE-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfFACHs)) OF FACH-ParametersItem-CTCH-SetupRqstFDD

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

```

```

}

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

PCH-Parameters-CTCH-SetupRqstFDD ::= ProtocolIE-Container {{ PCH-ParametersIE-CTCH-SetupRqstFDD }}

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

PCH-ParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonTransportChannelID        CommonTransportChannelID,
    transportFormatSet              TransportFormatSet,
    toAWS                           ToAWS,
    toAWE                           ToAWE,
    pCH-Power                       DL-Power, -- R3-000655, CR24r1
    pICH-Parameters                 PICH-Parameters-CTCH-SetupRqstFDD,

    iE-Extensions                   ProtocolExtensionContainer { { PCH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

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

PICH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID        CommonPhysicalChannelID,
    dl-ScramblingCode              DL-ScramblingCode,
    fdd-dl-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    pICH-Power                     DL-Power,
    pICH-Mode                      PICH-Mode,
    sTTD-Indicator                 STTD-Indicator,
    iE-Extensions                   ProtocolExtensionContainer { { PICH-Parameters-CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

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

PRACH-CTCH-SetupRqstFDD ::= ProtocolIE-Container {{ PRACHIE-CTCH-SetupRqstFDD }}

PRACHIE-CTCH-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-PRACHItem-CTCH-SetupRqstFDD    CRITICALITY reject    TYPE PRACHItem-CTCH-SetupRqstFDD    PRESENCE mandatory },
    ...
}

```

```

PRACHItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID,
    scramblingCodeWordNumber
    tFCS
    preambleSignatures
    allowedSlotFormatInformation
    rACH-SubChannelNumbers
    ul-punctureLimit
    preambleThreshold
    rACH-Parameters
    iE-Extensions
    ...
}

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

AllowedSlotFormatInformationList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxSF)) OF AllowedSlotFormatInformationItem-CTCH-SetupRqstFDD

AllowedSlotFormatInformationItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    rACHSlotFormat
    iE-Extensions
    OPTIONAL,
    ...
}

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

RACH-Parameters-CTCH-SetupRqstFDD ::= ProtocolIE-Container {{ RACH-ParametersIE-CTCH-SetupRqstFDD }}

RACH-ParametersIE-CTCH-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-RACH-ParametersItem-CTCH-SetupRqstFDD CRITICALITY reject TYPE RACH-ParametersItem-CTCH-SetupRqstFDD PRESENCE mandatory },
    ...
}

RACH-ParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonTransportChannelID
    transportFormatSet
    aICH-Parameters
    iE-Extensions
    ...
}

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

AICH-Parameters-CTCH-SetupRqstFDD ::= 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,
iE-Extensions                    ProtocolExtensionContainer { { AICH-Parameters-CTCH-SetupRqstFDD-ExtIEs } } OPTIONAL,
...
}

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

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

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

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

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

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

Secondary-CCPCH-CTCH-SetupRqstTDD ::= ProtocolIE-Container {{ Secondary-CCPCHIE-CTCH-SetupRqstTDD }}

Secondary-CCPCHIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-Secondary-CCPCHItem-CTCH-SetupRqstTDD CRITICALITY reject TYPE Secondary-CCPCHItem-CTCH-SetupRqstTDD PRESENCE mandatory },
  ...
}

```

```

}

Secondary-CCPCHItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    tFCS              TFCS,
    secondaryCCPCH-parameterList Secondary-CCPCH-parameterList-CTCH-SetupRqstTDD,
    iE-Extensions     ProtocolExtensionContainer {{Secondary-CCPCHItem-CTCH-SetupRqstTDD-ExtIEs}} OPTIONAL,
    ...
}

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

Secondary-CCPCH-parameterList-CTCH-SetupRqstTDD ::= ProtocolIE-Container {{ Secondary-CCPCH-parameterListIEs-CTCH-SetupRqstTDD }}

Secondary-CCPCH-parameterListIEs-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD CRITICALITY reject TYPE Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD PRESENCE
    mandatory },
    ...
}

Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfSCCPCHs)) OF Secondary-CCPCH-parameterItem-CTCH-SetupRqstTDD

Secondary-CCPCH-parameterItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID CommonPhysicalChannelID,
    tdd-ChannelisationCode  TDD-ChannelisationCode,
    timeslot                TimeSlot,
    burstType               BurstType,
    midambleShift           MidambleShift,
    tdd-PhysicalChannelOffset TDD-PhysicalChannelOffset,
    repetitionPeriod        RepetitionPeriod,
    repetitionLength        RepetitionLength,
    s-CCPCH-Power           DL-Power,
    fach-ParametersList     FACH-ParametersList-CTCH-SetupRqstTDD OPTIONAL,
    pch-Parameters          PCH-Parameters-CTCH-SetupRqstTDD OPTIONAL,
    -- One of the channels FACH or PCH or both must be present
    iE-Extensions          ProtocolExtensionContainer { { Secondary-CCPCH-parameterItem-CTCH-SetupRqstTDD-ExtIEs } }
    OPTIONAL,
    ...
}

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

FACH-ParametersList-CTCH-SetupRqstTDD ::= ProtocolIE-Container {{ FACH-ParametersListIEs-CTCH-SetupRqstTDD }}

FACH-ParametersListIEs-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-FACH-ParametersListIE-CTCH-SetupRqstTDD CRITICALITY reject TYPE FACH-ParametersListIE-CTCH-SetupRqstTDD PRESENCE mandatory },
    ...
}

```

```

}

FACH-ParametersListIE-CTCH-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfFACHs)) OF FACH-ParametersItem-CTCH-SetupRqstTDD

FACH-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    dl-TransportFormatSet         TransportFormatSet,
    toAWS                          ToAWS,
    toAWE                          ToAWE,
    iE-Extensions                 ProtocolExtensionContainer { { FACH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs } }      OPTIONAL,
    ...
}

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

PCH-Parameters-CTCH-SetupRqstTDD ::= ProtocolIE-Container {{ PCH-ParametersIE-CTCH-SetupRqstTDD }}

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

PCH-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    dl-TransportFormatSet         TransportFormatSet,
    toAWS                          ToAWS,
    toAWE                          ToAWE,
    pICH-Parameters              PICH-Parameters-CTCH-SetupRqstTDD,
    iE-Extensions                 ProtocolExtensionContainer { { PCH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs } }      OPTIONAL,
    ...
}

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

PICH-Parameters-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    tdd-ChannelisationCode       TDD-ChannelisationCode,
    timeSlot                     TimeSlot,
    burstType                    BurstType          OPTIONAL,
    midambleShift               MidambleShift,
    tdd-PhysicalChannelOffset    TDD-PhysicalChannelOffset,
    repetitionPeriod            RepetitionPeriod,
    repetitionLength            RepetitionLength,
    pagingIndicatorLength       PagingIndicatorLength,
    pICH-Power                  DL-Power,
    iE-Extensions                 ProtocolExtensionContainer { { PICH-Parameters-CTCH-SetupRqstTDD-ExtIEs } }      OPTIONAL,
    ...
}

```

```

}

PICH-Parameters-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PRACH-CTCH-SetupRqstTDD ::= ProtocolIE-Container {{ PRACHIE-CTCH-SetupRqstTDD }}

PRACHIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-PRACHItem-CTCH-SetupRqstTDD    CRITICALITY reject    TYPE PRACHItem-CTCH-SetupRqstTDD    PRESENCE mandatory },
    ...
}

PRACHItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID                CommonPhysicalChannelID,
    timeslot                                Timeslot,
    tdd-ChannelisationCode                  TDD-ChannelisationCode,
    maxPRACH-MidambleShifts                 MaxPRACH-MidambleShifts    OPTIONAL,
    pRACH-Midamble                           PRACH-Midamble,
    rACH                                       RACH-Parameter-CTCH-SetupRqstTDD,
    iE-Extensions                             ProtocolExtensionContainer { { PRACHItem-CTCH-SetupRqstTDD-ExtIEs } }    OPTIONAL,
    ...
}

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

RACH-Parameter-CTCH-SetupRqstTDD ::= ProtocolIE-Container {{ RACH-ParameterIE-CTCH-SetupRqstTDD }}

RACH-ParameterIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-RACH-ParameterItem-CTCH-SetupRqstTDD    CRITICALITY reject    TYPE RACH-ParameterItem-CTCH-SetupRqstTDD    PRESENCE mandatory },
    ...
}

RACH-ParameterItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonTransportChannelID                CommonTransportChannelID,
    iE-Extensions                             ProtocolExtensionContainer { { RACH-ParameterItem-CTCH-SetupRqstTDD-ExtIEs } }    OPTIONAL,
    ...
}

RACH-ParameterItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

```

```

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

CommonTransportChannelSetupResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-CommonTransportChannelType-CTCH-SetupRsp  CRITICALITY ignore TYPE CommonTransportChannelType-CTCH-SetupRsp
    PRESENCE mandatory }|
    { ID id-CriticalityDiagnostics  CRITICALITY ignore TYPE CriticalityDiagnostics
    PRESENCE optional },
    ...
}

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

CommonTransportChannelType-CTCH-SetupRsp ::= SEQUENCE {
    fACH          FACH-CTCH-SetupRsp          OPTIONAL,
    -- One of the channels FACH or PCH or both must be present
    pCH          PCH-CTCH-SetupRsp          OPTIONAL,
    -- One of the channels FACH or PCH or both must be present
    rACH          RACH-CTCH-SetupRsp,
    iE-Extensions          ProtocolExtensionContainer  { { CommonTransportChannelType-CTCH-SetupRsp-ExtIEs } }  OPTIONAL,
    ...
}

CommonTransportChannelType-CTCH-SetupRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-CTCH-SetupRsp ::= ProtocolIE-Container {{ FACHIE-CTCH-SetupRsp }}

FACHIE-CTCH-SetupRsp NBAP-PROTOCOL-IES ::= {
    { ID id-FACHItem-CTCH-SetupRsp  CRITICALITY ignore TYPE FACHItem-CTCH-SetupRsp PRESENCE mandatory },
    ...
}

FACHItem-CTCH-SetupRsp ::= SEQUENCE {
    fACH-ParametersList-CTCH-SetupRsp          FACH-ParametersList-CTCH-SetupRsp          OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer  { { FACHItem-CTCH-SetupRsp-ExtIEs } }  OPTIONAL,
    ...
}

FACHItem-CTCH-SetupRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-ParametersList-CTCH-SetupRsp ::= SEQUENCE (SIZE (1..maxNrOfFACHs)) OF FACH-ParametersItem-CTCH-SetupRsp

```



```

FACH-ParametersItem-CTCH-SetupRsp ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    bindingID                     BindingID,
    transportLayerAddress         TransportLayerAddress,
    iE-Extensions                 ProtocolExtensionContainer { { FACH-ParametersItem-CTCH-SetupRsp-ExtIEs } }
    ...
}

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

PCH-CTCH-SetupRsp ::= ProtocolIE-Container {{ PCHIE-CTCH-SetupRsp }}

PCHIE-CTCH-SetupRsp NBAP-PROTOCOL-IES ::= {
    { ID id-PCHItem-CTCH-SetupRsp  CRITICALITY ignore  TYPE PCHItem-CTCH-SetupRsp  PRESENCE mandatory },
    ...
}

PCHItem-CTCH-SetupRsp ::= SEQUENCE {
    pCH-Parameters-CTCH-SetupRsp      PCH-Parameters-CTCH-SetupRsp      OPTIONAL,
    iE-Extensions                     ProtocolExtensionContainer { { PCHItem-CTCH-SetupRsp-ExtIEs } }
    ...
}

PCHItem-CTCH-SetupRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PCH-Parameters-CTCH-SetupRsp ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    bindingID                     BindingID,
    transportLayerAddress         TransportLayerAddress,
    iE-Extensions                 ProtocolExtensionContainer { { PCH-Parameters-CTCH-SetupRsp-ExtIEs } }
    ...
}

PCH-Parameters-CTCH-SetupRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RACH-CTCH-SetupRsp ::= ProtocolIE-Container {{ RACHIE-CTCH-SetupRsp }}

RACHIE-CTCH-SetupRsp NBAP-PROTOCOL-IES ::= {
    { ID id-RACHItem-CTCH-SetupRsp  CRITICALITY ignore  TYPE RACHItem-CTCH-SetupRsp  PRESENCE mandatory },
    ...
}

RACHItem-CTCH-SetupRsp ::= SEQUENCE {
    rACH-Parameters-CTCH-SetupRsp      RACH-Parameters-CTCH-SetupRsp,
    iE-Extensions                     ProtocolExtensionContainer { { RACHItem-CTCH-SetupRsp-ExtIEs } }
    ...
}

```

```

}
...
}
RACHItem-CTCH-SetupRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
RACH-Parameters-CTCH-SetupRsp ::= SEQUENCE {
commonTransportChannelID      CommonTransportChannelID,
bindingID                      BindingID,
transportLayerAddress          TransportLayerAddress,
iE-Extensions                  ProtocolExtensionContainer  { { RACH-Parameters-CTCH-SetupRsp-ExtIEs } }      OPTIONAL,
...
}
RACH-Parameters-CTCH-SetupRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
-- *****
--
-- COMMON TRANSPORT CHANNEL SETUP FAILURE
--
-- *****

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

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

CommonTransportChannelSetupFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
...
}
-- *****
--
-- COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST FDD
--
-- *****

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

```

```

}

CommonTransportChannelReconfigurationRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-C-ID CRITICALITY reject TYPE C-ID PRESENCE mandatory }|
  { ID id-ConfigurationGenerationID CRITICALITY reject TYPE ConfigurationGenerationID PRESENCE mandatory }|
  { ID id-FACH-ParametersList-CTCH-ReconfRqstFDD CRITICALITY reject TYPE FACH-ParametersList-CTCH-ReconfRqstFDD PRESENCE optional }|
  { ID id-PCH-Parameters-CTCH-ReconfRqstFDD CRITICALITY reject TYPE PCH-Parameters-CTCH-ReconfRqstFDD PRESENCE optional }|
  { ID id-PICH-Parameters-CTCH-ReconfRqstFDD CRITICALITY reject TYPE PICH-Parameters-CTCH-ReconfRqstFDD PRESENCE optional }|
  { ID id-PRACH-ParametersList-CTCH-ReconfRqstFDD CRITICALITY reject TYPE PRACH-ParametersList-CTCH-ReconfRqstFDD PRESENCE optional }|
  { ID id-AICH-ParametersList-CTCH-ReconfRqstFDD CRITICALITY reject TYPE AICH-ParametersList-CTCH-ReconfRqstFDD PRESENCE optional },
  ...
}

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

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

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

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

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

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

```

```

PICH-Parameters-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    pICH-Power                    DL-Power,
    iE-Extensions                 ProtocolExtensionContainer  { { PICH-Parameters-CTCH-ReconfRqstFDD-ExtIEs} }      OPTIONAL,
    ...
}

PICH-Parameters-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PRACH-ParametersList-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfPRACHs)) OF PRACH-ParametersItem-CTCH-ReconfRqstFDD

PRACH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    preambleSignatures           PreambleSignatures,
    allowedSlotFormatInformation AllowedSlotFormatInformationList-CTCH-ReconfRqstFDD      OPTIONAL,
    rACH-SubChannelNumbers       RACH-SubChannelNumbers      OPTIONAL,
    iE-Extensions                 ProtocolExtensionContainer  { { PRACH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs} }      OPTIONAL,
    ...
}

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

AllowedSlotFormatInformationList-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxSF)) OF AllowedSlotFormatInformationItem-CTCH-ReconfRqstFDD

AllowedSlotFormatInformationItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    rACH-SlotFormat              RACH-SlotFormat,
    iE-Extensions                 ProtocolExtensionContainer  { { AllowedSlotFormatInformationItem-CTCH-ReconfRqstFDD-ExtIEs} }
    OPTIONAL,
    ...
}

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

AICH-ParametersList-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfPRACHs)) OF AICH-ParametersItem-CTCH-ReconfRqstFDD

AICH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    aICH-Power                    DL-Power,
    iE-Extensions                 ProtocolExtensionContainer  { { AICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs} }      OPTIONAL,
    ...
}

AICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

}

-- *****
--
-- COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST TDD
--
-- *****

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

CommonTransportChannelReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-C-ID          CRITICALITY reject    TYPE    C-ID
      PRESENCE mandatory }|
    { ID id-ConfigurationGenerationID          CRITICALITY reject    TYPE    ConfigurationGenerationID
      PRESENCE mandatory }|
    { ID id-Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD          CRITICALITY reject    TYPE    Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD
      PRESENCE optional }|
    { ID id-PICH-Parameters-CTCH-ReconfRqstTDD          CRITICALITY reject    TYPE    PICH-Parameters-CTCH-ReconfRqstTDD          PRESENCE optional }|
    { ID id-FACH-ParametersList-CTCH-ReconfRqstTDD          CRITICALITY reject    TYPE    FACH-ParametersList-CTCH-ReconfRqstTDD          PRESENCE optional }|
    { ID id-PCH-Parameters-CTCH-ReconfRqstTDD          CRITICALITY reject    TYPE    PCH-Parameters-CTCH-ReconfRqstTDD          PRESENCE optional },
    ...
}

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

Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    secondaryCCPCHList          Secondary-CCPCHList-CTCH-ReconfRqstTDD          OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer    { { Secondary-CCPCH-CTCH-ReconfRqstTDD-ExtIEs } }    OPTIONAL,
    ...
}

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

Secondary-CCPCHList-CTCH-ReconfRqstTDD ::= ProtocolIE-Container    { { Secondary-CCPCHListIEs-CTCH-ReconfRqstTDD } }

Secondary-CCPCHListIEs-CTCH-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-Secondary-CCPCHListIE-CTCH-ReconfRqstTDD          CRITICALITY reject    TYPE    Secondary-CCPCHListIE-CTCH-ReconfRqstTDD          PRESENCE    mandatory },
    ...
}

Secondary-CCPCHListIE-CTCH-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfSCCPCHs)) OF Secondary-CCPCHItem-CTCH-ReconfRqstTDD

```

```

Secondary-CCPCHItem-CTCH-ReconfRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    sCCPCH-Power                 DL-Power,
    iE-Extensions                ProtocolExtensionContainer { { Secondary-CCPCHItem-CTCH-ReconfRqstTDD-ExtIEs } }
    ...
}

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

PICH-Parameters-CTCH-ReconfRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    pICH-Power                   DL-Power,
    iE-Extensions                ProtocolExtensionContainer { { PICH-Parameters-CTCH-ReconfRqstTDD-ExtIEs } }
    ...
}

PICH-Parameters-CTCH-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-ParametersList-CTCH-ReconfRqstTDD ::= SEQUENCE (SIZE (0..maxNrOfFACHs)) OF FACH-ParametersItem-CTCH-ReconfRqstTDD

FACH-ParametersItem-CTCH-ReconfRqstTDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    toAWS                          OPTIONAL,
    toAWE                          OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { { FACH-ParametersItem-CTCH-ReconfRqstTDD-ExtIEs } }
    ...
}

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

PCH-Parameters-CTCH-ReconfRqstTDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    toAWS                          OPTIONAL,
    toAWE                          OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { { PCH-Parameters-CTCH-ReconfRqstTDD-ExtIEs } }
    ...
}

PCH-Parameters-CTCH-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

```

```

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

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

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

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

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

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

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

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

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

```

```

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

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

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

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

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

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

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

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

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

```



```

}

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

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

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

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

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

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

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

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

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

-- *****
--

```

```

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

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

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

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

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

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

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

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

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

```

```

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

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

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

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

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

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

NodeBInformation-AuditRsp ::= SEQUENCE {
    dl-or-global-capacityCredit          DL-or-Global-CapacityCredit,
    ul-capacityCredit                    UL-CapacityCredit          OPTIONAL,
    commonChannelsCapacityConsumptionLaw CommonChannelsCapacityConsumptionLaw,
    dedicatedChannelsCapacityConsumptionLaw DedicatedChannelsCapacityConsumptionLaw,
    iE-Extensions                        ProtocolExtensionContainer {{ NodeBInformation-AuditRep-ExtIEs} }    OPTIONAL,
    ...
}

NodeBInformation-AuditRep-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```
Cell-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxCellinNodeB)) OF ProtocolIE-Container {{ Cell-InformationItemIE-AuditRsp}}
```

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

```
Cell-InformationItem-AuditRsp ::= SEQUENCE {
  c-ID ConfigurationGenerationID,
  configurationGenerationID ConfigurationGenerationID,
  resourceOperationalState ResourceOperationalState,
  availabilityStatus AvailabilityStatus,
  local-Cell-ID Local-Cell-ID,
  maximumDL-PowerCapability MaximumDL-PowerCapability, -- to do: FFS
  minSpreadingFactor MinSpreadingFactor, -- to do: FFS
  primary-SCH-Information P-SCH-Information-AuditRsp OPTIONAL,
  secondary-SCH-Information S-SCH-Information-AuditRsp OPTIONAL,
  primary-CPICH-Information P-CPICH-Information-AuditRsp OPTIONAL,
  secondary-CPICH-InformationList S-CPICH-InformationList-AuditRsp OPTIONAL,
  primary-CCPCH-Information P-CCPCH-Information-AuditRsp OPTIONAL,
  bCH-Information BCH-Information-AuditRsp OPTIONAL,
  secondary-CCPCH-InformationList S-CCPCH-InformationList-AuditRsp OPTIONAL,
  pCH-Information PCH-Information-AuditRsp OPTIONAL,
  pICH-Information PICH-Information-AuditRsp OPTIONAL,
  fACH-InformationList FACH-InformationList-AuditRsp OPTIONAL,
  pRACH-InformationList PRACH-InformationList-AuditRsp OPTIONAL,
  rACH-InformationList RACH-InformationList-AuditRsp OPTIONAL,
  aICH-InformationList AICH-InformationList-AuditRsp OPTIONAL,
  sCH-Information SCH-Information-AuditRsp OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { Cell-InformationItem-AuditRsp-ExtIEs} } OPTIONAL,
  ...
}
```

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

```
P-SCH-Information-AuditRsp ::= ProtocolIE-Container {{ P-SCH-InformationIE-AuditRsp }}
```

```
P-SCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-P-SCH-InformationItem-AuditRsp CRITICALITY ignore TYPE P-SCH-InformationItem-AuditRsp PRESENCE mandatory },
  ...
}
```

```
P-SCH-InformationItem-AuditRsp ::= SEQUENCE {
  commonPhysicalChannelID CommonPhysicalChannelID,
  resourceOperationalState ResourceOperationalState,
  availabilityStatus AvailabilityStatus,
  iE-Extensions ProtocolExtensionContainer { { P-SCH-InformationItem-AuditRsp-ExtIEs} } OPTIONAL,
  ...
}
```

```

}

P-SCH-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

S-SCH-Information-AuditRsp ::= ProtocolIE-Container {{ S-SCH-InformationIE-AuditRsp }}

S-SCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-S-SCH-InformationItem-AuditRsp CRITICALITY ignore TYPE S-SCH-InformationItem-AuditRsp PRESENCE mandatory },
    ...
}

S-SCH-InformationItem-AuditRsp ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    resourceOperationalState         ResourceOperationalState,
    availabilityStatus               AvailabilityStatus,
    iE-Extensions                    ProtocolExtensionContainer { { S-SCH-InformationItem-AuditRsp-ExtIEs } } OPTIONAL,
    ...
}

S-SCH-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

P-CPICH-Information-AuditRsp ::= ProtocolIE-Container {{ P-CPICH-InformationIE-AuditRsp }}

P-CPICH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-P-CPICH-InformationItem-AuditRsp CRITICALITY ignore TYPE P-CPICH-InformationItem-AuditRsp PRESENCE mandatory },
    ...
}

P-CPICH-InformationItem-AuditRsp ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    resourceOperationalState         ResourceOperationalState,
    availabilityStatus               AvailabilityStatus,
    iE-Extensions                    ProtocolExtensionContainer { { P-CPICH-InformationItem-AuditRsp-ExtIEs } } OPTIONAL,
    ...
}

P-CPICH-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

```

```

S-CPICH-InformationItem-AuditRsp ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    resourceOperationalState     ResourceOperationalState,
    availabilityStatus           AvailabilityStatus,
    iE-Extensions                ProtocolExtensionContainer { { S-CPICH-InformationItem-AuditRsp-ExtIEs } } OPTIONAL,
    ...
}

S-CPICH-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

P-CCPCH-Information-AuditRsp ::= ProtocolIE-Container {{ P-CCPCH-InformationIE-AuditRsp }}

P-CCPCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-P-CCPCH-InformationItem-AuditRsp CRITICALITY ignore TYPE P-CCPCH-InformationItem-AuditRsp PRESENCE mandatory },
    ...
}

P-CCPCH-InformationItem-AuditRsp ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    resourceOperationalState     ResourceOperationalState,
    availabilityStatus           AvailabilityStatus,
    iE-Extensions                ProtocolExtensionContainer { { P-CCPCH-InformationItem-AuditRsp-ExtIEs } } OPTIONAL,
    ...
}

P-CCPCH-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

BCH-Information-AuditRsp ::= ProtocolIE-Container {{ BCH-InformationIE-AuditRsp }}

BCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-BCH-InformationItem-AuditRsp CRITICALITY ignore TYPE BCH-InformationItem-AuditRsp PRESENCE mandatory },
    ...
}

BCH-InformationItem-AuditRsp ::= SEQUENCE {
    commonTransportChannelID     CommonTransportChannelID,
    resourceOperationalState     ResourceOperationalState,
    availabilityStatus           AvailabilityStatus,
    iE-Extensions                ProtocolExtensionContainer { { BCH-InformationItem-AuditRsp-ExtIEs } } OPTIONAL,
    ...
}

BCH-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

```

```

S-CCPCH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-S-CCPCH-InformationItem-AuditRsp  CRITICALITY ignore  TYPE S-CCPCH-InformationItem-AuditRsp          PRESENCE mandatory },
  ...
}
S-CCPCH-InformationItem-AuditRsp ::= SEQUENCE {
  commonPhysicalChannelID          CommonPhysicalChannelID,
  resourceOperationalState         ResourceOperationalState,
  availabilityStatus               AvailabilityStatus,
  iE-Extensions                    ProtocolExtensionContainer { { S-CCPCH-InformationItem-AuditRsp-ExtIEs } }          OPTIONAL,
  ...
}

S-CCPCH-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

PCH-Information-AuditRsp ::= ProtocolIE-Container {{ PCH-InformationIE-AuditRsp }}

PCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-PCH-InformationItem-AuditRsp  CRITICALITY ignore  TYPE PCH-InformationItem-AuditRsp          PRESENCE mandatory },
  ...
}

PCH-InformationItem-AuditRsp ::= SEQUENCE {
  commonTransportChannelID        CommonTransportChannelID,
  resourceOperationalState         ResourceOperationalState,
  availabilityStatus               AvailabilityStatus,
  iE-Extensions                    ProtocolExtensionContainer { { PCH-InformationItem-AuditRsp-ExtIEs } }          OPTIONAL,
  ...
}

PCH-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

PICH-Information-AuditRsp ::= ProtocolIE-Container {{ PICH-InformationIE-AuditRsp }}

PICH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-PICH-InformationItem-AuditRsp  CRITICALITY ignore  TYPE PICH-InformationItem-AuditRsp          PRESENCE mandatory },
  ...
}

PICH-InformationItem-AuditRsp ::= SEQUENCE {
  commonPhysicalChannelID          CommonPhysicalChannelID,
  resourceOperationalState         ResourceOperationalState,
  availabilityStatus               AvailabilityStatus,
  iE-Extensions                    ProtocolExtensionContainer { { PICH-InformationItem-AuditRsp-ExtIEs } }          OPTIONAL,
  ...
}

```

```

PICH-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

FACH-InformationItem-AuditRsp ::= SEQUENCE {
    commonTransportChannelID          CommonTransportChannelID,
    resourceOperationalState          ResourceOperationalState,
    availabilityStatus                 AvailabilityStatus,
    iE-Extensions                      ProtocolExtensionContainer { { FACH-InformationItem-AuditRsp-ExtIEs } }    OPTIONAL,
    ...
}

FACH-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

PRACH-InformationItem-AuditRsp ::= SEQUENCE {
    commonPhysicalChannelID           CommonPhysicalChannelID,
    resourceOperationalState           ResourceOperationalState,
    availabilityStatus                 AvailabilityStatus,
    iE-Extensions                      ProtocolExtensionContainer { { PRACH-InformationItem-AuditRsp-ExtIEs } }    OPTIONAL,
    ...
}

PRACH-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RACH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxRACHCell)) OF ProtocolIE-Container {{ RACH-InformationItemIE-AuditRsp }}

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

RACH-InformationItem-AuditRsp ::= SEQUENCE {

```



```

    commonTransportChannelID      CommonTransportChannelID,
    resourceOperationalState      ResourceOperationalState,
    availabilityStatus            AvailabilityStatus,
    iE-Extensions                 ProtocolExtensionContainer { { RACH-InformationItem-AuditRsp-ExtIEs } } OPTIONAL,
    ...
}

RACH-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AICH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxRACHCell)) OF ProtocolIE-Container {{ AICH-InformationItemIE-AuditRsp }}

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

AICH-InformationItem-AuditRsp ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    resourceOperationalState      ResourceOperationalState,
    availabilityStatus            AvailabilityStatus,
    iE-Extensions                 ProtocolExtensionContainer { { AICH-InformationItem-AuditRsp-ExtIEs } } OPTIONAL,
    ...
}

AICH-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SCH-Information-AuditRsp ::= ProtocolIE-Container {{ SCH-InformationIE-AuditRsp }}

SCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-SCH-InformationItem-AuditRsp CRITICALITY ignore TYPE SCH-InformationItem-AuditRsp PRESENCE mandatory },
    ...
}

SCH-InformationItem-AuditRsp ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    resourceOperationalState      ResourceOperationalState,
    availabilityStatus            AvailabilityStatus,
    iE-Extensions                 ProtocolExtensionContainer { { SCH-InformationItem-AuditRsp-ExtIEs } } OPTIONAL,
    ...
}

SCH-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CCP-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxCCPinNodeB)) OF ProtocolIE-Container {{ CCP-InformationItemIE-AuditRsp }}

```

```

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

CCP-InformationItem-AuditRsp ::= SEQUENCE {
  communicationControlPortID      CommunicationControlPortID,
  resourceOperationalState        ResourceOperationalState,
  availabilityStatus               AvailabilityStatus,
  iE-Extensions                   ProtocolExtensionContainer  {{ CCP-InformationItem-AuditRsp-ExtIEs }}          OPTIONAL,
  ...
}

CCP-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

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

Local-Cell-InformationItem-AuditRsp ::= SEQUENCE {
  local-Cell-ID                    Local-Cell-ID,
  dl-or-global-capacityCredit      DL-or-Global-CapacityCredit,
  ul-capacityCredit                UL-CapacityCredit          OPTIONAL,
  commonChannelsCapacityConsumptionLaw  CommonChannelsCapacityConsumptionLaw,
  dedicatedChannelsCapacityConsumptionLaw  DedicatedChannelsCapacityConsumptionLaw,
  maximumDL-PowerCapability        MaximumDL-PowerCapability  OPTIONAL,
  iE-Extensions                   ProtocolExtensionContainer  {{ Local-Cell-InformationItem-AuditRsp-ExtIEs }}          OPTIONAL,
  ...
}

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

-- *****
--
-- COMMON MEASUREMENT INITIATION REQUEST
--
-- *****

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

```

```

}

CommonMeasurementInitiationRequest-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-MeasurementID          CRITICALITY reject          TYPE MeasurementID
  PRESENCE mandatory }|
  { ID id-CommonMeasurementObjectType-CM-Rqst  CRITICALITY ignore          TYPE CommonMeasurementObjectType-CM-Rqst          PRESENCE
  mandatory }|
  { ID id-CommonMeasurementType          CRITICALITY reject          TYPE CommonMeasurementType          PRESENCE
  mandatory }|
  { ID id-MeasurementFilterCoefficient          CRITICALITY reject          TYPE MeasurementFilterCoefficient          PRESENCE
  optional }|
  { ID id-ReportCharacteristics          CRITICALITY reject          TYPE ReportCharacteristics          PRESENCE
  mandatory },
  ...
}

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

CommonMeasurementObjectType-CM-Rqst ::= CHOICE {
  cell          Cell-CM-Rqst,
  rACH          RACH-CM-Rqst,
  ...
}

Cell-CM-Rqst ::= ProtocolIE-Container {{ CellIE-CM-Rqst }}

CellIE-CM-Rqst NBAP-PROTOCOL-IES ::= {
  { ID id-CellItem-CM-Rqst  CRITICALITY reject  TYPE CellItem-CM-Rqst  PRESENCE mandatory },
  ...
}

CellItem-CM-Rqst ::= SEQUENCE {
  c-ID          C-ID,
  timeSlot          TimeSlot  OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { { CellItem-CM-Rqst-ExtIEs } }  OPTIONAL,
  ...
}

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

RACH-CM-Rqst ::= ProtocolIE-Container {{ RACHIE-CM-Rqst }}

RACHIE-CM-Rqst NBAP-PROTOCOL-IES ::= {
  { ID id-RACHItem-CM-Rqst  CRITICALITY reject  TYPE RACHItem-CM-Rqst  PRESENCE mandatory },
  ...
}

```

```

RACHItem-CM-Rqst ::= SEQUENCE {
    c-ID                               C-ID,
    commonTransportChannelID           CommonTransportChannelID,
    iE-Extensions                      ProtocolExtensionContainer { { RACHItem-CM-Rqst-ExtIEs } } OPTIONAL,
    ...
}

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

-- *****
--
-- COMMON MEASUREMENT INITIATION RESPONSE
--
-- *****

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

CommonMeasurementInitiationResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID              CRITICALITY ignore          TYPE MeasurementID          PRESENCE
    mandatory }|
    { ID id-CommonMeasurementObjectType-CM-Rsp CRITICALITY ignore          TYPE CommonMeasurementObjectType-CM-Rsp PRESENCE
    mandatory }|
    { ID id-SFN                        CRITICALITY ignore          TYPE SFN
    PRESENCE optional }|
    { ID id-CriticalityDiagnostics      CRITICALITY ignore          TYPE CriticalityDiagnostics  PRESENCE
    optional },
    ...
}

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

CommonMeasurementObjectType-CM-Rsp ::= CHOICE {
    cell                               Cell-CM-Rsp,
    rACH                               RACH-CM-Rsp,
    ...
}

Cell-CM-Rsp ::= ProtocolIE-Container {{ CellIE-CM-Rsp }}

CellIE-CM-Rsp NBAP-PROTOCOL-IES ::= {
    { ID id-CellItem-CM-Rsp            CRITICALITY ignore          TYPE CellItem-CM-Rsp          PRESENCE mandatory },
    ...
}

```

```

CellItem-CM-Rsp ::= SEQUENCE {
    commonMeasurementValue      CommonMeasurementValue,
    iE-Extensions                ProtocolExtensionContainer { { CellItem-CM-Rsp-ExtIEs} }    OPTIONAL,
    ...
}

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

RACH-CM-Rsp ::= ProtocolIE-Container {{ RACHIE-CM-Rsp }}

RACHIE-CM-Rsp NBAP-PROTOCOL-IES ::= {
    { ID id-RACHItem-CM-Rsp    CRITICALITY ignore    TYPE RACHItem-CM-Rsp    PRESENCE mandatory },
    ...
}

RACHItem-CM-Rsp ::= SEQUENCE {
    commonMeasurementValue      CommonMeasurementValue,
    iE-Extensions                ProtocolExtensionContainer { { RACHItem-CM-Rsp-ExtIEs} }    OPTIONAL,
    ...
}

RACHItem-CM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON MEASUREMENT INITIATION FAILURE
--
-- *****

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

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

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

```

```

-- *****
--
-- COMMON MEASUREMENT REPORT
--
-- *****

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

CommonMeasurementReport-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY ignore          TYPE MeasurementID          PRESENCE
      mandatory }|
    { ID id-CommonMeasurementObjectType-CM-Rprt CRITICALITY ignore          TYPE CommonMeasurementObjectType-CM-Rprt PRESENCE
      mandatory }|
    { ID id-SFN                    CRITICALITY ignore          TYPE SFN
      PRESENCE optional },
    ...
}

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

CommonMeasurementObjectType-CM-Rprt ::= CHOICE {
    cell                Cell-CM-Rprt,
    rACH                RACH-CM-Rprt,
    ...
}

Cell-CM-Rprt ::= ProtocolIE-Container {{ CellIE-CM-Rprt }}

CellIE-CM-Rprt NBAP-PROTOCOL-IES ::= {
    { ID id-CellItem-CM-Rprt CRITICALITY ignore TYPE CellItem-CM-Rprt PRESENCE mandatory },
    ...
}

CellItem-CM-Rprt ::= SEQUENCE {
    commonMeasurementValue CommonMeasurementValue,
    iE-Extensions          ProtocolExtensionContainer {{ CellItem-CM-Rprt-ExtIEs }}    OPTIONAL,
    ...
}

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

```

```

RACH-CM-Rprt ::= ProtocolIE-Container {{ RACHIE-CM-Rprt }}

RACHIE-CM-Rprt NBAP-PROTOCOL-IES ::= {
  { ID id-RACHItem-CM-Rprt   CRITICALITY ignore   TYPE RACHItem-CM-Rprt   PRESENCE mandatory },
  ...
}

RACHItem-CM-Rprt ::= SEQUENCE {
  commonMeasurementValue      CommonMeasurementValue,
  iE-Extensions                ProtocolExtensionContainer {{ RACHItem-CM-Rprt-ExtIEs }}      OPTIONAL,
  ...
}

RACHItem-CM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

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

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

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

-- *****
--
-- COMMON MEASUREMENT FAILURE INDICATION
--
-- *****

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

CommonMeasurementFailureIndication-IEs NBAP-PROTOCOL-IES ::= {

```

```

    { ID    id-MeasurementID      CRITICALITY ignore      TYPE    MeasurementID      PRESENCE mandatory }|
    { ID    id-Cause              CRITICALITY ignore      TYPE    Cause                PRESENCE mandatory },
    ...
}

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

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

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

CellSetupRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-Local-Cell-ID      CRITICALITY reject      TYPE    Local-Cell-ID
      PRESENCE mandatory }|
    { ID    id-C-ID              CRITICALITY reject      TYPE    C-ID
      PRESENCE mandatory }|
    { ID    id-ConfigurationID    CRITICALITY reject      TYPE    ConfigurationGenerationID
      PRESENCE mandatory }|
    { ID    id-T-Cell            CRITICALITY reject      TYPE    T-Cell
      PRESENCE mandatory }|
    { ID    id-UARFCNforNu       CRITICALITY reject      TYPE    UARFCN
      PRESENCE mandatory }|
    { ID    id-UARFCNforNd       CRITICALITY reject      TYPE    UARFCN
      PRESENCE mandatory }|
    { ID    id-MaximumTransmissionPower
      PRESENCE mandatory }|
    { ID    id-PrimaryScramblingCode
      PRESENCE mandatory }|
    { ID    id-PrimarySCH-Information-Cell-SetupRqstFDD
      PRESENCE mandatory }|
    { ID    id-SecondarySCH-Information-Cell-SetupRqstFDD
      PRESENCE mandatory }|
    { ID    id-PrimaryCPICH-Information-Cell-SetupRqstFDD
      PRESENCE mandatory }|
    { ID    id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD
      PRESENCE optional }|
    { ID    id-PrimaryCCPCH-Information-Cell-SetupRqstFDD
      PRESENCE mandatory },
    ...
}

```



```

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

PrimarySCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    primarySCH-Power              DL-Power,
    tSTD-Indicator                TSTD-Indicator,
    iE-Extensions                 ProtocolExtensionContainer { { PrimarySCH-Information-Cell-SetupRqstFDD-ExtIEs } }      OPTIONAL,
    ...
}

PrimarySCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondarySCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    secondarySCH-Power           DL-Power,
    tSTD-Indicator                TSTD-Indicator,
    iE-Extensions                 ProtocolExtensionContainer { { SecondarySCH-Information-Cell-SetupRqstFDD-ExtIEs } }      OPTIONAL,
    ...
}

SecondarySCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimaryCPICH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    primaryCPICH-Power           PrimaryCPICH-Power,
    transmitDiversityIndicator    TransmitDiversityIndicator,
    iE-Extensions                 ProtocolExtensionContainer { { PrimaryCPICH-Information-Cell-SetupRqstFDD-ExtIEs } }      OPTIONAL,
    ...
}

PrimaryCPICH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondaryCPICH-InformationList-Cell-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxSCPICHCell)) OF ProtocolIE-Container{{ SecondaryCPICH-InformationItemIE-Cell-SetupRqstFDD }}

SecondaryCPICH-InformationItemIE-Cell-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD      CRITICALITY      reject      TYPE      SecondaryCPICH-InformationItem-Cell-SetupRqstFDD
      PRESENCE      mandatory},
    ...
}

SecondaryCPICH-InformationItem-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,

```

```

dl-ScramblingCode          DL-ScramblingCode,
fDD-DL-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
secondaryCPICH-Power       DL-Power,
transmitDiversityIndicator TransmitDiversityIndicator,
iE-Extensions              ProtocolExtensionContainer { { SecondaryCPICH-InformationItem-Cell-SetupRqstFDD-ExtIEs } }      OPTIONAL,
...
}

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

PrimaryCCPCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
commonPhysicalChannelID      CommonPhysicalChannelID,
bCH-information              BCH-Information-Cell-SetupRqstFDD,
sTTD-Indicator               STTD-Indicator,
iE-Extensions                ProtocolExtensionContainer { { PrimaryCCPCH-Information-Cell-SetupRqstFDD-ExtIEs } }      OPTIONAL,
...
}

PrimaryCCPCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

BCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
commonTransportChannelID     CommonTransportChannelID,
bCH-Power                    DL-Power,
iE-Extensions                ProtocolExtensionContainer { { BCH-Information-Cell-SetupRqstFDD-ExtIEs } }      OPTIONAL,
...
}

BCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

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

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

CellSetupRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
{ ID      id-Local-Cell-ID          CRITICALITY  reject      TYPE      Local-Cell-ID
  PRESENCE  mandatory    }|

```

```

    { ID id-C-ID
      PRESENCE mandatory }|
  { ID id-ConfigurationGenerationID
    PRESENCE mandatory }|
  { ID id-UARFCNforNt
    PRESENCE mandatory }|
  { ID id-CellParameterID
    PRESENCE mandatory }|
  { ID id-MaximumTransmissionPower
    PRESENCE mandatory }|
  { ID id-TransmissionDiversityApplied
    PRESENCE mandatory }|
  { ID id-SyncCase
    PRESENCE mandatory }|
  { ID id-SCH-Information-Cell-SetupRqstTDD
    PRESENCE mandatory }|
  { ID id-PCCPCH-Information-Cell-SetupRqstTDD
    PRESENCE mandatory }|
  { ID id-TimeSlotConfigurationList-Cell-SetupRqstTDD
    PRESENCE mandatory },
  ...
}

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

SCH-Information-Cell-SetupRqstTDD ::= SEQUENCE {
  commonPhysicalChannelID CommonPhysicalChannelID,
  syncCaseIndicator SyncCaseIndicator-Cell-SetupRqstTDD-PSCH,
  sCH-Power DL-Power,
  tSTD-Indicator TSTD-Indicator,
  iE-Extensions ProtocolExtensionContainer { { SCH-Information-Cell-SetupRqstTDD-ExtIEs } } OPTIONAL,
  ...
}

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

SyncCaseIndicator-Cell-SetupRqstTDD-PSCH ::= ProtocolIE-Container { { SyncCaseIndicatorIE-Cell-SetupRqstTDD-PSCH } }

SyncCaseIndicatorIE-Cell-SetupRqstTDD-PSCH NBAP-PROTOCOL-IES ::= {
  { ID id-SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH CRITICALITY reject TYPE SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH PRESENCE
  mandatory },
  ...
}

SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH ::= CHOICE {
  case1 Case1-Cell-SetupRqstTDD,

```

```

    case2                Case2-Cell-SetupRqstTDD,
    ...
}

Case1-Cell-SetupRqstTDD ::= ProtocolIE-Container {{ Case1IE-Cell-SetupRqstTDD }}

Case1IE-Cell-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-Case1Item-Cell-SetupRqstTDD    CRITICALITY reject    TYPE Case1Item-Cell-SetupRqstTDD    PRESENCE mandatory },
    ...
}

Case1Item-Cell-SetupRqstTDD ::= SEQUENCE {
    timeSlot                TimeSlot,
    iE-Extensions           ProtocolExtensionContainer { { Case1Item-Cell-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

Case1Item-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Case2-Cell-SetupRqstTDD ::= ProtocolIE-Container {{ Case2IE-Cell-SetupRqstTDD }}

Case2IE-Cell-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-Case2Item-Cell-SetupRqstTDD    CRITICALITY reject    TYPE Case2Item-Cell-SetupRqstTDD    PRESENCE mandatory },
    ...
}

Case2Item-Cell-SetupRqstTDD ::= SEQUENCE {
    sCH-TimeSlot            SCH-TimeSlot,
    iE-Extensions           ProtocolExtensionContainer { { Case2Item-Cell-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

Case2Item-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PCCPCH-Information-Cell-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID    CommonPhysicalChannelID,
    tdd-PhysicalChannelOffset    TDD-PhysicalChannelOffset,
    repetitionPeriod            RepetitionPeriod,
    repetitionLength            RepetitionLength,
    pCCPCH-Power                PCCPCH-Power,
    blockSTTD-Indicator          BlockSTTD-Indicator,
    iE-Extensions               ProtocolExtensionContainer { { PCCPCH-Information-Cell-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

PCCPCH-Information-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
TimeSlotConfigurationList-Cell-SetupRqstTDD ::= SEQUENCE (SIZE (1..15)) OF TimeSlotConfigurationItem-Cell-SetupRqstTDD

TimeSlotConfigurationItem-Cell-SetupRqstTDD ::= SEQUENCE {
    timeSlot                TimeSlot,
    timeSlotStatus          TimeSlotStatus,
    timeSlotDirection       TimeSlotDirection,
    iE-Extensions           ProtocolExtensionContainer { { TimeSlotConfigurationItem-Cell-SetupRqstTDD-ExtIEs } }      OPTIONAL,
    ...
}

TimeSlotConfigurationItem-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

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

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

-- *****
--
-- CELL SETUP FAILURE
--
-- *****

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

CellSetupFailure-IEs NBAP-PROTOCOL-IES ::= {

```

```

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

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

-- *****
--
-- CELL RECONFIGURATION REQUEST FDD
--
-- *****

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

CellReconfigurationRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-C-ID                CRITICALITY  reject      TYPE      C-ID
      PRESENCE  mandatory }|
    { ID      id-ConfigurationGenerationID CRITICALITY  reject      TYPE      ConfigurationGenerationID
      PRESENCE  mandatory }|
    { ID      id-MaximumTransmissionPower CRITICALITY  reject      TYPE      MaximumTransmissionPower
      PRESENCE  optional }|
    { ID      id-PrimarySCH-Information-Cell-ReconfRqstFDD CRITICALITY  reject      TYPE      PrimarySCH-Information-Cell-ReconfRqstFDD
      PRESENCE  optional }|
    { ID      id-SecondarySCH-Information-Cell-ReconfRqstFDD CRITICALITY  reject      TYPE      SecondarySCH-Information-Cell-ReconfRqstFDD
      PRESENCE  optional }|
    { ID      id-PrimaryCPICH-Information-Cell-ReconfRqstFDD CRITICALITY  reject      TYPE      PrimaryCPICH-Information-Cell-ReconfRqstFDD
      PRESENCE  optional }|
    { ID      id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD CRITICALITY  reject      TYPE      SecondaryCPICH-InformationList-Cell-ReconfRqstFDD
      PRESENCE  optional }|
    { ID      id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD CRITICALITY  reject      TYPE      PrimaryCCPCH-Information-Cell-ReconfRqstFDD
      PRESENCE  optional },
    ...
}

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

PrimarySCH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    primarySCH-Power              DL-Power,
    iE-Extensions                 ProtocolExtensionContainer { { PrimarySCH-Information-Cell-ReconfRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

```

```

PrimarySCH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondarySCH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    secondarySCH-Power           DL-Power,
    iE-Extensions                ProtocolExtensionContainer { { SecondarySCH-Information-Cell-ReconfRqstFDD-ExtIEs } }      OPTIONAL,
    ...
}

SecondarySCH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimaryCPICH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    primaryCPICH-Power           PrimaryCPICH-Power,
    iE-Extensions                ProtocolExtensionContainer { { PrimaryCPICH-Information-Cell-ReconfRqstFDD-ExtIEs } }      OPTIONAL,
    ...
}

PrimaryCPICH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondaryCPICH-InformationList-Cell-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxSCPICHCell)) OF ProtocolIE-Container{{ SecondaryCPICH-InformationItemIE-Cell-ReconfRqstFDD }}

SecondaryCPICH-InformationItemIE-Cell-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD      CRITICALITY      reject      TYPE      SecondaryCPICH-InformationItem-Cell-
ReconfRqstFDD      PRESENCE      mandatory},
    ...
}

SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    secondaryCPICH-Power         DL-Power,
    iE-Extensions                ProtocolExtensionContainer { { SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD-ExtIEs } }
OPTIONAL,
    ...
}

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

PrimaryCCPCH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    bCH-information              BCH-information-Cell-ReconfRqstFDD,
    iE-Extensions                ProtocolExtensionContainer { { PrimaryCCPCH-Information-Cell-ReconfRqstFDD-ExtIEs } }      OPTIONAL,

```

```

}
...
}
PrimaryCCPCH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
BCH-information-Cell-ReconfRqstFDD ::= SEQUENCE {
commonTransportChannelID      CommonTransportChannelID,
bCH-Power                     DL-Power,
iE-Extensions                  ProtocolExtensionContainer { { BCH-information-Cell-ReconfRqstFDD-ExtIEs } }      OPTIONAL,
...
}
BCH-information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
-- *****
--
-- CELL RECONFIGURATION REQUEST TDD
--
-- *****

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

CellReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
{ ID      id-C-ID                CRITICALITY  reject      TYPE      C-ID
  PRESENCE mandatory }|
{ ID      id-ConfigurationGenerationID  CRITICALITY  reject      TYPE      ConfigurationGenerationID
  PRESENCE mandatory }|
{ ID      id-SCH-Information-Cell-ReconfRqstTDD  CRITICALITY  reject      TYPE      SCH-Information-Cell-ReconfRqstTDD
  PRESENCE optional }|
{ ID      id-PCCPCH-Information-Cell-ReconfRqstTDD  CRITICALITY  reject      TYPE      PCCPCH-Information-Cell-ReconfRqstTDD
  PRESENCE optional }|
{ ID      id-MaximumTransmissionPower  CRITICALITY  reject      TYPE      MaximumTransmissionPower
  PRESENCE optional }|
{ ID      id-TimeSlotConfigurationList-Cell-ReconfRqstTDD  CRITICALITY  reject      TYPE      TimeSlotConfigurationList-Cell-ReconfRqstTDD
  PRESENCE mandatory },
...
}

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

SCH-Information-Cell-ReconfRqstTDD ::= SEQUENCE {

```



```

    commonPhysicalChannelID      CommonPhysicalChannelID,
    sCH-Power                    DL-Power,
    iE-Extensions                ProtocolExtensionContainer { { PSCH-Information-Cell-ReconfRqstTDD-ExtIEs } }      OPTIONAL,
    ...
}

PSCH-Information-Cell-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PCCPCH-Information-Cell-ReconfRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    pCCPCH-Power                DL-Power,
    iE-Extensions                ProtocolExtensionContainer { { PCCPCH-Information-Cell-ReconfRqstTDD-ExtIEs } }      OPTIONAL,
    ...
}

PCCPCH-Information-Cell-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TimeSlotConfigurationList-Cell-ReconfRqstTDD ::= SEQUENCE (SIZE (1..15)) OF TimeSlotConfigurationItem-Cell-ReconfRqstTDD

TimeSlotConfigurationItem-Cell-ReconfRqstTDD ::= SEQUENCE {
    timeSlot                    TimeSlot,
    timeSlotStatus              TimeSlotStatus,
    timeSlotDirection           TimeSlotDirection,
    iE-Extensions                ProtocolExtensionContainer { { TimeSlotConfigurationItem-Cell-ReconfRqstTDD-ExtIEs } }      OPTIONAL,
    ...
}

TimeSlotConfigurationItem-Cell-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- CELL RECONFIGURATION RESPONSE
--
-- *****

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

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

```

```

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

-- *****
--
-- CELL RECONFIGURATION FAILURE
--
-- *****

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

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

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

-- *****
--
-- CELL DELETION REQUEST
--
-- *****

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

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

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

-- *****
--
-- CELL DELETION RESPONSE

```

```

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

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

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

-- *****
--
-- RESOURCE STATUS INDICATION
--
-- *****

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

ResourceStatusIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-IndicationType-ResourceStatusInd          CRITICALITY    ignore          TYPE      IndicationType-ResourceStatusInd          PRESENCE
    mandatory }|
    { ID      id-Cause          CRITICALITY    ignore          TYPE      Cause
    PRESENCE  optional    },
    ...
}

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

IndicationType-ResourceStatusInd ::= CHOICE {
    no-Failure          No-Failure-ResourceStatusInd,
    serviceImpacting    ServiceImpacting-ResourceStatusInd,
    cellControl          NULL,
    ...
}

No-Failure-ResourceStatusInd ::= ProtocolIE-Container {{ No-FailureIE-ResourceStatusInd }}

```

```

No-FailureIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-No-FailureItem-ResourceStatusInd  CRITICALITY ignore  TYPE No-FailureItem-ResourceStatusInd  PRESENCE mandatory },
  ...
}

No-FailureItem-ResourceStatusInd ::= SEQUENCE {
  nodeB-Information-ResourceStatusInd  NodeB-Information-ResourceStatusInd,
  local-Cell-InformationList  Local-Cell-InformationList-ResourceStatusInd,
  iE-Extensions  ProtocolExtensionContainer { { No-FailureItem-ResourceStatusInd-ExtIEs} } OPTIONAL,
  ...
}

No-FailureItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

NodeB-Information-ResourceStatusInd ::= SEQUENCE {
  dl-or-global-capacityCredit  DL-or-Global-CapacityCredit,
  ul-capacityCredit  UL-CapacityCredit  OPTIONAL,
  commonChannelsCapacityConsumptionLaw  CommonChannelsCapacityConsumptionLaw,
  dedicatedChannelsCapacityConsumptionLaw  DedicatedChannelsCapacityConsumptionLaw,
  iE-Extensions  ProtocolExtensionContainer { { NodeB-Information-ResourceStatusInd-ExtIEs} } OPTIONAL,
  ...
}

NodeB-Information-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

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

Local-Cell-InformationItem-ResourceStatusInd ::= SEQUENCE {
  local-CellID  Local-Cell-ID,
  addorDeleteIndicator  AddorDeleteIndicator,
  dl-or-global-capacityCredit  DL-or-Global-CapacityCredit  OPTIONAL,
  -- This IE is present only if "AddorDeleteIndicator" equals add
  ul-capacityCredit  UL-CapacityCredit  OPTIONAL,
  commonChannelsCapacityConsumptionLaw  CommonChannelsCapacityConsumptionLaw  OPTIONAL,
  -- This IE is present only if "AddorDeleteIndicator" equals add
  dedicatedChannelsCapacityConsumptionLaw  DedicatedChannelsCapacityConsumptionLaw  OPTIONAL,
  -- This IE is present only if "AddorDeleteIndicator" equals add
  maximumDL-PowerCapability  MaximumDL-PowerCapability,
  iE-Extensions  ProtocolExtensionContainer { { Local-Cell-InformationItem-ResourceStatusInd-ExtIEs} }  OPTIONAL,
  ...
}

```

```

}

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

ServiceImpacting-ResourceStatusInd ::= ProtocolIE-Container {{ ServiceImpactingIE-ResourceStatusInd }}

ServiceImpactingIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-ServiceImpactingItem-ResourceStatusInd    CRITICALITY ignore TYPE ServiceImpactingItem-ResourceStatusInd    PRESENCE mandatory },
    ...
}

ServiceImpactingItem-ResourceStatusInd ::= SEQUENCE {
    nodeB-Information-Service                NodeB-Information-Service-ResourceStatusInd    OPTIONAL,
    local-Cell-InformationList                Local-Cell-InformationList2-ResourceStatusInd    OPTIONAL,
    cCP-InformationList                      CCP-InformationList-ResourceStatusInd            OPTIONAL,
    cell-InformationList                     Cell-InformationList-ResourceStatusInd           OPTIONAL,
    primary-SCH-Information                  P-SCH-Information-ResourceStatusInd             OPTIONAL,
    secondary-SCH-Information                 S-SCH-Information-ResourceStatusInd             OPTIONAL,
    primary-CPICH-Information                P-CPICH-Information-ResourceStatusInd           OPTIONAL,
    secondary-CPICH-Information              S-CPICH-InformationList-ResourceStatusInd       OPTIONAL,
    primary-CCPCH-Information                P-CCPCH-Information-ResourceStatusInd           OPTIONAL,
    bCH-Information                          BCH-Information-ResourceStatusInd               OPTIONAL,
    secondary-CCPCH-InformationList          S-CCPCH-InformationList-ResourceStatusInd       OPTIONAL,
    pCH-Information                          PCH-Information-ResourceStatusInd              OPTIONAL,
    pICH-Information                         PICH-Information-ResourceStatusInd             OPTIONAL,
    fACH-InformationList                     FACH-InformationList-ResourceStatusInd         OPTIONAL,
    pRACH-InformationList                    PRACH-InformationList-ResourceStatusInd        OPTIONAL,
    rACH-InformationList                     RACH-InformationList-ResourceStatusInd         OPTIONAL,
    aICH-InformationList                     AICH-InformationList-ResourceStatusInd         OPTIONAL,
    sCH-Information                          SCH-Information-ResourceStatusInd              OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer { { ServiceImpactingItem-ResourceStatusInd-ExtIEs } }    OPTIONAL,
    ...
}

ServiceImpactingItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

NodeB-Information-Service-ResourceStatusInd ::= SEQUENCE {
    dl-or-global-capacityCredit              DL-or-Global-CapacityCredit                    OPTIONAL,
    ul-capacityCredit                        UL-CapacityCredit                              OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer { { NodeB-Information-Service-ResourceStatusInd-ExtIEs } }    OPTIONAL,
    ...
}

NodeB-Information-Service-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

Local-Cell-InformationList2-ResourceStatusInd ::= SEQUENCE(SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Container {{ Local-Cell-InformationItemIE2-ResourceStatusInd }}

Local-Cell-InformationItemIE2-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-Local-Cell-InformationItem2-ResourceStatusInd  CRITICALITY ignore  TYPE Local-Cell-InformationItem2-ResourceStatusInd  PRESENCE
  mandatory },
  ...
}

Local-Cell-InformationItem2-ResourceStatusInd ::= SEQUENCE {
  local-Cell-ID                Local-Cell-ID,
  dl-or-global-capacityCredit  DL-or-Global-CapacityCredit  OPTIONAL,
  ul-capacityCredit            UL-CapacityCredit            OPTIONAL,
  maximum-DL-PowerCapability   MaximumDL-PowerCapability  OPTIONAL,
  iE-Extensions                ProtocolExtensionContainer { { Local-Cell-InformationItem2-ResourceStatusInd-ExtIEs } }  OPTIONAL,
  ...
}

Local-Cell-InformationItem2-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CCP-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCCPinNodeB)) OF ProtocolIE-Container {{ CCP-InformationItemIE-ResourceStatusInd }}

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

CCP-InformationItem-ResourceStatusInd ::= SEQUENCE {
  communicationControlPortID  CommunicationControlPortID,
  resourceOperationalState    ResourceOperationalState,
  availabilityStatus           AvailabilityStatus,
  iE-Extensions               ProtocolExtensionContainer { { CCP-InformationItem-ResourceStatusInd-ExtIEs } }  OPTIONAL,
  ...
}

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

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

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

Cell-InformationItem-ResourceStatusInd ::= SEQUENCE {
  c-ID                C-ID,
  resourceOperationalState  ResourceOperationalState,
}

```

```

availabilityStatus      AvailabilityStatus,      --to do: FFS
maximumDL-PowerCapability MaximumDL-PowerCapability, --to do: FFS
minSpreadingFactor      MinSpreadingFactor,
iE-Extensions          ProtocolExtensionContainer { { Cell-InformationItem-ResourceStatusInd-ExtIEs } } OPTIONAL,
...
}

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

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

P-SCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
{ ID id-P-SCH-InformationItem-ResourceStatusInd CRITICALITY ignore TYPE P-SCH-InformationItem-ResourceStatusInd PRESENCE mandatory },
...
}

P-SCH-InformationItem-ResourceStatusInd ::= SEQUENCE {
commonPhysicalChannelID CommonPhysicalChannelID,
resourceOperationalState ResourceOperationalState,
availabilityStatus      AvailabilityStatus,
iE-Extensions          ProtocolExtensionContainer { { P-SCH-InformationItem-ResourceStatusInd-ExtIEs } } OPTIONAL,
...
}

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

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

S-SCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
{ ID id-S-SCH-InformationItem-ResourceStatusInd CRITICALITY ignore TYPE S-SCH-InformationItem-ResourceStatusInd PRESENCE mandatory },
...
}

S-SCH-InformationItem-ResourceStatusInd ::= SEQUENCE {
commonPhysicalChannelID CommonPhysicalChannelID,
resourceOperationalState ResourceOperationalState,
availabilityStatus      AvailabilityStatus,
iE-Extensions          ProtocolExtensionContainer { { S-SCH-InformationItem-ResourceStatusInd-ExtIEs } } OPTIONAL,
...
}

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

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

```

```

P-CPICH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-P-CPICH-InformationItem-ResourceStatusInd  CRITICALITY ignore  TYPE P-CPICH-InformationItem-ResourceStatusInd      PRESENCE mandatory },
  ...
}

P-CPICH-InformationItem-ResourceStatusInd ::= SEQUENCE {
  commonPhysicalChannelID          CommonPhysicalChannelID,
  resourceOperationalState         ResourceOperationalState,
  availabilityStatus                AvailabilityStatus,
  iE-Extensions                    ProtocolExtensionContainer { { P-CPICH-InformationItem-ResourceStatInd-ExtIEs } }      OPTIONAL,
  ...
}

P-CPICH-InformationItem-ResourceStatInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

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

S-CPICH-InformationItem-ResourceStatusInd ::= SEQUENCE {
  commonPhysicalChannelID          CommonPhysicalChannelID,
  resourceOperationalState         ResourceOperationalState,
  availabilityStatus                AvailabilityStatus,
  iE-Extensions                    ProtocolExtensionContainer { { S-CPICH-InformationItem-ResourceStatusInd-ExtIEs } }      OPTIONAL,
  ...
}

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

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

P-CCPCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-P-CCPCH-InformationItem-ResourceStatusInd  CRITICALITY ignore  TYPE P-CCPCH-InformationItem-ResourceStatusInd      PRESENCE mandatory },
  ...
}

P-CCPCH-InformationItem-ResourceStatusInd ::= SEQUENCE {
  commonPhysicalChannelID          CommonPhysicalChannelID,
  resourceOperationalState         ResourceOperationalState,
  availabilityStatus                AvailabilityStatus,
  iE-Extensions                    ProtocolExtensionContainer { { P-CCPCH-InformationItem-ResourceStatusInd-ExtIEs } }      OPTIONAL,
  ...
}

```



```

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

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

BCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-BCH-InformationItem-ResourceStatusInd    CRITICALITY ignore    TYPE BCH-InformationItem-ResourceStatusInd    PRESENCE mandatory },
    ...
}

BCH-InformationItem-ResourceStatusInd ::= SEQUENCE {
    commonTransportChannelID          CommonTransportChannelID,
    resourceOperationalState          ResourceOperationalState,
    availabilityStatus                 AvailabilityStatus,
    iE-Extensions                      ProtocolExtensionContainer { { BCH-InformationItem-ResourceStatusInd-ExtIEs } }    OPTIONAL,
    ...
}

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

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

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

S-CCPCH-InformationItem-ResourceStatusInd ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    resourceOperationalState          ResourceOperationalState,
    availabilityStatus                 AvailabilityStatus,
    iE-Extensions                      ProtocolExtensionContainer { { S-CCPCH-InformationItem-ResourceStatusInd-ExtIEs } }    OPTIONAL,
    ...
}

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

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

PCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-PCH-InformationItem-ResourceStatusInd    CRITICALITY ignore    TYPE PCH-InformationItem-ResourceStatusInd    PRESENCE mandatory },
    ...
}

```

```

PCH-InformationItem-ResourceStatusInd ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    resourceOperationalState      ResourceOperationalState,
    availabilityStatus            AvailabilityStatus,
    iE-Extensions                 ProtocolExtensionContainer { { PCH-InformationItem-ResourceStatusInd-ExtIEs} }      OPTIONAL,
    ...
}

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

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

PICH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-PICH-InformationItem-ResourceStatusInd    CRITICALITY ignore TYPE PICH-InformationItem-ResourceStatusInd      PRESENCE mandatory },
    ...
}

PICH-InformationItem-ResourceStatusInd ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    resourceOperationalState      ResourceOperationalState,
    availabilityStatus            AvailabilityStatus,
    iE-Extensions                 ProtocolExtensionContainer { { PICH-InformationItem-ResourceStatusInd-ExtIEs} }      OPTIONAL,
    ...
}

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

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

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

FACH-InformationItem-ResourceStatusInd ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    resourceOperationalState      ResourceOperationalState,
    availabilityStatus            AvailabilityStatus,
    iE-Extensions                 ProtocolExtensionContainer { { FACH-InformationItem-ResourceStatusInd-ExtIEs} }      OPTIONAL,
    ...
}

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

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

```

```

PRACH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-PRACH-InformationItem-ResourceStatusInd  CRITICALITY ignore  TYPE PRACH-InformationItem-ResourceStatusInd  PRESENCE mandatory },
  ...
}
PRACH-InformationItem-ResourceStatusInd ::= SEQUENCE {
  commonPhysicalChannelID  CommonPhysicalChannelID,
  resourceOperationalState  ResourceOperationalState,
  availabilityStatus  AvailabilityStatus,
  iE-Extensions  ProtocolExtensionContainer { { PRACH-InformationItem-ResourceStatusInd-ExtIEs} }  OPTIONAL,
  ...
}

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

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

RACH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-RACH-InformationItem-ResourceStatusInd  CRITICALITY ignore TYPE RACH-InformationItem-ResourceStatusInd  PRESENCE mandatory },
  ...
}
RACH-InformationItem-ResourceStatusInd ::= SEQUENCE {
  commonTransportChannelID  CommonTransportChannelID,
  resourceOperationalState  ResourceOperationalState,
  availabilityStatus  AvailabilityStatus,
  iE-Extensions  ProtocolExtensionContainer { { RACH-InformationItem-ResourceStatusInd-ExtIEs} }  OPTIONAL,
  ...
}

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

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

AICH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-AICH-InformationItem-ResourceStatusInd  CRITICALITY ignore TYPE AICH-InformationItem-ResourceStatusInd  PRESENCE mandatory },
  ...
}
AICH-InformationItem-ResourceStatusInd ::= SEQUENCE {
  commonPhysicalChannelID  CommonPhysicalChannelID,
  resourceOperationalState  ResourceOperationalState,
  availabilityStatus  AvailabilityStatus,
  iE-Extensions  ProtocolExtensionContainer { { AICH-InformationItem-ResourceStatusInd-ExtIEs} }  OPTIONAL,
  ...
}

```

```

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

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

SCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-SCH-InformationItem-ResourceStatusInd    CRITICALITY ignore    TYPE SCH-InformationItem-ResourceStatusInd    PRESENCE mandatory },
    ...
}

SCH-InformationItem-ResourceStatusInd ::= SEQUENCE {
    commonTransportChannelID          CommonTransportChannelID,
    resourceOperationalState         ResourceOperationalState,
    availabilityStatus               AvailabilityStatus,
    iE-Extensions                    ProtocolExtensionContainer { { SCH-InformationItem-ResourceStatusInd-ExtIEs } }    OPTIONAL,
    ...
}

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

-- *****
--
-- SYSTEM INFORMATION UPDATE REQUEST
--
-- *****

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

SystemInformationUpdateRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-C-ID          CRITICALITY reject    TYPE C-ID          PRESENCE mandatory }|
    { ID id-BCCH-ModificationTime    CRITICALITY reject    TYPE BCCH-ModificationTime    PRESENCE optional }|
    { ID id-MIB-SIB-InformationList-SystemInfoUpdateRqst    CRITICALITY reject    TYPE MIB-SIB-InformationList-SystemInfoUpdateRqst    PRESENCE mandatory },
    ...
}

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

MIB-SIB-InformationList-SystemInfoUpdateRqst ::= SEQUENCE (SIZE (1..maxIB)) OF MIB-SIB-InformationItem-SystemInfoUpdateRqst

```

```

MIB-SIB-InformationItem-SystemInfoUpdateRqst ::= SEQUENCE {
    iB-Type                IB-Type,
    sIB-DeletionIndicator  SIB-DeletionIndicator          OPTIONAL,
    -- This IE shall be present if the IB-Type is not equal to "MIB"
    deletionIndicator      DeletionIndicator-SystemInfoUpdate,
    iE-Extensions          ProtocolExtensionContainer { { MIB-SIB-InformationItem-SystemInfoUpdateRqst-ExtIEs } }      OPTIONAL,
    ...
}

MIB-SIB-InformationItem-SystemInfoUpdateRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DeletionIndicator-SystemInfoUpdate ::= CHOICE {
    no-Deletion            No-Deletion-SystemInfoUpdate,
    ...
}

No-Deletion-SystemInfoUpdate ::= ProtocolIE-Container {{ No-DeletionIE-SystemInfoUpdate }}

No-DeletionIE-SystemInfoUpdate NBAP-PROTOCOL-IES ::= {
    { ID id-No-DeletionItem-SystemInfoUpdate  CRITICALITY ignore  TYPE No-DeletionItem-SystemInfoUpdate      PRESENCE mandatory },
    ...
}

No-DeletionItem-SystemInfoUpdate ::= SEQUENCE {
    sIB-Originator        SIB-Originator          OPTIONAL,
    -- This IE shall be present if the IB-Type is not equal to "MIB"
    iB-SG-REP             IB-SG-REP,
    segmentInformationList SegmentInformationList-SystemInfoUpdate,
    iE-Extensions          ProtocolExtensionContainer { { No-DeletionItem-SystemInfoUpdate-ExtIEs } }      OPTIONAL,
    ...
}

No-DeletionItem-SystemInfoUpdate-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SegmentInformationList-SystemInfoUpdate ::= ProtocolIE-Container {{ SegmentInformationListIEs-SystemInfoUpdate }}

SegmentInformationListIEs-SystemInfoUpdate NBAP-PROTOCOL-IES ::= {
    { ID id-SegmentInformationListIE-SystemInfoUpdate  CRITICALITY ignore  TYPE SegmentInformationListIE-SystemInfoUpdate      PRESENCE mandatory },
    ...
}

SegmentInformationListIE-SystemInfoUpdate ::= SEQUENCE (SIZE (1..maxIBSEG)) OF SegmentInformationItem-SystemInfoUpdate

SegmentInformationItem-SystemInfoUpdate ::= SEQUENCE {
    iB-SG-POS             IB-SG-POS,
    iB-SG-DATA            IB-SG-DATA          OPTIONAL,
    -- This IE shall be present if the SIB Originator IE is set to "CRNC"
}

```

```

    iE-Extensions          ProtocolExtensionContainer { { SegmentInformationItem-SystemInfoUpdate-ExtIEs } } OPTIONAL,
    ...
}

SegmentInformationItem-SystemInfoUpdate-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- SYSTEM INFORMATION UPDATE RESPONSE
--
-- *****

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

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

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

-- *****
--
-- SYSTEM INFORMATION UPDATE FAILURE
--
-- *****

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

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

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

```

```

-- *****
--
-- RADIO LINK SETUP REQUEST FDD
--
-- *****

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

RadioLinkSetupRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CRNC-CommunicationContextID          CRITICALITY reject          TYPE      CRNC-CommunicationContextID
    PRESENCE mandatory } |
    { ID      id-UL-DPCH-Information-RL-SetupRqstFDD  CRITICALITY reject          TYPE      UL-DPCH-Information-RL-SetupRqstFDD
    PRESENCE mandatory } |
    { ID      id-DL-DPCH-Information-RL-SetupRqstFDD  CRITICALITY reject          TYPE      DL-DPCH-Information-RL-SetupRqstFDD
    PRESENCE mandatory } |
    { ID      id-DCH-InformationList-RL-SetupRqstFDD  CRITICALITY reject          TYPE      DCH-InformationList-RL-SetupRqstFDD
    PRESENCE mandatory } |
    { ID      id-DSCH-InformationList-RL-SetupRqstFDD CRITICALITY reject          TYPE      DSCH-InformationList-RL-SetupRqstFDD
    PRESENCE optional } |
    { ID      id-RL-InformationList-RL-SetupRqstFDD   CRITICALITY notify          TYPE      RL-InformationList-RL-SetupRqstFDD
    PRESENCE mandatory },
    ...
}

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

UL-DPCH-Information-RL-SetupRqstFDD ::= SEQUENCE {
    ul-ScramblingCode          UL-ScramblingCode,
    minUL-ChannelisationCodeLength  MinUL-ChannelisationCodeLength,
    maxNrOfUL-DPDCHs           MaxNrOfUL-DPDCHs          OPTIONAL,
    -- This IE is present only if "Min UL Channelisation Code length" equals to 4 --
    ul-PunctureLimit           PunctureLimit,
    tFCS                        TFCS,
    ul-DPCCH-SlotFormat         UL-DPCCH-SlotFormat,
    ul-SIR-Target               UL-SIR,
    diversityMode               DiversityMode,
    d-FieldLength               D-FieldLength          OPTIONAL
    -- This IE is present only if Feed Back mode diversity is activated -- ,
    sSDT-CellID-Length          SSDT-CellID-Length          OPTIONAL,
    s-FieldLength               S-FieldLength          OPTIONAL,
    iE-Extensions               ProtocolExtensionContainer { { UL-DPCH-Information-RL-SetupRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

UL-DPCH-Information-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```

```

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

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

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

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

DCH-InformationList-RL-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationItem-RL-SetupRqstFDD

DCH-InformationItem-RL-SetupRqstFDD ::= SEQUENCE {
    dCH-ID                             DCH-ID,
    dCH-CombinationIndication           DCH-CombinationIndication OPTIONAL,
    limitedPowerIncrease                LimitedPowerIncrease,
    ul-TransportFormatSet               TransportFormatSet,
    dl-TransportFormatSet               TransportFormatSet,
    frameHandlingPriority                FrameHandlingPriority,
    payloadCRC-PresenceIndicator        PayloadCRC-PresenceIndicator,
    ul-FP-Mode                          UL-FP-Mode,
    qE-Selector                          QE-Selector,
    toAWS                               ToAWS,
    toAWE                               ToAWE,
    iE-Extensions                      ProtocolExtensionContainer { { DCH-InformationItem-RL-SetupRqstFDD-ExtIEs } } OPTIONAL,

```



```

}
...
}
DCH-InformationItem-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
DSCH-InformationList-RL-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-InformationItem-RL-SetupRqstFDD
DSCH-InformationItem-RL-SetupRqstFDD ::= SEQUENCE {
    dSCH-ID                DSCH-ID,
    dSCH-TFS                DSCH-TFS,
    frameHandlingPriority   FrameHandlingPriority,
    toAWS                   ToAWS,
    toAWE                   ToAWE,
    iE-Extensions          ProtocolExtensionContainer { { DSCH-InformationItem-RL-SetupRqstFDD-ExtIEs } } OPTIONAL,
    ...
}
DSCH-InformationItem-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
RL-InformationList-RL-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF
    ProtocolIE-Container{{ RL-InformationItemIE-RL-SetupRqstFDD }}
RL-InformationItemIE-RL-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-RL-InformationItem-RL-SetupRqstFDD      CRITICALITY   notify           TYPE           RL-InformationItem-RL-SetupRqstFDD      PRESENCE
    mandatory},
    ...
}
RL-InformationItem-RL-SetupRqstFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    c-ID                 C-ID,
    frameOffset          FrameOffset,
    chipOffset           ChipOffset,
    propagationDelay     PropagationDelay OPTIONAL,
    diversityControlField DiversityControlField OPTIONAL,
    -- This IE is present only if the RL is not the first one in the RL Information
    dl-CodeInformationList DL-CodeInformationList-RL-SetupRqstFDD,
    initialDL-transmissionPower DL-Power,
    maximumDL-power      DL-Power,
    minimumDL-power      DL-Power,
    sSDT-Cell-Identity    SSdT-Cell-Identity OPTIONAL,
    transmitDiversityIndicator TransmitDiversityIndicator OPTIONAL,
    -- This IE is present unless Diversity Mode IE in UL DPCH Information group is "none"
    iE-Extensions        ProtocolExtensionContainer { { RL-InformationItem-RL-SetupRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

```

```

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

DL-CodeInformationList-RL-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfCodes)) OF DL-CodeInformationItem-RL-SetupRqstFDD

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

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

-- *****
--
-- RADIO LINK SETUP REQUEST TDD
--
-- *****

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

RadioLinkSetupRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CRNC-CommunicationContextID          CRITICALITY reject          TYPE      CRNC-CommunicationContextID
      PRESENCE mandatory }|
    { ID      id-UL-CCTrCH-InformationList-RL-SetupRqstTDD          CRITICALITY notify          TYPE      UL-CCTrCH-InformationList-RL-SetupRqstTDD
      PRESENCE optional }|
    { ID      id-UL-DPCH-InformationList-RL-SetupRqstTDD          CRITICALITY notify          TYPE      UL-DPCH-InformationList-RL-SetupRqstTDD
      PRESENCE optional }|
    { ID      id-DL-CCTrCH-InformationList-RL-SetupRqstTDD          CRITICALITY notify          TYPE      DL-CCTrCH-InformationList-RL-SetupRqstTDD
      PRESENCE optional }|
    { ID      id-DL-DPCH-InformationList-RL-SetupRqstTDD          CRITICALITY notify          TYPE      DL-DPCH-InformationList-RL-SetupRqstTDD
      PRESENCE optional }|
    { ID      id-DCH-InformationList-RL-SetupRqstTDD              CRITICALITY reject          TYPE      DCH-InformationList-RL-SetupRqstTDD
      PRESENCE optional }|
    { ID      id-DSCH-InformationList-RL-SetupRqstTDD              CRITICALITY reject          TYPE      DSCH-InformationList-RL-SetupRqstTDD
      PRESENCE optional }|
    { ID      id-USCH-InformationList-RL-SetupRqstTDD              CRITICALITY reject          TYPE      USCH-InformationList-RL-SetupRqstTDD
      PRESENCE optional }|
    { ID      id-RL-Information-RL-SetupRqstTDD                CRITICALITY reject          TYPE      RL-Information-RL-SetupRqstTDD
      PRESENCE mandatory },
    ...
}

```

```

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

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

UL-CCTrCH-InformationItemIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID      id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD      CRITICALITY      notify      TYPE UL-CCTrCH-InformationItem-RL-SetupRqstTDD
    PRESENCE      mandatory},
    ...
}

UL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    tFCS               TFCS,
    tFCI-Coding        TFCI-Coding,
    punctureLimit      PunctureLimit,
    iE-Extensions      ProtocolExtensionContainer { { UL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs } }      OPTIONAL,
    ...
}

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

UL-DPCH-InformationList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-InformationItem-RL-SetupRqstTDD

UL-DPCH-InformationItem-RL-SetupRqstTDD ::= 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,
    iE-Extensions                ProtocolExtensionContainer { { UL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs } }      OPTIONAL,
    ...
}

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

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

DL-CCTrCH-InformationItemIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {

```

```

    { ID      id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD
      PRESENCE mandatory},
    ...
}

DL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    tFCS               TFCS,
    tFCI-Coding        TFCI-Coding,
    punctureLimit      PunctureLimit,
    tdd-TPC-DownlinkStepSize TDD-TPC-DownlinkStepSize,
    iE-Extensions      ProtocolExtensionContainer { { DL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs } } OPTIONAL,
    ...
}

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

DL-DPCH-InformationList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-InformationItem-RL-SetupRqstTDD

DL-DPCH-InformationItem-RL-SetupRqstTDD ::= 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,
    iE-Extensions    ProtocolExtensionContainer { { DL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs } } OPTIONAL,
    ...
}

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

DCH-InformationList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-InformationItem-RL-SetupRqstTDD

DCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    dCH-ID          DCH-ID,
    limitedPowerIncrease LimitedPowerIncrease,
    ul-CCTrCH-ID    CCTrCH-ID,
    dl-CCTrCH-ID    CCTrCH-ID,
    dCH-CombinationIndication DCH-CombinationIndication OPTIONAL,
    ul-TransportFormatSet TransportFormatSet,
    dl-TransportFormatSet TransportFormatSet,
    frameHandlingPriority FrameHandlingPriority OPTIONAL,
    payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
}

```

```

    ul-FP-Mode          UL-FP-Mode,
    toAWS               ToAWS,
    toAWE               ToAWE,
    iE-Extensions      ProtocolExtensionContainer { { DCH-InformationItem-RL-SetupRqstTDD-ExtIEs } }    OPTIONAL,
    ...
}

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

DSCH-InformationList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-InformationItem-RL-SetupRqstTDD

DSCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    dSCH-ID            DSCH-ID,
    cCTrCH-ID         CCTrCH-ID,
    transportFormatSet TransportFormatSet,
    frameHandlingPriority FrameHandlingPriority,
    toAWS              ToAWS,
    toAWE              ToAWE,
    iE-Extensions     ProtocolExtensionContainer { { DSCH-InformationItem-RL-SetupRqstTDD-ExtIEs } }    OPTIONAL,
    ...
}

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

USCH-InformationList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-InformationItem-RL-SetupRqstTDD

USCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    uSCH-ID            USCH-ID,
    cCTrCH-ID         CCTrCH-ID,
    transportFormatSet TransportFormatSet,
    iE-Extensions     ProtocolExtensionContainer { { USCH-InformationItemIE-RL-SetupRqstTDD-ExtIEs } }    OPTIONAL,
    ...
}

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

RL-Information-RL-SetupRqstTDD ::= SEQUENCE {
    rL-ID             RL-ID,
    c-ID              C-ID,
    frameOffset       FrameOffset,
    initialDL-transmissionPower DL-Power,
    maximumDL-power   DL-Power,
    minimumDL-power   DL-Power,
    iE-Extensions     ProtocolExtensionContainer { { RL-Information-RL-SetupRqstTDD-ExtIEs } }    OPTIONAL,
    ...
}

```

```

}

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

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

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

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

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

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

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

RL-InformationResponseItem-RL-SetupRspFDD ::= SEQUENCE {
  rL-ID                RL-ID,
  rL-Set-ID            RL-Set-ID,
  ul-InterferenceLevel  UL-InterferenceLevel,
  diversityIndication-RL-SetupRspFDD  DiversityIndication-RL-SetupRspFDD  OPTIONAL,
  -- This IE is present only if the RL is not the first one in the RL Information
  dSCH-InformationResponseList  DSCH-InformationResponseList-RL-SetupRspFDD  OPTIONAL,
}

```

```

sSDT-SupportIndicator          SSdT-SupportIndicator,
iE-Extensions                  ProtocolExtensionContainer { { RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs } }      OPTIONAL,
...
}

RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

DiversityIndication-RL-SetupRspFDD ::= CHOICE {
    combining                    Combining-RL-SetupRspFDD,
    nonCombiningOrIENotPrsent   NonCombiningOrIENotPrsent-RL-SetupRspFDD,
    ...
}

Combining-RL-SetupRspFDD ::= ProtocolIE-Container {{ CombiningIE-RL-SetupRspFDD }}

CombiningIE-RL-SetupRspFDD NBAP-PROTOCOL-IES ::= {
    { ID id-CombiningItem-RL-SetupRspFDD    CRITICALITY ignore    TYPE CombiningItem-RL-SetupRspFDD        PRESENCE mandatory },
    ...
}

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

Combining-RL-SetupRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

NonCombiningOrIENotPrsent-RL-SetupRspFDD ::= ProtocolIE-Container {{ NonCombiningOrIENotPrsentIE-RL-SetupRspFDD }}

NonCombiningOrIENotPrsentIE-RL-SetupRspFDD NBAP-PROTOCOL-IES ::= {
    { ID id-NonCombiningOrIENotPrsentItem-RL-SetupRspFDD    CRITICALITY ignore    TYPE NonCombiningOrIENotPrsentItem-RL-SetupRspFDD        PRESENCE
mandatory },
    ...
}

NonCombiningOrIENotPrsentItem-RL-SetupRspFDD ::= SEQUENCE {
    dCH-InformationResponseList   DCH-InformationResponseList-RL-SetupRspFDD        OPTIONAL ,
    iE-Extensions                ProtocolExtensionContainer { { NonCombiningOrIENotPrsentItem-RL-SetupRspFDD-ExtIEs } }
OPTIONAL,
    ...
}

NonCombiningOrIENotPrsentItem-RL-SetupRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

DCH-InformationResponseList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-SetupRspFDD

DCH-InformationResponseItem-RL-SetupRspFDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    bindingID             BindingID,
    transportLayerAddress TransportLayerAddress,
    iE-Extensions        ProtocolExtensionContainer { { DCH-InformationResponseItem-RL-SetupRspFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-InformationResponseItem-RL-SetupRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-InformationResponseList-RL-SetupRspFDD ::= ProtocolIE-Container {{ DSCH-InformationResponseListIEs-RL-SetupRspFDD }}

DSCH-InformationResponseListIEs-RL-SetupRspFDD NBAP-PROTOCOL-IES ::= {
    { ID id-DSCH-InformationResponseListIE-RL-SetupRspFDD CRITICALITY ignore TYPE DSCH-InformationResponseListIE-RL-SetupRspFDD PRESENCE
    mandatory },
    ...
}

DSCH-InformationResponseListIE-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-InformationResponseItem-RL-SetupRspFDD

DSCH-InformationResponseItem-RL-SetupRspFDD ::= SEQUENCE {
    dSCH-ID                DSCH-ID,
    bindingID             BindingID,
    transportLayerAddress TransportLayerAddress,
    iE-Extensions        ProtocolExtensionContainer { { DSCH-InformationResponseItem-RL-SetupRspFDD-ExtIEs} } OPTIONAL,
    ...
}

DSCH-InformationResponseItem-RL-SetupRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK SETUP RESPONSE TDD
--
-- *****

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

RadioLinkSetupResponseTDD-IEs NBAP-PROTOCOL-IES ::= {

```



```

{ ID id-CRNC-CommunicationContextID
  PRESENCE mandatory }|
{ ID id-NodeB-CommunicationContextID
  PRESENCE mandatory }|
{ ID id-CommunicationControlPortID
  PRESENCE mandatory }|
{ ID id-RL-InformationResponse-RL-SetupRspTDD
  PRESENCE mandatory }|
{ ID id-CriticalityDiagnostics
  PRESENCE optional },
...
}

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

RL-InformationResponse-RL-SetupRspTDD ::= SEQUENCE {
  rL-ID RL-ID,
  uL-InterferenceList-RL-SetupRspTDD UL-InterferenceList-RL-SetupRspTDD,
  dCH-InformationResponseList DCH-InformationResponseList-RL-SetupRspTDD,
  dSCH-InformationResponseList DSCH-InformationResponseList-RL-SetupRspTDD OPTIONAL,
  uSCH-InformationResponseList USCH-InformationResponseList-RL-SetupRspTDD OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { RL-InformationResponseList-RL-SetupRspTDD-ExtIEs } } OPTIONAL,
...
}

RL-InformationResponseList-RL-SetupRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

UL-InterferenceList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-InterferenceItem-RL-SetupRspTDD

UL-InterferenceItem-RL-SetupRspTDD ::= SEQUENCE {
  timeSlot TimeSlot,
  ul-InterferenceLevel UL-InterferenceLevel,
  iE-Extensions ProtocolExtensionContainer { { UL-InterferenceItem-RL-SetupRspTDD-ExtIEs } } OPTIONAL,
...
}

UL-InterferenceItem-RL-SetupRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-InformationResponseList-RL-SetupRspTDD ::= ProtocolIE-Container{{ DCH-InformationResponseListIEs-RL-SetupRspTDD }}

DCH-InformationResponseListIEs-RL-SetupRspTDD NBAP-PROTOCOL-IES ::= {
  { ID id-DCH-InformationResponseListIE-RL-SetupRspTDD CRITICALITY ignore TYPE DCH-InformationResponseListIE-RL-SetupRspTDD PRESENCE
    mandatory},
...
}

```

```

DCH-InformationResponseListIE-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-SetupRspTDD

DCH-InformationResponseItem-RL-SetupRspTDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    bindingID             BindingID,
    transportLayerAddress TransportLayerAddress,
    iE-Extensions        ProtocolExtensionContainer { { DCH-InformationResponseItem-RL-SetupRspTDD-ExtIEs } } OPTIONAL,
    ...
}

DCH-InformationResponseItem-RL-SetupRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-InformationResponseList-RL-SetupRspTDD ::= ProtocolIE-Container {{ DSCH-InformationResponseListIEs-RL-SetupRspTDD }}

DSCH-InformationResponseListIEs-RL-SetupRspTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DSCH-InformationResponseListIE-RL-SetupRspTDD CRITICALITY ignore TYPE DSCH-InformationResponseListIE-RL-SetupRspTDD mandatory }, PRESENCE
    ...
}

DSCH-InformationResponseListIE-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-InformationResponseItem-RL-SetupRspTDD

DSCH-InformationResponseItem-RL-SetupRspTDD ::= SEQUENCE {
    dSCH-ID                DSCH-ID,
    bindingID             BindingID,
    transportLayerAddress TransportLayerAddress,
    iE-Extensions        ProtocolExtensionContainer { { DSCH-InformationResponseItem-RL-SetupRspTDD-ExtIEs } } OPTIONAL,
    ...
}

DSCH-InformationResponseItem-RL-SetupRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCH-InformationResponseList-RL-SetupRspTDD ::= ProtocolIE-Container {{ USCH-InformationResponseListIEs-RL-SetupRspTDD }}

USCH-InformationResponseListIEs-RL-SetupRspTDD NBAP-PROTOCOL-IES ::= {
    { ID id-USCH-InformationResponseListIE-RL-SetupRspTDD CRITICALITY ignore TYPE USCH-InformationResponseListIE-RL-SetupRspTDD mandatory }, PRESENCE
    ...
}

USCH-InformationResponseListIE-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-InformationResponseItem-RL-SetupRspTDD

USCH-InformationResponseItem-RL-SetupRspTDD ::= SEQUENCE {
    uSCH-ID                USCH-ID,
    bindingID             BindingID,
    transportLayerAddress TransportLayerAddress,

```

```

    iE-Extensions          ProtocolExtensionContainer { { USCH-InformationResponseItem-RL-SetupRspTDD-ExtIEs } } OPTIONAL,
  }
}

USCH-InformationResponseItem-RL-SetupRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK SETUP FAILURE FDD
--
-- *****

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

RadioLinkSetupFailureFDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID    id-CRNC-CommunicationContextID          PRESENCE  mandatory }| CRITICALITY  ignore          TYPE  CRNC-CommunicationContextID
  { ID    id-NodeB-CommunicationContextID        PRESENCE  optional   }| CRITICALITY  ignore          TYPE  NodeB-CommunicationContextID
  { ID    id-CommunicationControlPortID          PRESENCE  mandatory }| CRITICALITY  ignore          TYPE  CommunicationControlPortID
  { ID    id-Unsuccessful-RL-InformationRespList-RL-SetupFailureFDD PRESENCE  mandatory }| CRITICALITY  ignore          TYPE  Unsuccessful-RL-
InformationRespList-RL-SetupFailureFDD
  { ID    id-Successful-RL-InformationRespList-RL-SetupFailureFDD PRESENCE  optional   }| CRITICALITY  ignore          TYPE  Successful-RL-
InformationRespList-RL-SetupFailureFDD
  { ID    id-CriticalityDiagnostics              PRESENCE  optional   }, CRITICALITY  ignore          TYPE  CriticalityDiagnostics
  ...
}

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

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

Unsuccessful-RL-InformationRespItemIE-RL-SetupFailureFDD NBAP-PROTOCOL-IES ::= {
  { ID    id-Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD PRESENCE  mandatory }, CRITICALITY  ignore          TYPE  Unsuccessful-RL-InformationRespItem-RL-
SetupFailureFDD
  ...
}

Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD ::= SEQUENCE {
  rL-ID          RL-ID,

```

```

    cause
    iE-Extensions
    OPTIONAL,
    ...
}

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

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

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

Successful-RL-InformationRespItem-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID RL-ID,
    rL-Set-ID RL-Set-ID,
    ul-InterferenceLevel UL-InterferenceLevel,
    diversityIndication DiversityIndication-RL-SetupFailureFDD OPTIONAL,
    -- This IE is present if at least one of the RL is not the first one in the RL information
    dSCH-InformationResponseList DSCH-InformationRespList-RL-SetupFailureFDD OPTIONAL,
    sSDT-SupportIndicator SSDT-SupportIndicator,
    iE-Extensions ProtocolExtensionContainer { { Successful-RL-InformationRespItem-RL-SetupFailureFDD-ExtIEs} }
    OPTIONAL,
    ...
}

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

DiversityIndication-RL-SetupFailureFDD ::= CHOICE {
    combining Combining-RL-SetupFailureFDD,
    nonCombiningOrIENotPrsent NonCombiningOrIENotPrsent-RL-SetupFailureFDD,
    ...
}

Combining-RL-SetupFailureFDD ::= ProtocolIE-Container {{ CombiningIE-RL-SetupFailureFDD }}

CombiningIE-RL-SetupFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID id-CombiningItem-RL-SetupFailureFDD CRITICALITY ignore TYPE CombiningItem-RL-SetupFailureFDD PRESENCE mandatory },
    ...
}

CombiningItem-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID RL-ID,

```

```

    iE-Extensions
    ...
}
ProtocolExtensionContainer { { CombiningItem-RL-SetupFailureFDD-ExtIEs } } OPTIONAL,

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

NonCombiningOrIENotPrsent-RL-SetupFailureFDD ::= ProtocolIE-Container {{ NonCombiningOrIENotPrsentIE-RL-SetupFailureFDD }}

NonCombiningOrIENotPrsentIE-RL-SetupFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID id-NonCombiningOrIENotPrsentItem-RL-SetupFailureFDD CRITICALITY ignore TYPE NonCombiningOrIENotPrsentItem-RL-SetupFailureFDD
    PRESENCE mandatory },
    ...
}

NonCombiningOrIENotPrsentItem-RL-SetupFailureFDD ::= SEQUENCE {
    dCH-InformationResponseList DCH-InformationRespList-RL-SetupFailureFDD OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { { NonCombiningOrIENotPrsentItem-RL-SetupFailureFDD-ExtIEs } }
    OPTIONAL,
    ...
}

NonCombiningOrIENotPrsentItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationRespList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1.. maxNrOfDCHs)) OF DCH-InformationRespItem-RL-SetupFailureFDD

DCH-InformationRespItem-RL-SetupFailureFDD ::= SEQUENCE {
    dCH-ID DCH-ID,
    bindingID BindingID,
    transportLayerAddress TransportLayerAddress,
    iE-Extensions ProtocolExtensionContainer { { DCH-InformationRespItem-RL-SetupFailureFDD-ExtIEs } } OPTIONAL,
    ...
}

DCH-InformationRespItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-InformationRespList-RL-SetupFailureFDD ::= ProtocolIE-Container {{ DSCH-InformationRespListIEs-RL-SetupFailureFDD }}

DSCH-InformationRespListIEs-RL-SetupFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID id-DSCH-InformationRespListIE-RL-SetupFailureFDD CRITICALITY ignore TYPE DSCH-InformationRespListIE-RL-SetupFailureFDD
    mandatory },
    ...
}

DSCH-InformationRespListIE-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-InformationRespItem-RL-SetupFailureFDD

```

```

DSCH-InformationRespItem-RL-SetupFailureFDD ::= SEQUENCE {
    dSCH-ID          DSCH-ID,
    bindingID        BindingID,
    transportLayerAddress TransportLayerAddress,
    iE-Extensions    ProtocolExtensionContainer { { DSCH-InformationRespItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

DSCH-InformationRespItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- 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-InformationResp-RL-SetupFailureTDD          CRITICALITY ignore      TYPE      Unsuccessful-RL-InformationResp-RL-
SetupFailureTDD      PRESENCE mandatory }|
    { ID      id-CriticalityDiagnostics              CRITICALITY ignore      TYPE CriticalityDiagnostics
      PRESENCE optional   },
    ...
}

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

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

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

-- *****

```

```

--
-- RADIO LINK ADDITION REQUEST FDD
--
-- *****

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

RadioLinkAdditionRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-NodeB-CommunicationContextID          CRITICALITY reject          TYPE      NodeB-CommunicationContextID
    PRESENCE mandatory } |
    { ID      id-RL-InformationList-RL-AdditionRqstFDD          CRITICALITY notify          TYPE      RL-InformationList-RL-AdditionRqstFDD
    PRESENCE mandatory },
    ...
}

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

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

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

RL-InformationItem-RL-AdditionRqstFDD ::= SEQUENCE {
    rL-ID          RL-ID,
    c-ID           C-ID,
    frameOffset    FrameOffset,
    chipOffset     ChipOffset,
    diversityControlField DiversityControlField,
    dl-CodeInformationList DL-CodeInformationList-RL-AdditionRqstFDD,
    initialDL-TransmissionPower DL-Power          OPTIONAL,
    maximumDL-Power DL-Power          OPTIONAL,
    minimumDL-Power DL-Power          OPTIONAL,
    sSDT-CellIdentity SSDT-Cell-Identity    OPTIONAL,
    transmitDiversityIndicator TransmitDiversityIndicator    OPTIONAL,
    -- This IE is present unless Diversity Mode IE in UL DPCH Information group is "none"
    iE-Extensions ProtocolExtensionContainer { { RL-InformationItem-RL-AdditionRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

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

```

```

DL-CodeInformationList-RL-AdditionRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfDLCodes)) OF DL-CodeInformationItem-RL-AdditionRqstFDD

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

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

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

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

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

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

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

UL-CCTrCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
    cCtRch-ID          CCTrCH-ID,
    iE-Extensions      ProtocolExtensionContainer { { UL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs} }      OPTIONAL,
}

```



```

}
...
}
UL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
UL-DPCH-InformationList-RL-AdditionRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF ProtocolIE-Container {{ UL-DPCH-InformationItemIE-RL-
AdditionRqstTDD }}
UL-DPCH-InformationItemIE-RL-AdditionRqstTDD NBAP-PROTOCOL-IES ::= {
{ ID      id-UL-DPCH-InformationItem-RL-AdditionRqstTDD      CRITICALITY      notify      TYPE      UL-DPCH-InformationItem-RL-AdditionRqstTDD
  PRESENCE      mandatory},
...
}
UL-DPCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
  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,
  iE-Extensions      ProtocolExtensionContainer { { UL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs } }      OPTIONAL,
  ...
}
UL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
DL-CCTrCH-InformationList-RL-AdditionRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationItem-RL-AdditionRqstTDD
DL-CCTrCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
  cCtTrCH-ID      CCTrCH-ID,
  iE-Extensions      ProtocolExtensionContainer { { DL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs } }      OPTIONAL,
  ...
}
DL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
DL-DPCH-InformationList-RL-AdditionRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF ProtocolIE-Container {{ DL-DPCH-InformationItemIE-RL-
AdditionRqstTDD }}
DL-DPCH-InformationItemIE-RL-AdditionRqstTDD NBAP-PROTOCOL-IES ::= {

```

```

    { ID      id-DL-DPCH-InformationItem-RL-AdditionRqstTDD      CRITICALITY      notify      TYPE      DL-DPCH-InformationItem-RL-AdditionRqstTDD
      PRESENCE      mandatory},
    ...
}

DL-DPCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
  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,
  iE-Extensions        ProtocolExtensionContainer { { DL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs } }
  OPTIONAL,
  ...
}

DL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-Information-RL-AdditionRqstTDD ::= SEQUENCE {
  rL-ID          RL-ID,
  c-ID          C-ID,
  frameOffset   FrameOffset,
  diversityControlField      DiversityControlField,
  initial-DL-Transmission-Power      DL-Power      OPTIONAL,
  maximumDL-Power      DL-Power      OPTIONAL,
  minimumDL-Power      DL-Power      OPTIONAL,
  iE-Extensions        ProtocolExtensionContainer { { RL-information-RL-AdditionRqstTDD-ExtIEs } }
  ...
}

RL-information-RL-AdditionRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK ADDITION RESPONSE FDD
--
-- *****

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

```

```

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

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

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

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

RL-InformationResponseItem-RL-AdditionRspFDD ::= SEQUENCE {
  rL-ID RL-ID,
  rL-Set-ID RL-Set-ID,
  ul-InterferenceLevel UL-InterferenceLevel,
  diversityIndication DiversityIndication-RL-AdditionRspFDD,
  sSDT-SupportIndicator SSDT-SupportIndicator,
  iE-Extensions ProtocolExtensionContainer { { RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs} }
  OPTIONAL,
  ...
}

RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

Combining-RL-AdditionRspFDD ::= ProtocolIE-Container {{ CombiningIE-RL-AdditionRspFDD }}

CombiningIE-RL-AdditionRspFDD NBAP-PROTOCOL-IES ::= {
  { ID id-CombiningItem-RL-AdditionRspFDD CRITICALITY ignore          TYPE CombiningItem-RL-AdditionRspFDD PRESENCE mandatory },
  ...
}

```

```

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

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

Non-Combining-RL-AdditionRspFDD ::= ProtocolIE-Container {{ Non-CombiningIE-RL-AdditionRspFDD }}

Non-CombiningIE-RL-AdditionRspFDD NBAP-PROTOCOL-IES ::= {
    { ID id-Non-CombiningItem-RL-AdditionRspFDD CRITICALITY ignore TYPE Non-CombiningItem-RL-AdditionRspFDD PRESENCE mandatory },
    ...
}

Non-CombiningItem-RL-AdditionRspFDD ::= SEQUENCE {
    dCH-InformationResponseList
    iE-Extensions
    ...
    DCH-InformationResponseList-RL-AdditionRspFDD,
    ProtocolExtensionContainer { { Non-CombiningItem-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
}

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

DCH-InformationResponseList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF DCH-InformationResponseItem-RL-AdditionRspFDD

DCH-InformationResponseItem-RL-AdditionRspFDD ::= SEQUENCE {
    dCH-ID
    bindingID
    transportLayerAddress
    iE-Extensions
    ...
    DCH-ID,
    BindingID,
    TransportLayerAddress,
    ProtocolExtensionContainer { { DCH-InformationResponseItem-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
}

DCH-InformationResponseItem-RL-AdditionRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK ADDITION RESPONSE TDD
--
-- *****

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

```

```

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

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

RL-InformationResponse-RL-AdditionRspTDD ::= SEQUENCE {
  rL-ID                RL-ID,
  uL-InterferenceList-RL-AdditionRspTDD UL-InterferenceList-RL-AdditionRspTDD,
  diversityIndication DiversityIndication-RL-AdditionRspTDD,
  dSCH-InfomationResponseList DSCH-InformationResponseList-RL-AdditionRspTDD OPTIONAL,
  uSCH-InfomationResponseList USCH-InformationResponseList-RL-AdditionRspTDD OPTIONAL,
  iE-Extensions         ProtocolExtensionContainer { { RL-InformationResponse-RL-AdditionRspTDD-ExtIEs } } OPTIONAL,
  ...
}

RL-InformationResponse-RL-AdditionRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

UL-InterferenceList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1.. maxNrOfULTSs)) OF UL-InterferenceItem-RL-AdditionRspTDD

UL-InterferenceItem-RL-AdditionRspTDD ::= SEQUENCE {
  timeSlot          TimeSlot,
  ul-InterferenceLevel UL-InterferenceLevel,
  iE-Extensions     ProtocolExtensionContainer { { UL-InterferenceItem-RL-AdditionRspTDD-ExtIEs } } OPTIONAL,
  ...
}

UL-InterferenceItem-RL-AdditionRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

Combining-RL-AdditionRspTDD ::= ProtocolIE-Container {{ CombiningIE-RL-AdditionRspTDD }}

```

```

CombiningIE-RL-AdditionRspTDD NBAP-PROTOCOL-IES ::= {
  { ID id-CombiningItem-RL-AdditionRspTDD  CRITICALITY ignore  TYPE CombiningItem-RL-AdditionRspTDD  PRESENCE mandatory },
  ...
}

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

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

Non-Combining-RL-AdditionRspTDD ::= ProtocolIE-Container {{ Non-CombiningIE-RL-AdditionRspTDD }}

Non-CombiningIE-RL-AdditionRspTDD NBAP-PROTOCOL-IES ::= {
  { ID id-Non-CombiningItem-RL-AdditionRspTDD  CRITICALITY ignore  TYPE Non-CombiningItem-RL-AdditionRspTDD  PRESENCE mandatory },
  ...
}

Non-CombiningItem-RL-AdditionRspTDD ::= SEQUENCE {
  dCH-InfomationResponseList  DCH-InformationResponseList-RL-AdditionRspTDD  OPTIONAL,
  iE-Extensions  ProtocolExtensionContainer { { Non-CombiningItem-RL-AdditionRspTDD-ExtIEs} }  OPTIONAL,
  ...
}

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

DCH-InformationResponseList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-AdditionRspTDD

DCH-InformationResponseItem-RL-AdditionRspTDD ::= SEQUENCE {
  dCH-ID  DCH-ID,
  bindingID  BindingID,
  transportLayerAddress  TransportLayerAddress,
  iE-Extensions  ProtocolExtensionContainer { { DCH-InformationResponseItem-RL-AdditionRspTDD-ExtIEs} }
  OPTIONAL,
  ...
}

DCH-InformationResponseItem-RL-AdditionRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DSCH-InformationResponseList-RL-AdditionRspTDD ::= ProtocolIE-Container {{ DSCH-InformationResponseListIEs-RL-AdditionRspTDD }}

DSCH-InformationResponseListIEs-RL-AdditionRspTDD NBAP-PROTOCOL-IES ::= {

```

```

    { ID id-DSCH-InformationResponseListIE-RL-AdditionRspTDD CRITICALITY ignore TYPE DSCH-InformationResponseListIE-RL-AdditionRspTDD
      PRESENCE mandatory },
    ...
  }

DSCH-InformationResponseListIE-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-InformationResponseItem-RL-AdditionRspTDD

DSCH-InformationResponseItem-RL-AdditionRspTDD ::= SEQUENCE {
  dSCH-ID DSCH-ID,
  bindingID BindingID,
  transportLayerAddress TransportLayerAddress,
  iE-Extensions ProtocolExtensionContainer { { DSCH-InformationResponseItem-RL-AdditionRspTDD-ExtIEs } } OPTIONAL,
  ...
}

DSCH-InformationResponseItem-RL-AdditionRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

USCH-InformationResponseList-RL-AdditionRspTDD ::= ProtocolIE-Container {{ USCH-InformationResponseListIEs-RL-AdditionRspTDD }}

USCH-InformationResponseListIEs-RL-AdditionRspTDD NBAP-PROTOCOL-IES ::= {
  { ID id-USCH-InformationResponseListIE-RL-AdditionRspTDD CRITICALITY ignore TYPE USCH-InformationResponseListIE-RL-AdditionRspTDD
    PRESENCE mandatory },
  ...
}

USCH-InformationResponseListIE-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-InformationResponseItem-RL-AdditionRspTDD

USCH-InformationResponseItem-RL-AdditionRspTDD ::= SEQUENCE {
  uSCH-ID USCH-ID,
  bindingID BindingID,
  transportLayerAddress TransportLayerAddress,
  iE-Extensions ProtocolExtensionContainer { { USCH-InformationResponseItem-RL-AdditionRspTDD-ExtIEs } } OPTIONAL,
  ...
}

USCH-InformationResponseItem-RL-AdditionRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

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

```

```

}

RadioLinkAdditionFailureFDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-CRNC-CommunicationContextID
    PRESENCE mandatory } |
  { ID id-Unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD
    InformationRespList-RL-AdditionFailureFDD PRESENCE mandatory } |
  { ID id-Successful-RL-InformationRespList-RL-AdditionFailureFDD
    InformationRespList-RL-AdditionFailureFDD PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics
    PRESENCE optional },
  ...
}

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

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

Unsuccessful-RL-InformationRespItemIE-RL-AdditionFailureFDD NBAP-PROTOCOL-IES ::= {
  { ID id-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD
    InformationRespItem-RL-AdditionFailureFDD PRESENCE mandatory },
  ...
}

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

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

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

Successful-RL-InformationRespItemIE-RL-AdditionFailureFDD NBAP-PROTOCOL-IES ::= {
  { ID id-Successful-RL-InformationRespItem-RL-AdditionFailureFDD
    AdditionFailureFDD PRESENCE mandatory },
  ...
}

Successful-RL-InformationRespItem-RL-AdditionFailureFDD ::= SEQUENCE {
  rL-ID RL-ID,
  rL-Set-ID RL-Set-ID,

```



```

    ul-InterferenceLevel
    diversityIndication
    sSDT-SupportIndicator
    iE-Extensions
    OPTIONAL,
    ...
}

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

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

Combining-RL-AdditionFailureFDD ::= ProtocolIE-Container {{ CombiningIE-RL-AdditionFailureFDD }}

CombiningIE-RL-AdditionFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID id-CombiningItem-RL-AdditionFailureFDD CRITICALITY ignore TYPE CombiningItem-RL-AdditionFailureFDD PRESENCE mandatory },
    ...
}

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

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

Non-Combining-RL-AdditionFailureFDD ::= ProtocolIE-Container {{ Non-CombiningIE-RL-AdditionFailureFDD }}

Non-CombiningIE-RL-AdditionFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID id-Non-CombiningItem-RL-AdditionFailureFDD CRITICALITY ignore TYPE Non-CombiningItem-RL-AdditionFailureFDD PRESENCE mandatory },
    ...
}

Non-CombiningItem-RL-AdditionFailureFDD ::= SEQUENCE {
    dCH-InformationResponseList
        DCH-InformationResponseList-RL-AdditionFailureFDD,
    iE-Extensions
        ProtocolExtensionContainer { { Non-CombiningItem-RL-AdditionFailureFDD-ExtIEs } }
    OPTIONAL,
    ...
}

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

```

```

}

DCH-InformationResponseList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-AdditionFailureFDD

DCH-InformationResponseItem-RL-AdditionFailureFDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    bindingID             BindingID,
    transportLayerAddress TransportLayerAddress,
    iE-Extensions        ProtocolExtensionContainer { { DCH-InformationResponseList-RL-AdditionFailureFDD-ExtIEs} }
    OPTIONAL,
    ...
}

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

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

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

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

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

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

```

```

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

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

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

RadioLinkReconfigurationPrepareFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-NodeB-CommunicationContextID      CRITICALITY  reject          TYPE      NodeB-CommunicationContextID
    PRESENCE  mandatory } |
    { ID      id-UL-DPCH-Information-RL-ReconfPrepFDD  CRITICALITY  reject          TYPE      UL-DPCH-Information-RL-ReconfPrepFDD
    PRESENCE  optional } |
    { ID      id-DL-DPCH-Information-RL-ReconfPrepFDD  CRITICALITY  reject          TYPE      DL-DPCH-Information-RL-ReconfPrepFDD
    PRESENCE  optional } |
    { ID      id-DCH-ModifyList-RL-ReconfPrepFDD      CRITICALITY  reject          TYPE      DCH-ModifyList-RL-ReconfPrepFDD
    PRESENCE  optional } |
    { ID      id-DCH-AddList-RL-ReconfPrepFDD         CRITICALITY  reject          TYPE      DCH-AddList-RL-ReconfPrepFDD
    PRESENCE  optional } |
    { ID      id-DCH-DeleteList-RL-ReconfPrepFDD     CRITICALITY  reject          TYPE      DCH-DeleteList-RL-ReconfPrepFDD
    PRESENCE  optional } |
    { ID      id-DSCH-ModifyList-RL-ReconfPrepFDD    CRITICALITY  reject          TYPE      DSCH-ModifyList-RL-ReconfPrepFDD
    PRESENCE  optional } |
    { ID      id-DSCH-AddList-RL-ReconfPrepFDD       CRITICALITY  reject          TYPE      DSCH-AddList-RL-ReconfPrepFDD
    PRESENCE  optional } |
    { ID      id-DSCH-DeleteList-RL-ReconfPrepFDD    CRITICALITY  reject          TYPE      DSCH-DeleteList-RL-ReconfPrepFDD
    PRESENCE  optional } |
    { ID      id-RL-InformationList-RL-ReconfPrepFDD CRITICALITY  reject          TYPE      RL-InformationList-RL-ReconfPrepFDD
    PRESENCE  optional },
    ...
}

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

UL-DPCH-Information-RL-ReconfPrepFDD ::= SEQUENCE {
    ul-ScramblingCode      UL-ScramblingCode      OPTIONAL,
    ul-SIR-Target          UL-SIR                      OPTIONAL,
    minUL-ChannelisationCodeLength  MinUL-ChannelisationCodeLength  OPTIONAL,
    maxNrOfUL-DPDCHs      MaxNrOfUL-DPDCHs      OPTIONAL,
    -- This IE is present only if minUL-ChannelisationCodeLength equals to 4
    ul-PunctureLimit      PunctureLimit          OPTIONAL,
}

```

```

tFCS                                TFCS                                OPTIONAL,
ul-DPCH-SlotFormat                  UL-DPCH-SlotFormat              OPTIONAL,
sSDT-CellIDLength                   SSdT-CellID-Length             OPTIONAL,
s-FieldLength                       S-FieldLength                  OPTIONAL,
iE-Extensions                       ProtocolExtensionContainer { { UL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs } } OPTIONAL,
...
}

UL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}

DL-DPCH-Information-RL-ReconfPrepFDD ::= SEQUENCE {
tFCS                                TFCS                                OPTIONAL,
dl-DPCH-SlotFormat                  DL-DPCH-SlotFormat              OPTIONAL,
tFCI-SignallingMode                 TFCI-SignallingMode            OPTIONAL,
tFCI-Presence                       TFCI-Presence                  OPTIONAL,
-- This IE is only present if the DL DPCH Slot Format is equal to any of the value from 12 to 16
multiplexingPosition                MultiplexingPosition            OPTIONAL,
pDSCH-CodeMapping                   PDSCH-CodeMapping              OPTIONAL,
pDSCH-RL-ID                         RL-ID                          OPTIONAL,
iE-Extensions                       ProtocolExtensionContainer { { DL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs } } OPTIONAL,
...
}

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

DCH-ModifyList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifyItem-RL-ReconfPrepFDD

DCH-ModifyItem-RL-ReconfPrepFDD ::= 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,
iE-Extensions                       ProtocolExtensionContainer { { DCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs } } OPTIONAL,
...
}

DCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-AddList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-AddItem-RL-ReconfPrepFDD

DCH-AddItem-RL-ReconfPrepFDD ::= SEQUENCE {
dCH-ID                              DCH-ID,

```

```

dCH-CombinationIndication          DCH-CombinationInd          OPTIONAL,
limitedPowerIncrease                LimitedPowerIncrease,
ul-TransportFormatSet              TransportFormatSet,
dl-TransportFormatSet              TransportFormatSet,
frameHandlingPriority               FrameHandlingPriority,
payloadCRC-PresenceIndicator        PayloadCRC-PresenceIndicator,
ul-FP-Mode                          UL-FP-Mode,
qE-Selector                        QE-Selector,
toAWS                               ToAWS,
toAWE                               ToAWE,
iE-Extensions                       ProtocolExtensionContainer { { DCH-AddItem-RL-ReconfPrepFDD-ExtIEs } }    OPTIONAL,
...
}

DCH-AddItem-RL-ReconfPrepFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}

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

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

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

DSCH-ModifyList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF ProtocolIE-Container {{DSCH-ModifyItemIE-RL-ReconfPrepFDD }}

DSCH-ModifyItemIE-RL-ReconfPrepFDD NBAP-PROTOCOL-IES ::= {
{ ID      id-DSCH-ModifyItem-RL-ReconfPrepFDD      CRITICALITY reject      TYPE      DSCH-ModifyItem-RL-ReconfPrepFDD      PRESENCE      mandatory},
...
}

DSCH-ModifyItem-RL-ReconfPrepFDD ::= SEQUENCE {
dSCH-ID                             DSCH-ID,
dl-TransportFormatSet                TransportFormatSet          OPTIONAL,
frameHandlingPriority                 FrameHandlingPriority       OPTIONAL,
toAWS                                ToAWS                      OPTIONAL,
toAWE                                ToAWE                      OPTIONAL,
iE-Extensions                       ProtocolExtensionContainer { { DSCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs } }    OPTIONAL,
...
}

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

```

```

DSCH-AddList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF ProtocolIE-Container {{DSCH-AddItemIE-RL-ReconfPrepFDD }}

DSCH-AddItemIE-RL-ReconfPrepFDD NBAP-PROTOCOL-IES ::= {
  { ID      id-DSCH-AddItem-RL-ReconfPrepFDD      CRITICALITY reject      TYPE      DSCH-AddItem-RL-ReconfPrepFDD      PRESENCE      mandatory},
  ...
}

DSCH-AddItem-RL-ReconfPrepFDD ::= SEQUENCE {
  dSCH-ID          DSCH-ID,
  dl-TransportFormatSet      TransportFormatSet,
  frameHandlingPriority      FrameHandlingPriority,
  toAWS              ToAWS,
  toAWE              ToAWE,
  iE-Extensions      ProtocolExtensionContainer { { DSCH-AddItem-RL-ReconfPrepFDD-ExtIEs } }      OPTIONAL,
  ...
}

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

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

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

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

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

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

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

RL-InformationItem-RL-ReconfPrepFDD ::= SEQUENCE {
  rL-ID          RL-ID,
  dl-CodeInformationList      DL-CodeInformationList-RL-ReconfPrepFDD      OPTIONAL,
  maxDL-Power      DL-Power      OPTIONAL,
  minDL-Power      DL-Power      OPTIONAL,
}

```

```

sSDT-Indication                SSdT-Indication                OPTIONAL,
sSDT-Cell-Identity              SSdT-Cell-Identity              OPTIONAL,
-- The IE may be present if the SSdT Indication is set to SSdT Active in the UE
iE-Extensions                   ProtocolExtensionContainer { { RL-InformationItem-RL-ReconfPrepFDD-ExtIEs } } OPTIONAL,
...
}

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

DL-CodeInformationList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfDLCodes)) OF DL-CodeInformationItem-RL-ReconfPrepFDD

DL-CodeInformationItem-RL-ReconfPrepFDD ::= SEQUENCE {
dl-scramblingCode                DL-ScramblingCode                OPTIONAL,
fdd-DL-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber  OPTIONAL,
iE-Extensions                   ProtocolExtensionContainer { { DL-CodeInformationList-RL-ReconfPrepFDD-ExtIEs } }
OPTIONAL,
...
}

DL-CodeInformationList-RL-ReconfPrepFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}

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

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

RadioLinkReconfigurationPrepareTDD-IEs NBAP-PROTOCOL-IES ::= {
{ ID    id-NodeB-CommunicationContextID                CRITICALITY    reject    TYPE NodeB-CommunicationContextID
  PRESENCE    mandatory    } |
{ ID    id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD  CRITICALITY    reject    TYPE UL-CCTrCH-InformationList-RL-ReconfPrepTDD
  PRESENCE    optional    } |
{ ID    id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD  CRITICALITY    reject    TYPE DL-CCTrCH-InformationList-RL-ReconfPrepTDD
  PRESENCE    optional    } |
{ ID    id-DCH-ModifyList-RL-ReconfPrepTDD             CRITICALITY    reject    TYPE DCH-ModifyList-RL-ReconfPrepTDD
  PRESENCE    optional    } |
{ ID    id-DCH-AddList-RL-ReconfPrepTDD                CRITICALITY    reject    TYPE DCH-AddList-RL-ReconfPrepTDD
  PRESENCE    optional    } |
{ ID    id-DCH-DeleteList-RL-ReconfPrepTDD            CRITICALITY    reject    TYPE DCH-DeleteList-RL-ReconfPrepTDD
  PRESENCE    optional    } |

```

```

{ ID id-DSCH-Information-ModifyList-RL-ReconfPrepTDD CRITICALITY reject TYPE DSCH-Information-ModifyList-RL-ReconfPrepTDD
  PRESENCE optional } |
{ ID id-DSCH-information-AddList-RL-ReconfPrepTDD CRITICALITY reject TYPE DSCH-Information-AddList-RL-ReconfPrepTDD
  PRESENCE optional } |
{ ID id-DSCH-Information-DeleteList-RL-ReconfPrepTDD CRITICALITY reject TYPE DSCH-Information-DeleteList-RL-ReconfPrepTDD
  PRESENCE optional } |
{ ID id-USCH-Information-ModifyList-RL-ReconfPrepTDD CRITICALITY reject TYPE USCH-Information-ModifyList-RL-ReconfPrepTDD
  PRESENCE optional } |
{ ID id-USCH-information-AddList-RL-ReconfPrepTDD CRITICALITY reject TYPE USCH-Information-AddList-RL-ReconfPrepTDD
  PRESENCE optional } |
{ ID id-USCH-Information-DeleteList-RL-ReconfPrepTDD CRITICALITY reject TYPE USCH-Information-DeleteList-RL-ReconfPrepTDD
  PRESENCE optional } |
{ ID id-RL-Information-RL-ReconfPrepTDD CRITICALITY reject TYPE RL-Information-RL-ReconfPrepTDD
  PRESENCE optional },
...
}

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

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

UL-CCTrCH-InformationItem-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID CCTrCH-ID,
  tFCS TFCS OPTIONAL,
  tFCI-Coding TFCI-Coding OPTIONAL,
  punctureLimit PunctureLimit OPTIONAL,
  ul-DPCH-InformationList UL-DPCH-InformationList-RL-ReconfPrepTDD OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { UL-CCTrCH-InformationItem-RL-ReconfPrepTDD-ExtIEs } } OPTIONAL,
...
}

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

UL-DPCH-InformationList-RL-ReconfPrepTDD ::= ProtocolIE-Container {{ UL-DPCH-InformationListIEs-RL-ReconfPrepTDD }}

UL-DPCH-InformationListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
  { ID id-UL-DPCH-InformationListIE-RL-ReconfPrepTDD CRITICALITY reject TYPE UL-DPCH-InformationListIE-RL-ReconfPrepTDD PRESENCE
  mandatory },
...
}

UL-DPCH-InformationListIE-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-InformationItem-RL-ReconfPrepTDD

UL-DPCH-InformationItem-RL-ReconfPrepTDD ::= 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,
iE-Extensions           ProtocolExtensionContainer { { UL-DPCH-InformationItem-RL-ReconfPrepTDD-ExtIEs } } OPTIONAL,
...
}

UL-DPCH-InformationItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}

DL-CCTrCH-InformationList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationItem-RL-ReconfPrepTDD

DL-CCTrCH-InformationItem-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID              CCTrCH-ID,
  tFCS                   TFCS                OPTIONAL,
  tFCI-Coding            TFCI-Coding            OPTIONAL,
  punctureLimit          PunctureLimit          OPTIONAL,
  dl-DPCH-InformationList  DL-DPCH-InformationList-RL-ReconfPrepTDD  OPTIONAL,
  iE-Extensions           ProtocolExtensionContainer { { DL-CCTrCH-InformationItem-RL-ReconfPrepTDD-ExtIEs } }
  OPTIONAL,
  ...
}

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

DL-DPCH-InformationList-RL-ReconfPrepTDD ::= ProtocolIE-Container {{ DL-DPCH-InformationListIEs-RL-ReconfPrepTDD }}

DL-DPCH-InformationListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
  { ID id-DL-DPCH-InformationListIE-RL-ReconfPrepTDD  CRITICALITY reject  TYPE DL-DPCH-InformationListIE-RL-ReconfPrepTDD  PRESENCE
  mandatory },
  ...
}

DL-DPCH-InformationListIE-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-InformationItem-RL-ReconfPrepTDD

DL-DPCH-InformationItem-RL-ReconfPrepTDD ::= 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,
  rpetitionLength         RepetitionLength    OPTIONAL,
  tFCI-Presence           TFCI-Presence        OPTIONAL,

```

```

    iE-Extensions          ProtocolExtensionContainer { { DL-DPCH-InformationItem-RL-ReconfPrepTDD-ExtIEs } }      OPTIONAL,
    ...
}

DL-DPCH-InformationItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifyItem-RL-ReconfPrepTDD

DCH-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    ul-cCTrCH-ID          CCTrCH-ID                OPTIONAL,
    dl-cCTrCH-ID          CCTrCH-ID                OPTIONAL,
    ul-TransportFormatSet TransportFormatSet        OPTIONAL,
    dl-TransportFormatSet TransportFormatSet        OPTIONAL,
    frameHandlingPriority FrameHandlingPriority     OPTIONAL,
    ul-FP-Mode            UL-FP-Mode                OPTIONAL,
    toAWS                 ToAWS                    OPTIONAL,
    toAWE                 ToAWE                    OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { { DCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs } }      OPTIONAL,
    ...
}

DCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-AddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-AddItem-RL-ReconfPrepTDD

DCH-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    limitedPowerIncrease  LimitedPowerIncrease,
    ul-CCTrCH-ID          CCTrCH-ID,
    dl-CCTrCH-ID          CCTrCH-ID,
    dCH-CombinationIndication DCH-CombinationInd  OPTIONAL,
    ul-TransportFormatSet TransportFormatSet,
    dl-TransportFormatSet TransportFormatSet,
    frameHandlingPriority FrameHandlingPriority,
    payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
    ul-FP-Mode            UL-FP-Mode,
    toAWS                 ToAWS,
    toAWE                 ToAWE,
    iE-Extensions          ProtocolExtensionContainer { { DCH-AddItem-RL-ReconfPrepTDD-ExtIEs } }      OPTIONAL,
    ...
}

DCH-AddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

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

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

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

DSCH-Information-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-Information-ModifyItem-RL-ReconfPrepTDD

```
DSCH-Information-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dSCH-ID                DSCH-ID,
    cCTrCH-ID              CCTrCH-ID                OPTIONAL,
    transportFormatSet     TransportFormatSet        OPTIONAL,
    frameHandlingPriority   FrameHandlingPriority    OPTIONAL,
    toAWS                  ToAWS                    OPTIONAL,
    toAWE                  ToAWE                    OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { { DSCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }      OPTIONAL,
    ...
}
```

```
DSCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

DSCH-Information-AddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-Information-AddItem-RL-ReconfPrepTDD

```
DSCH-Information-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dSCH-ID                DSCH-ID,
    cCTrCH-ID              CCTrCH-ID,
    transportFormatSet     TransportFormatSet,
    frameHandlingPriority   FrameHandlingPriority    OPTIONAL,
    toAWS                  ToAWS,
    toAWE                  ToAWE,
    iE-Extensions         ProtocolExtensionContainer { { DSCH-Information-AddItem-RL-ReconfPrepTDD-ExtIEs} }      OPTIONAL,
    ...
}
```

```
DSCH-Information-AddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

DSCH-Information-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-Information-DeleteItem-RL-ReconfPrepTDD

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

```

}
...
}
DSCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}
USCH-Information-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-Information-ModifyItem-RL-ReconfPrepTDD
USCH-Information-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    uSCH-ID                USCH-ID,
    transportFormatSet     TransportFormatSet     OPTIONAL,
    cCTrCH-ID              CCTrCH-ID              OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { { USCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }     OPTIONAL,
    ...
}
USCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}
USCH-Information-AddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-Information-AddItem-RL-ReconfPrepTDD
USCH-Information-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    uSCH-ID                USCH-ID,
    cCTrCH-ID              CCTrCH-ID,
    transportFormatSet     TransportFormatSet,
    iE-Extensions          ProtocolExtensionContainer { { USCH-Information-AddItem-RL-ReconfPrepTDD-ExtIEs} }     OPTIONAL,
    ...
}
USCH-Information-AddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}
USCH-Information-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-Information-DeleteItem-RL-ReconfPrepTDD
USCH-Information-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    uSCH-ID                USCH-ID,
    iE-Extensions          ProtocolExtensionContainer { { USCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }     OPTIONAL,
    ...
}
USCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}
RL-Information-RL-ReconfPrepTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    maxDL-Power          DL-Power                OPTIONAL,

```

```

minDL-Power          DL-Power          OPTIONAL,
iE-Extensions        ProtocolExtensionContainer { { RL-Information-RL-ReconfPrepTDD-ExtIEs } }    OPTIONAL,
...
}

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

-- *****
--
-- RADIO LINK RECONFIGURATION READY
--
-- *****

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

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

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

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

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

RL-InformationResponseItem-RL-ReconfReady ::= SEQUENCE {
  rL-ID          RL-ID,
  dCH-AddList-RL-ReconfReady  DCH-AddList-RL-ReconfReady          OPTIONAL,
  dCH-ModifyList-RL-ReconfReady  DCH-ModifyList-RL-ReconfReady          OPTIONAL,
  dSCH-SetupList-RL-ReconfReady  DSCH-SetupList-RL-ReconfReady          OPTIONAL,
  dSCH-ModifyList-RL-ReconfReady  DSCH-ModifyList-RL-ReconfReady          OPTIONAL,
  uSCH-SetupList-RL-ReconfReady  USCH-SetupList-RL-ReconfReady          OPTIONAL,
}

```

```

    uSCH-ModifyList-RL-ReconfReady
    iE-Extensions
    ...
}

RL-InformationResponseItem-RL-ReconfReady-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-AddList-RL-ReconfReady ::= ProtocolIE-Container {{ DCH-AddListIEs-RL-ReconfReady }}

DCH-AddListIEs-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
    { ID id-DCH-AddListIE-RL-ReconfReady  CRITICALITY ignore  TYPE DCH-AddListIE-RL-ReconfReady  PRESENCE mandatory },
    ...
}

DCH-AddListIE-RL-ReconfReady ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-AddItem-RL-ReconfReady

DCH-AddItem-RL-ReconfReady ::= SEQUENCE {
    dCH-ID                DCH-ID,
    bindingID             BindingID,
    transportLayerAddress TransportLayerAddress,
    iE-Extensions        ProtocolExtensionContainer { { DCH-AddItem-RL-ReconfReady-ExtIEs} }      OPTIONAL,
    ...
}

DCH-AddItem-RL-ReconfReady-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifyList-RL-ReconfReady ::= ProtocolIE-Container {{ DCH-ModifyListIEs-RL-ReconfReady }}

DCH-ModifyListIEs-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
    { ID id-DCH-ModifyListIE-RL-ReconfReady  CRITICALITY ignore  TYPE DCH-ModifyListIE-RL-ReconfReady  PRESENCE mandatory },
    ...
}

DCH-ModifyListIE-RL-ReconfReady ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifyItem-RL-ReconfReady

DCH-ModifyItem-RL-ReconfReady ::= SEQUENCE {
    dCH-ID                DCH-ID,
    bindingID             BindingID,
    transportLayerAddress TransportLayerAddress,
    iE-Extensions        ProtocolExtensionContainer { { DCH-ModifyItem-RL-ReconfReady-ExtIEs} }      OPTIONAL,
    ...
}

DCH-ModifyItem-RL-ReconfReady-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

DSCH-SetupList-RL-ReconfReady ::= ProtocolIE-Container {{ DSCH-SetupListIEs-RL-ReconfReady }}

DSCH-SetupListIEs-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
  { ID id-DSCH-SetupListIE-RL-ReconfReady  CRITICALITY ignore  TYPE DSCH-SetupListIE-RL-ReconfReady  PRESENCE mandatory },
  ...
}

DSCH-SetupListIE-RL-ReconfReady ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-SetupItem-RL-ReconfReady

DSCH-SetupItem-RL-ReconfReady ::= SEQUENCE {
  dSCH-ID                DSCH-ID,
  bindingID              BindingID,
  transportLayerAddress  TransportLayerAddress,
  iE-Extensions          ProtocolExtensionContainer { { DSCH-SetupItem-RL-ReconfReady-ExtIEs} }  OPTIONAL,
  ...
}

DSCH-SetupItem-RL-ReconfReady-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DSCH-ModifyList-RL-ReconfReady ::= ProtocolIE-Container {{ DSCH-ModifyListIEs-RL-ReconfReady }}

DSCH-ModifyListIEs-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
  { ID id-DSCH-ModifyListIE-RL-ReconfReady  CRITICALITY ignore  TYPE DSCH-ModifyListIE-RL-ReconfReady  PRESENCE mandatory },
  ...
}

DSCH-ModifyListIE-RL-ReconfReady ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-ModifyItem-RL-ReconfReady

DSCH-ModifyItem-RL-ReconfReady ::= SEQUENCE {
  dSCH-ID                DSCH-ID,
  bindingID              BindingID,
  transportLayerAddress  TransportLayerAddress,
  iE-Extensions          ProtocolExtensionContainer { { DSCH-ModifyItem-RL-ReconfReady-ExtIEs} }  OPTIONAL,
  ...
}

DSCH-ModifyItem-RL-ReconfReady-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

USCH-SetupList-RL-ReconfReady ::= ProtocolIE-Container {{ USCH-SetupListIEs-RL-ReconfReady }}

USCH-SetupListIEs-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
  { ID id-USCH-SetupListIE-RL-ReconfReady  CRITICALITY ignore  TYPE USCH-SetupListIE-RL-ReconfReady  PRESENCE mandatory },
  ...
}

USCH-SetupListIE-RL-ReconfReady ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-SetupItem-RL-ReconfReady

```

```

USCH-SetupItem-RL-ReconfReady ::= SEQUENCE {
    uSCH-ID                USCH-ID,
    bindingID              BindingID,
    transportLayerAddress  TransportLayerAddress,
    iE-Extensions          ProtocolExtensionContainer { { USCH-SetupItem-RL-ReconfReady-ExtIEs} }      OPTIONAL,
    ...
}

USCH-SetupItem-RL-ReconfReady-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCH-ModifyList-RL-ReconfReady ::= ProtocolIE-Container {{ USCH-ModifyListIEs-RL-ReconfReady }}

USCH-ModifyListIEs-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
    { ID id-USCH-ModifyListIE-RL-ReconfReady  CRITICALITY ignore  TYPE USCH-ModifyListIE-RL-ReconfReady  PRESENCE mandatory },
    ...
}

USCH-ModifyListIE-RL-ReconfReady ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-ModifyItem-RL-ReconfReady

USCH-ModifyItem-RL-ReconfReady ::= SEQUENCE {
    uSCH-ID                USCH-ID,
    bindingID              BindingID,
    transportLayerAddress  TransportLayerAddress,
    iE-Extensions          ProtocolExtensionContainer { { USCH-ModifyItem-RL-ReconfReady-ExtIEs} }      OPTIONAL,
    ...
}

USCH-ModifyItem-RL-ReconfReady-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- 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-ReconfFailure  CRITICALITY  ignore  TYPE  RL-ReconfigurationFailureList-RL-ReconfFailure
  PRESENCE optional } |
{ ID      id-CriticalityDiagnostics  CRITICALITY  ignore  TYPE  CriticalityDiagnostics
  PRESENCE optional },
...
}

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

RL-ReconfigurationFailureList-RL-ReconfFailure ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Container {{ RL-ReconfigurationFailureItemIE-RL-
ReconfFailure}}

RL-ReconfigurationFailureItemIE-RL-ReconfFailure NBAP-PROTOCOL-IES ::= {
  { ID      id-RL-ReconfigurationFailureItem-RL-ReconfFailure  CRITICALITY  ignore  TYPE  RL-ReconfigurationFailureItem-RL-
ReconfFailure  PRESENCE  mandatory},
  ...
}

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

RL-ReconfigurationFailureItem-RL-ReconfFailure-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- RADIO LINK RECONFIGURATION COMMIT
--
-- *****

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

RadioLinkReconfigurationCommit-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-NodeB-CommunicationContextID  CRITICALITY  ignore  TYPE  NodeB-CommunicationContextID  PRESENCE  mandatory } |
  { ID      id-CFN  CRITICALITY  ignore  TYPE  CFN  PRESENCE  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   reject          TYPE      NodeB-CommunicationContextID      PRESENCE
    mandatory  } |
    { ID      id-UL-DPCH-Information-RL-ReconfRqstFDD      CRITICALITY   reject          TYPE      UL-DPCH-Information-RL-ReconfRqstFDD
    PRESENCE   optional  } |
    { ID      id-DL-DPCH-Information-RL-ReconfRqstFDD      CRITICALITY   reject          TYPE      DL-DPCH-Information-RL-ReconfRqstFDD
    PRESENCE   optional  } |
    { ID      id-DCH-ModifyList-RL-ReconfRqstFDD      CRITICALITY   reject          TYPE      DCH-ModifyList-RL-ReconfRqstFDD
    PRESENCE   optional  } |
    { ID      id-DCH-AddList-RL-ReconfRqstFDD      CRITICALITY   reject          TYPE      DCH-AddList-RL-ReconfRqstFDD
    PRESENCE   optional  } |
    { ID      id-DCH-DeleteList-RL-ReconfRqstFDD      CRITICALITY   reject          TYPE      DCH-DeleteList-RL-ReconfRqstFDD
    PRESENCE   optional  } |
}

```

```

{ ID      id-DSCH-ModifyList-RL-ReconfRqstFDD      CRITICALITY  reject      TYPE      DSCH-ModifyList-RL-ReconfRqstFDD
  PRESENCE optional } |
{ ID      id-DSCH-AddList-RL-ReconfRqstFDD         CRITICALITY  reject      TYPE      DSCH-AddList-RL-ReconfRqstFDD
  PRESENCE optional } |
{ ID      id-DSCH-DeleteList-RL-ReconfRqstFDD     CRITICALITY  reject      TYPE      DSCH-DeleteList-RL-ReconfRqstFDD
  PRESENCE optional } |
{ ID      id-RL-InformationList-RL-ReconfRqstFDD  CRITICALITY  reject      TYPE      RL-InformationList-RL-ReconfRqstFDD
  PRESENCE optional },
...
}

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

UL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
  ul-TFCS                TFCS                OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { { UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs } }  OPTIONAL,
  ...
}

UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

DL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
  dl-TFCS                TFCS                OPTIONAL,
  tFCI-SignallingMode    TFCI-SignallingMode    OPTIONAL,
  pDSCH-CodeMapping      PDSCH-CodeMapping      OPTIONAL,
  pDSCH-RL-ID            RL-ID                OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { { DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs } }  OPTIONAL,
  ...
}

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

DCH-ModifyList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifyItem-RL-ReconfRqstFDD

DCH-ModifyItem-RL-ReconfRqstFDD ::= 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,
  iE-Extensions          ProtocolExtensionContainer { { DCH-ModifyItem-RL-ReconfRqstFDD-ExtIEs } }  OPTIONAL,
}

```

```

...
}
DCH-ModifyItem-RL-ReconfRqstFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}
DCH-AddList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-AddItem-RL-ReconfRqstFDD
DCH-AddItem-RL-ReconfRqstFDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    dCH-CombinationInd    DCH-CombinationInd          OPTIONAL,
    limitedPowerIncrease  LimitedPowerIncrease,
    ul-TransportFormatSet TransportFormatSet,
    dl-TransportFormatSet TransportFormatSet,
    frameHandlingPriority FrameHandlingPriority,
    payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
    ul-FP-Mode            UL-FP-Mode,
    qE-Selector           QE-Selector,
    toAWS                 ToAWS,
    toAWE                 ToAWE,
    iE-Extensions        ProtocolExtensionContainer { { DCH-Add-RL-ReconfRqstFDDItem-ExtIEs } }    OPTIONAL,
    ...
}
DCH-Add-RL-ReconfRqstFDDItem-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}
DCH-DeleteList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfRqstFDD
DCH-DeleteItem-RL-ReconfRqstFDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    iE-Extensions        ProtocolExtensionContainer { { DCH-DeleteItem-RL-ReconfRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}
DCH-DeleteItem-RL-ReconfRqstFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}
DSCH-ModifyList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF ProtocolIE-Container {{DSCH-ModifyItemIE-RL-ReconfRqstFDD }}
DSCH-ModifyItemIE-RL-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-DSCH-ModifyItem-RL-ReconfRqstFDD      CRITICALITY reject      TYPE      DSCH-ModifyItem-RL-ReconfRqstFDD      PRESENCE      mandatory},
    ...
}
DSCH-ModifyItem-RL-ReconfRqstFDD ::= SEQUENCE {

```

```

    dSCH-ID
    dl-TransportFormatSet
    frameHandlingPriority
    toAWS
    toAWE
    iE-Extensions
    ...
}

DSCH-ModifyItem-RL-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-AddList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF ProtocolIE-Container {{DSCH-AddItemIE-RL-ReconfRqstFDD }}

DSCH-AddItemIE-RL-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-DSCH-AddItem-RL-ReconfRqstFDD CRITICALITY reject TYPE DSCH-AddItem-RL-ReconfRqstFDD PRESENCE mandatory},
    ...
}

DSCH-AddItem-RL-ReconfRqstFDD ::= SEQUENCE {
    dSCH-ID
    dl-TransportFormatSet
    frameHandlingPriority
    toAWS
    toAWE
    iE-Extensions
    ...
}

DSCH-AddItem-RL-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

DSCH-DeleteItem-RL-ReconfRqstFDD ::= SEQUENCE {
    dSCH-ID
    iE-Extensions
    ...
}

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

```

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

```
RL-InformationItemIE-RL-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
  { ID      id-RL-InformationItem-RL-ReconfRqstFDD      CRITICALITY    reject      TYPE RL-InformationItem-RL-ReconfRqstFDD
    PRESENCE  mandatory},
  ...
}
```

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

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

```
-- *****
--
-- RADIO LINK RECONFIGURATION REQUEST TDD
--
-- *****
```

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

```
RadioLinkReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-NodeB-CommunicationContextID      CRITICALITY    reject      TYPE NodeB-CommunicationContextID
    PRESENCE  mandatory } |
  { ID      id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD      CRITICALITY    notify      TYPE UL-CCTrCH-InformationList-RL-ReconfRqstTDD
    PRESENCE  optional } |
  { ID      id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD      CRITICALITY    notify      TYPE DL-CCTrCH-InformationList-RL-ReconfRqstTDD
    PRESENCE  optional } |
  { ID      id-DCH-ModifyList-RL-ReconfRqstTDD      CRITICALITY    reject      TYPE DCH-ModifyList-RL-ReconfRqstTDD
    PRESENCE  optional } |
  { ID      id-DCH-AddList-RL-ReconfRqstTDD      CRITICALITY    reject      TYPE DCH-AddList-RL-ReconfRqstTDD
    PRESENCE  optional } |
  { ID      id-DCH-DeleteList-RL-ReconfRqstTDD      CRITICALITY    reject      TYPE DCH-DeleteList-RL-ReconfRqstTDD
    PRESENCE  optional } |
  { ID      id-DSCH-Information-ModifyList-RL-ReconfRqstTDD      CRITICALITY    reject      TYPE DSCH-Information-ModifyList-RL-ReconfRqstTDD
    PRESENCE  optional } |
  { ID      id-DSCH-Information-AddList-RL-ReconfRqstTDD      CRITICALITY    reject      TYPE DSCH-Information-AddList-RL-ReconfRqstTDD
    PRESENCE  optional } |
}
```

```

{ ID id-DSCH-Information-DeleteList-RL-ReconfRqstTDD CRITICALITY reject TYPE DSCH-Information-DeleteList-RL-ReconfRqstTDD
  PRESENCE optional } |
{ ID id-USCH-Information-ModifyList-RL-ReconfRqstTDD CRITICALITY reject TYPE USCH-Information-ModifyList-RL-ReconfRqstTDD
  PRESENCE optional } |
{ ID id-USCH-Information-AddList-RL-ReconfRqstTDD CRITICALITY reject TYPE USCH-Information-AddList-RL-ReconfRqstTDD
  PRESENCE optional } |
{ ID id-USCH-Information-DeleteList-RL-ReconfRqstTDD CRITICALITY reject TYPE USCH-Information-DeleteList-RL-ReconfRqstTDD
  PRESENCE optional } |
{ ID id-RL-Information-RL-ReconfRqstTDD CRITICALITY ignore TYPE RL-Information-RL-ReconfRqstTDD
  PRESENCE optional },
...
}

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

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

UL-CCTrCH-InformationItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-InformationItem-RL-ReconfRqstTDD CRITICALITY notify TYPE UL-CCTrCH-InformationItem-RL-ReconfRqstTDD
    PRESENCE mandatory},
  ...
}

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

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

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

DL-CCTrCH-InformationItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationItem-RL-ReconfRqstTDD CRITICALITY notify TYPE DL-CCTrCH-InformationItem-RL-ReconfRqstTDD
    PRESENCE mandatory},
  ...
}

DL-CCTrCH-InformationItem-RL-ReconfRqstTDD ::= SEQUENCE {
  cCTrCH-ID CCTrCH-ID,
  tFCS TFCS OPTIONAL,

```

```

    punctureLimit
    iE-Extensions
    OPTIONAL,
    ...
}

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

DCH-ModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifyItem-RL-ReconfRqstTDD

DCH-ModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
    dCH-ID
    ul-CCTrCH-ID
    dl-CCTrCH-ID
    ul-TransportFormatSet
    dl-TransportFormatSet
    frameHandlingPriority
    ul-FP-Mode
    toAWS
    toAWE
    iE-Extensions
    ...
    DCH-ID,
    CCTrCH-ID
    CCTrCH-ID
    TransportFormatSet
    TransportFormatSet
    FrameHandlingPriority
    UL-FP-Mode
    ToAWS
    ToAWE
    ProtocolExtensionContainer { { DCH-ModifyItem-RL-ReconfRqstTDD-ExtIEs } }
    OPTIONAL,
}

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

DCH-AddList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-AddItem-RL-ReconfRqstTDD

DCH-AddItem-RL-ReconfRqstTDD ::= SEQUENCE {
    dCH-ID
    limitedPowerIncrease
    ul-CCTrCH-ID
    dl-CCTrCH-ID
    dCH-CombinaionInd
    ul-TransportFormatSet
    dl-TransportFormatSet
    frameHandlingPriority
    payloadCRC-PresenceIndicator
    ul-FP-Mode
    toAWS
    toAWE
    iE-Extensions
    ...
    DCH-ID,
    LimitedPowerIncrease,
    CCTrCH-ID,
    CCTrCH-ID,
    DCH-CombinationInd
    OPTIONAL,
    TransportFormatSet,
    TransportFormatSet,
    FrameHandlingPriority,
    PayloadCRC-PresenceIndicator,
    UL-FP-Mode,
    ToAWS,
    ToAWE,
    ProtocolExtensionContainer { { DCH-AddItem-RL-ReconfRqstTDD-ExtIEs } }
    OPTIONAL,
}

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

```



```

}

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

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

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

DSCH-Information-ModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-Information-ModifyItem-RL-ReconfRqstTDD

DSCH-Information-ModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
    dSCH-ID                DSCH-ID,
    cCTrCH-ID              CCTrCH-ID                OPTIONAL,
    transportFormatSet     TransportFormatSet        OPTIONAL,
    frameHandlingPriority   FrameHandlingPriority   OPTIONAL,
    toAWS                  ToAWS                    OPTIONAL,
    toAWE                  ToAWE                    OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { { DSCH-Information-ModifyItem-RL-ReconfRqstTDD-ExtIEs } }
    OPTIONAL,
    ...
}

DSCH-Information-ModifyItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-Information-AddList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-Information-AddItem-RL-ReconfRqstTDD

DSCH-Information-AddItem-RL-ReconfRqstTDD ::= SEQUENCE {
    dSCH-ID                DSCH-ID,
    cCTrCH-ID              CCTrCH-ID,
    transportFormatSet     TransportFormatSet,
    frameHandlingPriority   FrameHandlingPriority   OPTIONAL,
    toAWS                  ToAWS,
    toAWE                  ToAWE,
    iE-Extensions         ProtocolExtensionContainer { { DSCH-Information-AddItem-RL-ReconfRqstTDD-ExtIEs } }      OPTIONAL,
    ...
}

DSCH-Information-AddItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-Information-DeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-Information-DeleteItem-RL-ReconfRqstTDD

```

```

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

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

USCH-Information-ModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-Information-ModifyItem-RL-ReconfRqstTDD

USCH-Information-ModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
    uSCH-ID                USCH-ID,
    cTrCH-ID              CCTrCH-ID                OPTIONAL,
    transportFormatSet    TransportFormatSet        OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { { USCH-Information-ModifyItem-RL-ReconfRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

USCH-Information-ModifyItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCH-Information-AddList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-Information-AddItem-RL-ReconfRqstTDD

USCH-Information-AddItem-RL-ReconfRqstTDD ::= SEQUENCE {
    uSCH-ID                USCH-ID,
    cTrCH-ID              CCTrCH-ID,
    transportFormatSet    TransportFormatSet,
    iE-Extensions          ProtocolExtensionContainer { { USCH-Information-AddItem-RL-ReconfRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

USCH-Information-AddItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCH-Information-DeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-Information-DeleteItem-RL-ReconfRqstTDD

USCH-Information-DeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    uSCH-ID                USCH-ID,
    iE-Extensions          ProtocolExtensionContainer { { USCH-Information-DeleteItem-RL-ReconfRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

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

```

```

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

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

-- *****
--
-- RADIO LINK RECONFIGURATION RESPONSE
--
-- *****

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

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

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

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

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

RL-InformationResponseItem-RL-ReconfRsp ::= SEQUENCE {
    rL-ID                               RL-ID,
    dCH-AddList-RL-ReconfRsp            DCH-AddList-RL-ReconfRsp           OPTIONAL,
    dCH-ModifyList-RL-ReconfRsp         DCH-ModifyList-RL-ReconfRsp        OPTIONAL,
    dSCH-SetupList-RL-ReconfRsp         DSCH-SetupList-RL-ReconfRsp        OPTIONAL,
}

```

```

dSCH-ModifyList-RL-ReconfRsp      DSCH-ModifyList-RL-ReconfRsp      OPTIONAL,
uSCH-SetupList-RL-ReconfRsp        USCH-SetupList-RL-ReconfRsp        OPTIONAL,
uSCH-ModifyList-RL-ReconfRsp      USCH-ModifyList-RL-ReconfRsp      OPTIONAL,
iE-Extensions                      ProtocolExtensionContainer { { RL-InformationResponseItem-RL-ReconfRsp-ExtIEs } }      OPTIONAL,
...
}

RL-InformationResponseItem-RL-ReconfRsp-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-AddList-RL-ReconfRsp ::= ProtocolIE-Container {{ DCH-AddListIEs-RL-ReconfRsp }}

DCH-AddListIEs-RL-ReconfRsp NBAP-PROTOCOL-IES ::= {
{ ID id-DCH-AddListIE-RL-ReconfRsp  CRITICALITY ignore TYPE DCH-AddListIE-RL-ReconfRsp      PRESENCE mandatory },
...
}

DCH-AddListIE-RL-ReconfRsp ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-AddItem-RL-ReconfRsp

DCH-AddItem-RL-ReconfRsp ::= SEQUENCE {
dCH-ID                                DCH-ID,
bindingID                             BindingID,
transportLayerAddress                 TransportLayerAddress,
iE-Extensions                         ProtocolExtensionContainer { { DCH-AddItem-RL-ReconfRsp-ExtIEs } }      OPTIONAL,
...
}

DCH-AddItem-RL-ReconfRsp-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-ModifyList-RL-ReconfRsp ::= ProtocolIE-Container {{ DCH-ModifyIEs-RL-ReconfRsp }}

DCH-ModifyIEs-RL-ReconfRsp NBAP-PROTOCOL-IES ::= {
{ ID id-DCH-ModifyListIE-RL-ReconfRsp  CRITICALITY ignore TYPE DCH-ModifyListIE-RL-ReconfRsp      PRESENCE mandatory },
...
}

DCH-ModifyListIE-RL-ReconfRsp ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifyItem-RL-ReconfRsp

DCH-ModifyItem-RL-ReconfRsp ::= SEQUENCE {
dCH-ID                                DCH-ID,
bindingID                             BindingID,
transportLayerAddress                 TransportLayerAddress,
iE-Extensions                         ProtocolExtensionContainer { { DCH-ModifyItem-RL-ReconfRsp-ExtIEs } }      OPTIONAL,
...
}

DCH-ModifyItem-RL-ReconfRsp-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

}

DSCH-SetupList-RL-ReconfRsp ::= ProtocolIE-Container {{ DSCH-SetupListIEs-RL-ReconfRsp }}

DSCH-SetupListIEs-RL-ReconfRsp NBAP-PROTOCOL-IES ::= {
  { ID id-DSCH-SetupListIE-RL-ReconfRsp  CRITICALITY ignore  TYPE DSCH-SetupListIE-RL-ReconfRsp  PRESENCE mandatory },
  ...
}

DSCH-SetupListIE-RL-ReconfRsp ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-SetupItem-RL-ReconfRsp

DSCH-SetupItem-RL-ReconfRsp ::= SEQUENCE {
  dSCH-ID                DSCH-ID,
  bindingID              BindingID,
  transportLayerAddress  TransportLayerAddress,
  iE-Extensions          ProtocolExtensionContainer { { DSCH-SetupItem-RL-ReconfRsp-ExtIEs} }  OPTIONAL,
  ...
}

DSCH-SetupItem-RL-ReconfRsp-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DSCH-ModifyList-RL-ReconfRsp ::= ProtocolIE-Container {{ DSCH-ModifyListIEs-RL-ReconfRsp }}

DSCH-ModifyListIEs-RL-ReconfRsp NBAP-PROTOCOL-IES ::= {
  { ID id-DSCH-ModifyListIE-RL-ReconfRsp  CRITICALITY ignore  TYPE DSCH-ModifyListIE-RL-ReconfRsp  PRESENCE mandatory },
  ...
}

DSCH-ModifyListIE-RL-ReconfRsp ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-ModifyItem-RL-ReconfRsp

DSCH-ModifyItem-RL-ReconfRsp ::= SEQUENCE {
  dSCH-ID                DSCH-ID,
  bindingID              BindingID,
  transportLayerAddress  TransportLayerAddress,
  iE-Extensions          ProtocolExtensionContainer { { DSCH-ModifyItem-RL-ReconfRsp-ExtIEs} }  OPTIONAL,
  ...
}

DSCH-ModifyItem-RL-ReconfRsp-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

USCH-SetupList-RL-ReconfRsp ::= ProtocolIE-Container {{ USCH-SetupListIEs-RL-ReconfRsp }}

USCH-SetupListIEs-RL-ReconfRsp NBAP-PROTOCOL-IES ::= {
  { ID id-USCH-SetupListIE-RL-ReconfRsp  CRITICALITY ignore  TYPE USCH-SetupListIE-RL-ReconfRsp  PRESENCE mandatory },
  ...
}

```

```

USCH-SetupListIE-RL-ReconfRsp ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-SetupItem-RL-ReconfRsp

USCH-SetupItem-RL-ReconfRsp ::= SEQUENCE {
    uSCH-ID                USCH-ID,
    bindingID              BindingID,
    transportLayerAddress TransportLayerAddress,
    iE-Extensions          ProtocolExtensionContainer { { USCH-SetupItem-RL-ReconfRsp-ExtIEs} } OPTIONAL,
    ...
}

USCH-SetupItem-RL-ReconfRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCH-ModifyList-RL-ReconfRsp ::= ProtocolIE-Container {{ USCH-ModifyListIEs-RL-ReconfRsp }}

USCH-ModifyListIEs-RL-ReconfRsp NBAP-PROTOCOL-IES ::= {
    { ID id-USCH-ModifyListIE-RL-ReconfRsp CRITICALITY ignore TYPE USCH-ModifyListIE-RL-ReconfRsp PRESENCE mandatory },
    ...
}

USCH-ModifyListIE-RL-ReconfRsp ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-ModifyItem-RL-ReconfRsp

USCH-ModifyItem-RL-ReconfRsp ::= SEQUENCE {
    uSCH-ID                USCH-ID,
    bindingID              BindingID,
    transportLayerAddress TransportLayerAddress,
    iE-Extensions          ProtocolExtensionContainer { { USCH-ModifyItem-RL-ReconfRsp-ExtIEs} } OPTIONAL,
    ...
}

USCH-ModifyItem-RL-ReconfRsp-ExtIEs 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 reject TYPE NodeB-CommunicationContextID
    PRESENCE mandatory } |

```

```

    { ID      id-RL-informationList-RL-DeletionRqst          CRITICALITY    notify          TYPE      RL-informationList-RL-DeletionRqst
      PRESENCE    mandatory          } ,
    ...
}

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

RL-informationList-RL-DeletionRqst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Container {{RL-informationItemIE-RL-DeletionRqst}}

RL-informationItemIE-RL-DeletionRqst NBAP-PROTOCOL-IES ::= {
    { ID      id-RL-informationItem-RL-DeletionRqst          CRITICALITY    notify          TYPE      RL-informationItem-RL-DeletionRqst
      PRESENCE    mandatory},
    ...
}

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

RL-informationItem-RL-DeletionRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK DELETION RESPONSE
--
-- *****

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

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

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

```

```

-- *****
--
-- DL POWER CONTROL REQUEST FDD
--
-- *****

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

DL-PowerControlRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-NodeB-CommunicationContextID          CRITICALITY ignore          TYPE          NodeB-CommunicationContextID          PRESENCE          mandatory
    } |
    { ID id-PowerAdjustmentType                  CRITICALITY ignore          TYPE          PowerAdjustmentType          PRESENCE          mandatory } |
    { ID id-DLReferencePower                    CRITICALITY ignore          TYPE          DL-Power                    PRESENCE          conditional } |
    -- This IE is present only 'Adjustment Type' equals to 'Common'
    { ID id-DLReferencePowerList-DL-PC-Rqst      CRITICALITY ignore          TYPE          DL-ReferencePowerInformationList-DL-PC-Rqst  PRESENCE          conditional } |
    -- This IE is present only 'Adjustment Type' equals to 'Individual'
    { ID id-MaxAdjustmentStep                    CRITICALITY ignore          TYPE          ScaledMaxAdjustmentStep      PRESENCE          conditional } |
    -- This IE is present only 'Adjustment Type " equals to 'Common' or 'Individual'
    { ID id-MaxAdjustmentPeriod                  CRITICALITY ignore          TYPE          ScaledMaxAdjustmentPeriod     PRESENCE          conditional },
    ...
}

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

DL-ReferencePowerInformationList-DL-PC-Rqst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Container  {{DL-ReferencePowerInformationItemIE-DL-PC-Rqst
}}

DL-ReferencePowerInformationItemIE-DL-PC-Rqst NBAP-PROTOCOL-IES ::= {
    { ID id-DL-ReferencePowerInformationItem-DL-PC-Rqst          CRITICALITY          ignore          TYPE          DL-ReferencePowerInformationItem-DL-PC-Rqst
    PRESENCE          mandatory
    },
    ...
}

DL-ReferencePowerInformationItem-DL-PC-Rqst ::= SEQUENCE {
    rL-ID              RL-ID,
    dl-ReferencePower   DL-Power,
    iE-Extensions      ProtocolExtensionContainer  { { DL-ReferencePowerInformationItem-DL-PC-Rqst-ExtIEs } }    OPTIONAL,
    ...
}

DL-ReferencePowerInformationItem-DL-PC-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```



```

}

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

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

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

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

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

RL-DM-Rqst ::= ProtocolIE-Container {{ RLIE-DM-Rqst }}

RLIE-DM-Rqst NBAP-PROTOCOL-IES ::= {
    { ID id-RLItem-DM-Rqst  CRITICALITY reject TYPE RLItem-DM-Rqst  PRESENCE mandatory },
    ...
}

RLItem-DM-Rqst ::= SEQUENCE {
    rL-InformationList          RL-InformationList-DM-Rqst,

```

```

    iE-Extensions          ProtocolExtensionContainer { { RLItem-DM-Rqst-ExtIEs } }          OPTIONAL,
    ...
}

RLItem-DM-Rqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

RL-InformationItemIE-DM-Rqst NBAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rqst  CRITICALITY reject TYPE RL-InformationItem-DM-Rqst  PRESENCE mandatory },
    ...
}

RL-InformationItem-DM-Rqst ::= SEQUENCE {
    rL-ID                RL-ID,
    dPCH-ID              DPCH-ID          OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { { RL-InformationItem-DM-Rqst-ExtIEs } }          OPTIONAL,
    ...
}

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

RL-Set-DM-Rqst ::= ProtocolIE-Container {{ RL-SetIE-DM-Rqst }}

RL-SetIE-DM-Rqst NBAP-PROTOCOL-IES ::= {
    { ID id-RL-SetItem-DM-Rqst  CRITICALITY reject TYPE RL-SetItem-DM-Rqst  PRESENCE mandatory },
    ...
}

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

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

RL-Set-InformationList-DM-Rqst ::= SEQUENCE (SIZE(1..maxNrOfRLSets)) OF RL-Set-InformationItem-DM-Rqst

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

```

```

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

-- *****
--
-- DEDICATED MEASUREMENT INITIATION RESPONSE
--
-- *****

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

DedicatedMeasurementInitiationResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-CRNC-CommunicationContextID          CRITICALITY ignore TYPE CRNC-CommunicationContextID
    PRESENCE mandatory } |
    { ID id-MeasurementID                        CRITICALITY ignore TYPE MeasurementID
    PRESENCE mandatory } |
    { ID id-DedicatedMeasurementObjectType-DM-Rsp CRITICALITY ignore TYPE DedicatedMeasurementObjectType-DM-Rsp PRESENCE
    mandatory } |
    { ID id-CFN                                  CRITICALITY ignore TYPE CFN
    PRESENCE optional } |
    { ID id-CriticalityDiagnostics              CRITICALITY ignore TYPE CriticalityDiagnostics
    PRESENCE optional },
    ...
}

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

DedicatedMeasurementObjectType-DM-Rsp ::= CHOICE {
    rL          RL-DM-Rsp,
    rLS         RL-Set-DM-Rsp,
    all-RL      AllRL-DM-Rsp,
    all-RLS     AllRL-Set-DM-Rsp,
    ...
}

RL-DM-Rsp ::= ProtocolIE-Container {{ RLIE-DM-Rsp }}

RLIE-DM-Rsp NBAP-PROTOCOL-IES ::= {
    { ID id-RLItem-DM-Rsp CRITICALITY ignore TYPE RLItem-DM-Rsp PRESENCE mandatory },
    ...
}

RLItem-DM-Rsp ::= SEQUENCE {
    rL-InformationList-DM-Rsp          RL-InformationList-DM-Rsp,

```

```

    iE-Extensions          ProtocolExtensionContainer { { RLIItem-DM-Rsp-ExtIEs } }      OPTIONAL,
    ...
}

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

AllRL-DM-Rsp ::= ProtocolIE-Container {{ AllRLIE-DM-Rsp }}

AllRLIE-DM-Rsp NBAP-PROTOCOL-IES ::= {
    { ID id-AllRLItem-DM-Rsp  CRITICALITY ignore  TYPE AllRLItem-DM-Rsp      PRESENCE mandatory },
    ...
}

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

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

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

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

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

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

RL-Set-DM-Rsp ::= ProtocolIE-Container {{ RL-SetIE-DM-Rsp }}

RL-SetIE-DM-Rsp NBAP-PROTOCOL-IES ::= {
    { ID id-RL-SetItem-DM-Rsp  CRITICALITY ignore  TYPE RL-SetItem-DM-Rsp      PRESENCE mandatory },
    ...
}

```

```

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

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

AllRL-Set-DM-Rsp ::= ProtocolIE-Container {{ AllRLIE-Set-DM-Rsp }}

AllRLIE-Set-DM-Rsp NBAP-PROTOCOL-IES ::= {
    { ID id-AllRLItem-Set-DM-Rsp      CRITICALITY ignore      TYPE AllRLItem-Set-DM-Rsp      PRESENCE mandatory },
    ...
}

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

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

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

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

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

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

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

```

```

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

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

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

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

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

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

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

DedicatedMeasurementObjectType-DM-Rprt ::= CHOICE {

```

```

    rL                RL-DM-Rprt,
    rLS               RL-Set-DM-Rprt,
    all-RL            RL-DM-Rprt,
    all-RLS           RL-Set-DM-Rprt,
    ...
}
RL-DM-Rprt ::= ProtocolIE-Container {{ RLIE-DM-Rprt }}

RLIE-DM-Rprt NBAP-PROTOCOL-IES ::= {
  { ID id-RLItem-DM-Rprt  CRITICALITY ignore      TYPE RLItem-DM-Rprt      PRESENCE mandatory },
  ...
}

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

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

AllRL-DM-Rprt ::= ProtocolIE-Container {{ AllRLIE-DM-Rprt }}

AllRLIE-DM-Rprt NBAP-PROTOCOL-IES ::= {
  { ID id-AllRLItem-DM-Rprt  CRITICALITY ignore      TYPE AllRLItem-DM-Rprt      PRESENCE mandatory },
  ...
}

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

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

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

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

RL-InformationItem-DM-Rprt ::= SEQUENCE {
  rL-ID                RL-ID,
  dPCH-ID              DPCH-ID      OPTIONAL,
  dedicatedMeasurementValue  DedicatedMeasurementValue,

```

```

    iE-Extensions          ProtocolExtensionContainer { { RL-InformationItem-DM-Rprt-ExtIEs } }      OPTIONAL,
    ...
}

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

RL-Set-DM-Rprt ::= ProtocolIE-Container {{ RL-SetIE-DM-Rprt }}

RL-SetIE-DM-Rprt NBAP-PROTOCOL-IES ::= {
    { ID id-RL-SetItem-DM-Rprt  CRITICALITY ignore      TYPE RL-SetItem-DM-Rprt      PRESENCE mandatory },
    ...
}

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

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

AllRL-Set-DM-Rprt ::= ProtocolIE-Container {{ AllRLIE-Set-DM-Rprt }}

AllRLIE-Set-DM-Rprt NBAP-PROTOCOL-IES ::= {
    { ID id-AllRLItem-Set-DM-Rprt  CRITICALITY ignore  TYPE AllRLItem-Set-DM-Rprt      PRESENCE mandatory },
    ...
}

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

AllRLItem-Set-DM-Rprt-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

RL-Set-InformationItem-DM-Rprt ::= SEQUENCE {
    rL-Set-ID          RL-Set-ID,

```



```

    dedicatedMeasurementValue      DedicatedMeasurementValue,
    iE-Extensions                  ProtocolExtensionContainer { { RL-Set-InformationItem-DM-Rprt-ExtIEs} } OPTIONAL,
    ...
}

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

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

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

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

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

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

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

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

```

```

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

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

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

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

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

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

RL-RL-FailureInd ::= ProtocolIE-Container {{ RLIE-RL-FailureInd }}

RLIE-RL-FailureInd NBAP-PROTOCOL-IES ::= {
    { ID id-RLItem-RL-FailureInd    CRITICALITY ignore    TYPE RLItem-RL-FailureInd    PRESENCE mandatory },
    ...
}

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

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

```

```

}
...
}
RL-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Container {{ RL-InformationItemIE-RL-FailureInd}}
RL-InformationItemIE-RL-FailureInd NBAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationItem-RL-FailureInd CRITICALITY ignore TYPE RL-InformationItem-RL-FailureInd PRESENCE
    mandatory},
  ...
}
RL-InformationItem-RL-FailureInd ::= SEQUENCE {
  rL-ID RL-ID,
  cause Cause,
  iE-Extensions ProtocolExtensionContainer { { RL-InformationItem-RL-FailureInd-ExtIEs } } OPTIONAL,
  ...
}
RL-InformationItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
RL-Set-RL-FailureInd ::= ProtocolIE-Container {{ RL-SetIE-RL-FailureInd }}
RL-SetIE-RL-FailureInd NBAP-PROTOCOL-IES ::= {
  { ID id-RL-SetItem-RL-FailureInd CRITICALITY ignore TYPE RL-SetItem-RL-FailureInd PRESENCE mandatory },
  ...
}
RL-SetItem-RL-FailureInd ::= SEQUENCE {
  rL-Set-InformationList-RL-FailureInd RL-Set-InformationList-RL-FailureInd,
  iE-Extensions ProtocolExtensionContainer { { RL-SetItem-RL-FailureInd-ExtIEs } } OPTIONAL,
  ...
}
RL-SetItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
RL-Set-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Container {{ RL-Set-InformationItemIE-RL-FailureInd }}
RL-Set-InformationItemIE-RL-FailureInd NBAP-PROTOCOL-IES ::= {
  { ID id-RL-Set-InformationItem-RL-FailureInd CRITICALITY ignore TYPE RL-Set-InformationItem-RL-FailureInd PRESENCE mandatory },
  ...
}
RL-Set-InformationItem-RL-FailureInd ::= SEQUENCE {
  rL-Set-ID RL-Set-ID,
  cause Cause,
  iE-Extensions ProtocolExtensionContainer { { RL-Set-InformationItem-RL-FailureInd-ExtIEs } } OPTIONAL,
  ...
}

```

```

}

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

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

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

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

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

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

RL-RL-RestoreInd ::= ProtocolIE-Container {{ RLIE-RL-RestoreInd }}

RLIE-RL-RestoreInd NBAP-PROTOCOL-IES ::= {
  { ID id-RLItem-RL-RestoreInd   CRITICALITY ignore   TYPE RLItem-RL-RestoreInd           PRESENCE mandatory },
  ...
}

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

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

```

```

}

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

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

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

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

RL-Set-RL-RestoreInd ::= ProtocolIE-Container {{ RL-SetIE-RL-RestoreInd }}

RL-SetIE-RL-RestoreInd NBAP-PROTOCOL-IES ::= {
  { ID id-RL-SetItem-RL-RestoreInd CRITICALITY ignore TYPE RL-SetItem-RL-RestoreInd PRESENCE mandatory },
  ...
}

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

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

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

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

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

RL-Set-InformationItem-RL-RestoreInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
-- *****
--
-- COMPRESSED MODE PREPARE FDD
--
-- *****

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

CompressedModePrepare-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-NodeB-CommunicationContextID      CRITICALITY      reject      TYPE      NodeB-CommunicationContextID      PRESENCE      mandatory } |
    { ID      id-CM-PatternInformationList-CompressedModePrep      CRITICALITY      reject      TYPE      CM-PatternInformationList-CompressedModePrep      PRESENCE      mandatory },
    ...
}

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

CM-PatternInformationList-CompressedModePrep ::= SEQUENCE (SIZE (1.. maxNrOfCMpatterns)) OF ProtocolIE-Container {{ CM-PatternInformationItemIE-CompressedModePrep }}

CM-PatternInformationItemIE-CompressedModePrep NBAP-PROTOCOL-IES ::= {
    { ID      id-CM-PatternInformationItem-CompressedModePrep      CRITICALITY      reject      TYPE      CM-PatternInformationItem-CompressedModePrep      PRESENCE      mandatory},
    ...
}

CM-PatternInformationItem-CompressedModePrep ::= SEQUENCE {
    cFNOffset          CFNOffset,
    tGP1               GapPeriod,
    tGP2               GapPeriod          OPTIONAL,
    tGL                TGL,
    tGD                TGD,
    pD                 PD,
    ul-DL-CompressedModeSelection      UL-DL-CompressedModeSelection,
    compressedModeMethod      CompressedModeMethod,
    gapPositionMode      GapPositionMode,
    sN                   TimeSlot          OPTIONAL,
    -- This IE is present if Gap position mode = 'flexible position'--
    dl-FrameType         DL-FrameType,
    scramblingCodeChange      ScramblingCodeChange      OPTIONAL,
    -- This IE is present if Compressed mode method = 'SF/2' --
    powerControlMode     PowerControlMode,
}

```

```

    powerResumeMode          PowerResumeMode,
    ul-DeltaSIR              UL-DeltaSIR,
    ul-DeltaSIR-after        UL-DeltaSIR-after,
    iE-Extensions            ProtocolExtensionContainer { { CM-PatternInformationItem-CompressedModePrep-ExtIEs } }
    ...
}

CM-PatternInformationItem-CompressedModePrep-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
-- *****
--
-- COMPRESSED MODE READY FDD
--
-- *****

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

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

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

-- *****
--
-- COMPRESSED MODE COMMIT FDD
--
-- *****

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

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

```

```

}
...
}
CompressedModeCommit-Extensions NBAP-PROTOCOL-EXTENSION ::= {
...
}
-- *****
--
-- COMPRESSED MODE FAILURE FDD
--
-- *****

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

CompressedModeFailure-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-CriticalityDiagnostics           CRITICALITY  ignore          TYPE      CriticalityDiagnostics           PRESENCE  optional
  },
  ...
}

CompressedModeFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
...
}
-- *****
--
-- COMPRESSED MODE CANCEL FDD
--
-- *****

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

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

```



```

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

-- *****
--
-- ERROR INDICATION
--
-- *****

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

ErrorIndication-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-CRNC-CommunicationContextID      CRITICALITY   ignore          TYPE      CRNC-CommunicationContextID      PRESENCE
    conditional } |
  -- This IE is only present when message is transmitted by a Node B on a signalling bearer corresponding to a communication control port --
  { ID      id-NodeB-CommunicationContextID     CRITICALITY   ignore          TYPE      NodeB-CommunicationContextID      PRESENCE   conditional } |
  -- This IE is only present when message is transmitted by a RNC on a signalling bearer corresponding to a communication control port --
  { ID      id-Cause                            CRITICALITY   ignore          TYPE      Cause                             PRESENCE
    conditional } |
  -- At least either or Cause IE or Criticality Diagnostic IE shall be present--
  { ID      id-CriticalityDiagnostics          CRITICALITY   ignore          TYPE      CriticalityDiagnostics            PRESENCE
    conditional },
  -- At least either or Cause IE or Criticality Diagnostic IE shall be present--
  ...
}

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

-- *****
--
-- PRIVATE MESSAGE
--
-- *****

PrivateMessage ::= SEQUENCE {
  privateIEs          PrivateIE-Container   {{PrivateMessage-IEs}},
  ...
}

PrivateMessage-IEs NBAP-PRIVATE-IES ::= {
  ...
}

-- *****

```

```

--
-- PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST TDD
--
-- *****
PhysicalSharedChannelReconfigurationRequestTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container  {{PhysicalSharedChannelReconfigurationRequestTDD-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{PhysicalSharedChannelReconfigurationRequestTDD-Extensions}}  OPTIONAL,
    ...
}

PhysicalSharedChannelReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-C-ID          CRITICALITY  reject          TYPE      C-ID
      PRESENCE  mandatory    } |
    { ID      id-PDSCHSets-AddList-PSCH-ReconfRqst  CRITICALITY  reject          TYPE      PDSCHSets-AddList-PSCH-ReconfRqst          PRESENCE
      optional } |
    { ID      id-PDSCHSets-ModifyList-PSCH-ReconfRqst  CRITICALITY  reject          TYPE      PDSCHSets-ModifyList-PSCH-ReconfRqst          PRESENCE
      optional } |
    { ID      id-PDSCHSets-DeleteList-PSCH-ReconfRqst  CRITICALITY  reject          TYPE      PDSCHSets-DeleteList-PSCH-ReconfRqst          PRESENCE
      optional } |
    { ID      id-PUSCHSets-AddList-PSCH-ReconfRqst  CRITICALITY  reject          TYPE      PUSCHSets-AddList-PSCH-ReconfRqst          PRESENCE
      optional } |
    { ID      id-PUSCHSets-ModifyList-PSCH-ReconfRqst  CRITICALITY  reject          TYPE      PUSCHSets-ModifyList-PSCH-ReconfRqst          PRESENCE
      optional } |
    { ID      id-PUSCHSets-DeleteList-PSCH-ReconfRqst  CRITICALITY  reject          TYPE      PUSCHSets-DeleteList-PSCH-ReconfRqst          PRESENCE
      optional },
    ...
}

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

PDSCHSets-AddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHSets)) OF PDSCHSets-AddItem-PSCH-ReconfRqst

PDSCHSets-AddItem-PSCH-ReconfRqst ::= SEQUENCE {
    pDSCHSet-ID          PDSCHSet-ID,
    pDSCH-InformationList  PDSCH-Information-AddList-PSCH-ReconfRqst  OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {PDSCHSets-AddItem-PSCH-ReconfRqst-ExtIEs} }  OPTIONAL,
    ...
}

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

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

PDSCH-Information-AddListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
    {ID id-PDSCH-Information-AddListIE-PSCH-ReconfRqst  CRITICALITY  reject          TYPE      PDSCH-Information-AddListIE-PSCH-ReconfRqst
      PRESENCE  mandatory},

```

```

}
...
}
PDSCH-Information-AddListIE-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHs)) OF PDSCH-Information-AddItem-PSCH-ReconfRqst

PDSCH-Information-AddItem-PSCH-ReconfRqst ::= SEQUENCE {
    pDSCH-ID                PDSCH-ID,
    tdd-ChannelisationCode  TDD-ChannelisationCode,
    burstType               BurstType,
    midambleShift           MidambleShift,
    timeSlot                TimeSlot,
    repetitionPeriod        RepetitionPeriod,
    tdd-PhysicalChannelOffset TDD-PhysicalChannelOffset OPTIONAL,
    repetitionLength        RepetitionLength OPTIONAL,
    tFCI-Presence           TFCI-Presence,
    iE-Extensions           ProtocolExtensionContainer { {PDSCH-Information-AddItem-PSCH-ReconfRqst-ExtIEs} } OPTIONAL,
    ...
}

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

PDSCHSets-ModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHSets)) OF PDSCHSets-ModifyItem-PSCH-ReconfRqst

PDSCHSets-ModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    pDSCHSet-ID            PDSCHSet-ID,
    pDSCH-InformationList  PDSCH-Information-ModifyList-PSCH-ReconfRqst OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {PDSCHSets-ModifyItem-PSCH-ReconfRqst-ExtIEs} } OPTIONAL,
    ...
}

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

PDSCH-Information-ModifyList-PSCH-ReconfRqst ::= ProtocolIE-Container {{ PDSCH-Information-ModifyListIEs-PSCH-ReconfRqst }}

PDSCH-Information-ModifyListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
    {ID id-PDSCH-Information-ModifyListIE-PSCH-ReconfRqst CRITICALITY reject TYPE PDSCH-Information-ModifyListIE-PSCH-ReconfRqst
    PRESENCE mandatory},
    ...
}

PDSCH-Information-ModifyListIE-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHs)) OF PDSCH-Information-ModifyItem-PSCH-ReconfRqst

PDSCH-Information-ModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    pDSCH-ID                PDSCH-ID,
    tdd-ChannelisationCode  TDD-ChannelisationCode,
    burstType               BurstType,
    midambleShift           MidambleShift,

```

```

timeSlot                TimeSlot,
repetitionPeriod        RepetitionPeriod,
tdd-PhysicalChannelOffset  OPTIONAL,
repetitionLength        RepetitionLength  OPTIONAL,
tFCI-Presence           TFCI-Presence,
iE-Extensions           ProtocolExtensionContainer { {PDSCH-Information-ModifyItem-PSCH-ReconfRqst-ExtIEs} }  OPTIONAL,
...
}

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

PDSCHSets-DeleteList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHSets)) OF PDSCHSets-DeleteItem-PSCH-ReconfRqst

PDSCHSets-DeleteItem-PSCH-ReconfRqst ::= SEQUENCE {
pDSCHSet-ID                PDSCHSet-ID,
iE-Extensions              ProtocolExtensionContainer { {PDSCHSets-DeleteItem-PSCH-ReconfRqst-ExtIEs} }  OPTIONAL,
...
}

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

PUSCHSets-AddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHSets)) OF PUSCHSets-AddItem-PSCH-ReconfRqst

PUSCHSets-AddItem-PSCH-ReconfRqst ::= SEQUENCE {
pUSCHSet-ID                PUSCHSet-ID,
pUSCH-InformationList       PDSCH-Information-AddList-PSCH-ReconfRqst  OPTIONAL,
iE-Extensions              ProtocolExtensionContainer { {PUSCHSets-AddItem-PSCH-ReconfRqst-ExtIEs} }  OPTIONAL,
...
}

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

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

PUSCH-Information-AddListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
{ID id-PUSCH-Information-AddListIE-PSCH-ReconfRqst  CRITICALITY reject      TYPE      PUSCH-Information-AddListIE-PSCH-ReconfRqst
PRESENCE      mandatory},
...
}

PUSCH-Information-AddListIE-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHs)) OF PUSCH-Information-AddItem-PSCH-ReconfRqst

PUSCH-Information-AddItem-PSCH-ReconfRqst ::= SEQUENCE {
pUSCH-ID                PUSCH-ID,
tdd-ChannelisationCode  TDD-ChannelisationCode,

```

```

burstType          BurstType,
midambleShift      MidambleShift,
timeSlot           TimeSlot,
repetitionPeriod   RepetitionPeriod,
tdd-PhysicalChannelOffset  TDD-PhysicalChannelOffset  OPTIONAL,
repetitionLength   RepetitionLength  OPTIONAL,
tFCI-Presence      TFCI-Presence,
iE-Extensions      ProtocolExtensionContainer { {PUSCH-Information-AddItem-PSCH-ReconfRqst-ExtIEs} }  OPTIONAL,
...
}

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

PUSCHSets-ModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHSets)) OF PUSCHSets-ModifyItem-PSCH-ReconfRqst

PUSCHSets-ModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
pUSCHSet-ID          PUSCHSet-ID,
pUSCH-InformationList  PDSCH-Information-ModifyList-PSCH-ReconfRqst  OPTIONAL,
iE-Extensions        ProtocolExtensionContainer { {PUSCHSets-ModifyItem-PSCH-ReconfRqst-ExtIEs} }  OPTIONAL,
...
}

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

PUSCH-Information-ModifyList-PSCH-ReconfRqst ::= ProtocolIE-Container {{ PUSCH-Information-ModifyListIEs-PSCH-ReconfRqst }}

PUSCH-Information-ModifyListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
{ID id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst  CRITICALITY reject  TYPE  PUSCH-Information-ModifyListIE-PSCH-ReconfRqst
PRESENCE  mandatory},
...
}

PUSCH-Information-ModifyListIE-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHs)) OF PUSCH-Information-ModifyItem-PSCH-ReconfRqst

PUSCH-Information-ModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
pUSCH-ID          PUSCH-ID,
tdd-ChannelisationCode  TDD-ChannelisationCode,
burstType          BurstType,
midambleShift      MidambleShift,
timeSlot           TimeSlot,
repetitionPeriod   RepetitionPeriod,
tdd-PhysicalChannelOffset  TDD-PhysicalChannelOffset  OPTIONAL,
repetitionLength   RepetitionLength  OPTIONAL,
tFCI-Presence      TFCI-Presence,
iE-Extensions      ProtocolExtensionContainer { {PUSCH-Information-ModifyItem-PSCH-ReconfRqst-ExtIEs} }  OPTIONAL,
...
}

```

```

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

PUSCHSets-DeleteList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHSets)) OF PUSCHSets-DeleteItem-PSCH-ReconfRqst

PUSCHSets-DeleteItem-PSCH-ReconfRqst ::= SEQUENCE {
    pUSCHSet-ID PUSCHSet-ID,
    iE-Extensions ProtocolExtensionContainer { {PUSCHSets-DeleteItem-PSCH-ReconfRqst-ExtIEs} } OPTIONAL,
    ...
}

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

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

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

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

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

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

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

```

```

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

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

END

```

9.3.4 NBAP Information Elements

```

--*****
--
-- Information Element Definitions
--
--*****

NBAP-IEs
DEFINITIONS AUTOMATIC TAGS ::=
BEGIN

IMPORTS
    maxNrOfTFCS,
    maxNrOfErrors,
    maxCTFC-1,
    maxNrOfTFs,
    maxTTL-count,
    maxRateMatching,
    maxCodeNrComp-1,
    maxNrOfCodeGroups,
    maxNrOfTFCIGroups,
    maxNrOfTFCI1Combs,
    maxNrOfTFCI2Combs,
    maxCTFC-DCH-1,
    maxCTFC-DSCH-1,
    maxNrOfSF
FROM NBAP-Constants

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

    ProtocolExtensionContainer{} ,
NBAP-PROTOCOL-EXTENSION

```

```
FROM NBAP-Containers;
```

```
-- =====  
-- A  
-- =====
```

```
Acknowledged-RA-Tries-Value ::= INTEGER(0..240,...)
```

```
-- The number of L1 acknowledged random access tries per every 20 ms period.
```

```
AddorDeleteIndicator ::= ENUMERATED {  
    add,  
    delete,  
    ...  
}
```

```
AICH-TransmissionTiming ::= ENUMERATED {  
    v0,  
    v1,  
    ...  
}
```

```
AvailabilityStatus ::= ENUMERATED {  
    empty,  
    in-test,  
    failed,  
    power-off,  
    off-line,  
    off-duty,  
    dependency,  
    degraded,  
    not-installed,  
    log-full,  
    ...  
}
```

```
-- =====  
-- B  
-- =====
```

```
BCCH-ModificationTime ::= INTEGER (0..2047)
```

```
-- Time = BCCH-ModificationTime * 2
```

```
-- Range 0 to 4094, step 2
```

```
-- All even SFN values are allowed
```

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

```
BetaCD ::= INTEGER (0..15)
```

```
BlockingPriorityIndicator ::= ENUMERATED {  
    high,  
    normal,  
}
```



```
    low,
    ...
}
-- High priority: Block resource immediately.
-- Normal priority: Block resource when idle or upon timer expiry.
-- Low priority: Block resource when idle.

BlockSTTD-Indicator ::= ENUMERATED {
    active,
    inactive
}

BurstType ::= ENUMERATED {
    type1 (1),
    type2 (2),
    ...
}

-- =====
-- C
-- =====

Cause ::= CHOICE {
    radioNetwork          CauseRadioNetwork,
    transport             CauseTransport,
    protocol              CauseProtocol,
    misc                  CauseMisc,
    ...
}

CauseMisc ::= ENUMERATED {
    control-processing-overload,
    hardware-failure,
    oam-intervention,
    not-enough-user-plane-processing-resources,
    unspecified,
    ...
}

CauseProtocol ::= ENUMERATED {
    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-ActivatedOrAlocated,  
nodeB-Resources-unavailable,  
insufficient-physical-channel-resources,  
measurement-not-supported-for-the-object,  
macrodiversity-combining-not-possible,  
reconfiguration-not-allowed,  
requested-configuration-not-supported,  
synchronisation-failure,  
sIB-Origination-in-Node-B-not-Supported,  
unspecified,  
priority-transport-channel-established,  
...  
}  
  
CauseTransport ::= ENUMERATED {  
    transport-link-failure,  
    transmission-port-not-available,  
    transport-resource-unavailable,  
    unspecified,  
    ...  
}  
  
CCTrCH-ID ::= INTEGER (0..15)  
  
CellParameterID ::= INTEGER (0..127)  
  
CFN ::= INTEGER (0..255)  
  
CFNOffset ::= INTEGER (0..255)  
  
ChipOffset ::= INTEGER (0..38399)  
-- Unit Chip  
  
C-ID ::= INTEGER (0..65535)  
  
CommonChannelsCapacityConsumptionLaw ::= SEQUENCE (SIZE(1..maxNrOfSF)) OF  
    SEQUENCE {  
        dl-Cost      INTEGER (0..65535),  
        ul-Cost      INTEGER (0..65536)  
    }  
}  
  
CommonMeasurementType ::= ENUMERATED {  
    rssi,  
    transmitted-carrier-power,  
    acknowledged-ra-tries,
```

```

    time-slot-iscp,
    ...
}

CommonMeasurementValue ::= CHOICE {
    transmitted-carrier-power    Transmitted-Carrier-Power-Value,
    rssi                          RSSI-Value,
    acknowledged-ra-tries        Acknowledged-RA-Tries-Value,
    time-slot-iscp                TimeSlot-ISCP-Value,
    ...
}

CommonPhysicalChannelID ::= INTEGER (0..255)

CommonTransportChannelID ::= INTEGER (0..255)

CommunicationControlPortID ::= INTEGER (0..65535)

CompressedModeMethod ::= ENUMERATED {
    none,
    puncturing,
    half-SF,
    higher-Layer-Scheduling,
    ...
}
-- none = restore the normal mode

ConfigurationGenerationID ::= INTEGER (0..255)
-- Value '0' means "No configuration"

CriticalityDiagnostics ::= SEQUENCE {
    procedureCode                ProcedureCode                OPTIONAL,
    triggeringMessage             TriggeringMessage           OPTIONAL,
    criticalityResponse           Criticality                  OPTIONAL,
    transactionID                 TransactionID              OPTIONAL,
    iEsCriticalityResponses       CriticalityDiagnostics-IE-List,
    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,
    repetitionNumber              RepetitionNumber           OPTIONAL,
    iE-Extensions                 ProtocolExtensionContainer { {CriticalityDiagnostics-IE-List-ExtIEs} } OPTIONAL,
    ...
}

```

```
    }
CriticalityDiagnostics-IE-List-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
CRNC-CommunicationContextID ::= INTEGER (0..1048575)

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

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

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

DedicatedChannelsCapacityConsumptionLaw ::= SEQUENCE ( SIZE(1..maxNrOfSF) ) OF
SEQUENCE {
    dl-Cost      INTEGER (0..65535),
    ul-Cost      INTEGER (0..65536)
}

DedicatedMeasurementObjectType ::= ENUMERATED {
    rl,
    rls,
    all-rl,
    all-rls,
    ...
}

DedicatedMeasurementType ::= ENUMERATED {
    sir,
    sir-error,
    transmitted-code-power,
    rscp,
    ...
}

DedicatedMeasurementValue ::= CHOICE {
    sIR-Value          SIR-Value,
    sIR-ErrorValue     SIR-Error-Value,
    transmittedCodePowerValue  Transmitted-Code-Power-Value,
    rSCP               RSCP-Value,
    ...
}

D-FieldLength ::= ENUMERATED {
    v1,
    v2,
    ...
}
```

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

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

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

DL-FrameType ::= ENUMERATED {
    typeA,
    typeB,
    ...
}

DL-or-Global-CapacityCredit ::= INTEGER (0..65535)

DL-Power ::= INTEGER (-350..150)
-- DL-Power = power * 10
-- If Power <=-35 DL-Power shall be set to -350
-- if Power >=15 DL-Power shall be set to 150
-- Unit dB, Range -35dB .. +15dB, Step +0.1dB

DL-ScramblingCode ::= INTEGER (0..15)
-- 0= Primary scrambling code of the cell, 1..15= Secondary scrambling code --

DPCH-ID ::= INTEGER (0..239)

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

-- to do
-- the parameter need to be defined. It may correspond to the DL TFS defined for DCH
DSCH-TFS ::= INTEGER

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

-- =====
-- F
-- =====
```

```
FDD-DL-ChannelisationCodeNumber ::= INTEGER(0.. 255)
-- The maximum value is equal to the DL spreading factor -1--

FDD-S-CCPCH-Offset ::= INTEGER (0..149)
-- 0: 0 chip, 1: 256 chip, 2: 512 chip, .. ,149: 38144 chip [TS 25.211] --

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

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

FrameOffset ::= INTEGER (0..255)

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

GapPeriod ::= INTEGER (0..255)
-- Unit Frame

GapPositionMode ::= ENUMERATED {
    fixed,
    flexible,
    ...
}

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

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

IB-SG-DATA ::= BIT STRING

IB-SG-POS ::= INTEGER (0..2064)
-- Only even positions allowed

IB-SG-REP ::= ENUMERATED {rep4, rep8, rep16, rep32, rep64, rep128, rep256, rep512, rep1024, rep2048}

IB-Type ::= ENUMERATED {
    mib,
    sib1,
    sib2,
    sIB3,
    sIB4,
```

```
sIB5,  
sIB6,  
sIB7,  
sIB8,  
sIB9,  
sIB10,  
sIB11,  
sib12,  
sIB13,  
sIB13dot1,  
sIB13dot2,  
sIB13dot3,  
sIB13dot4,  
sIB14,  
...  
}  
  
IndicationType ::= ENUMERATED {  
    noFailure,  
    serviceImpacting,  
    ...  
}  
  
-- =====  
-- J  
-- =====  
  
-- =====  
-- K  
-- =====  
  
-- =====  
-- L  
-- =====  
  
Local-Cell-ID ::= INTEGER (0..268435455)  
  
-- =====  
-- M  
-- =====  
  
MaximumDL-PowerCapability ::= INTEGER(0..50)  
-- Unit dBm, Range 0dBm .. 50dBm, Step +1dB  
  
MaximumTransmissionPower ::= INTEGER(0..50)  
-- Unit dB, Range 0dB .. 50dB, Step +1dB  
  
MaxNrOfUL-DPDCHs ::= INTEGER (1..6)  
  
MaxPRACH-MidambleShifts ::= ENUMERATED {  
    shift4,  
    ...  
}
```

```
    shift8,  
    ...  
}  
  
MeasurementFilterCoefficient ::= INTEGER (1..256)  
-- Measurement Filter Coefficient to be used for measurement  
  
MeasurementID ::= INTEGER (0..1048575)  
  
MidambleShift ::= INTEGER (0..15)  
  
MinSpreadingFactor ::= ENUMERATED {  
    v4,  
    v16,  
    v32,  
    v64,  
    v128,  
    v256,  
    v512,  
    ...  
}  
  
MinUL-ChannelisationCodeLength ::= ENUMERATED {  
    v4,  
    v8,  
    v16,  
    v32,  
    v64,  
    v128,  
    v256,  
    ...  
}  
  
MultiplexingPosition ::= ENUMERATED {  
    fixed,  
    flexible,  
    ...  
}  
  
-- =====  
-- N  
-- =====  
  
NodeB-CommunicationContextID ::= INTEGER (0..1048575)  
  
-- =====  
-- O  
-- =====  
  
-- =====  
-- P
```



```

-- =====
PagingIndicatorLength ::= INTEGER (2 | 4 | 8)

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, ...)

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

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

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

PDSCH-CodeMapping-SpreadingFactor ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32,
    v64,
    v128,
    v256,
    ...
}

PDSCH-CodeMapping-PDSCH-CodeMappingInformationList ::= SEQUENCE (SIZE (1..maxNrOfCodeGroups)) OF
SEQUENCE {
    spreadingFactor            PDSCH-CodeMapping-SpreadingFactor,
    multi-CodeInfo            PDSCH-Multi-CodeInfo,
    start-CodeNumber          PDSCH-CodeMapping-CodeNumberComp,

```

```

    stop-CodeNumber      PDSCH-CodeMapping-CodeNumberComp,
    iE-Extensions        ProtocolExtensionContainer { { PDSCH-CodeMapping-PDSCH-CodeMappingInformationList-ExtIEs} } OPTIONAL,
    ...
}

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

PDSCH-CodeMapping-DSCH-MappingInformationList ::= SEQUENCE (SIZE (1..maxNrOfTFCIGroups)) OF
SEQUENCE {
    maxTFCI-field2-Value      PDSCH-CodeMapping-MaxTFCI-Field2-Value,
    spreadingFactor          PDSCH-CodeMapping-SpreadingFactor,
    multi-CodeInfo           PDSCH-Multi-CodeInfo,
    codeNumber               PDSCH-CodeMapping-CodeNumberComp,
    iE-Extensions            ProtocolExtensionContainer { { PDSCH-CodeMapping-DSCH-MappingInformationList-ExtIEs} } OPTIONAL,
    ...
}

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

PDSCH-CodeMapping-MaxTFCI-Field2-Value ::= INTEGER (1..1023)

PDSCH-CodeMapping-PDSCH-CodeInformationList ::= SEQUENCE (SIZE (1..maxNrOfTFCI2Combs)) OF
SEQUENCE {
    spreadingFactor          PDSCH-CodeMapping-SpreadingFactor,
    multi-CodeInfo           PDSCH-Multi-CodeInfo,
    codeNumber               PDSCH-CodeMapping-CodeNumberComp,
    iE-Extensions            ProtocolExtensionContainer { { PDSCH-CodeMapping-PDSCH-CodeInformationList-ExtIEs} } OPTIONAL,
    ...
}

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

PDSCH-Multi-CodeInfo ::= INTEGER (1..16)

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

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

PICH-Mode ::= ENUMERATED {
    v18,
    v36,
    v72,
    v144,
    ...
}

```

```
PowerAdjustmentType ::= ENUMERATED {
    none,
    common,
    individual
}

PowerControlMode ::= ENUMERATED {
    v0,
    v1,
    ...
}

PowerOffset ::= INTEGER (0..24)
-- PowerOffset = offset * 0.25
-- Unit dB, Range 0dB .. +6dB, Step +0.25dB

PowerResumeMode ::= ENUMERATED {
    v0,
    v1,
    ...
}

PRACH-Midamble ::= ENUMERATED {
    inverted,
    direct,
    ...
}

PreambleSignatures ::= BIT STRING (SIZE (16))
-- Bit 0=P0, Bit 1=P1, .. ,Bit 15=P15 [25.213] --

PreambleThreshold ::= INTEGER (0..72)
-- 0= 0dB, 1= 0.5dB, ... , 72= 36dB

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

PrimaryScramblingCode ::= INTEGER (0..511)

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

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

PunctureLimit ::= INTEGER (0..15)
-- 0: 40%; 1: 44%; ... 14: 96%; 15: 100%

PUSCH-ID ::= INTEGER (0..255)
```

```
PUSCHSet-ID ::= INTEGER (0..255)

-- =====
-- Q
-- =====

QE-Selector ::= ENUMERATED {
    selected-DCH,
    non-selected-DCH
}

-- =====
-- R
-- =====

RACH-SlotFormat ::= ENUMERATED {
    v0,
    v1,
    v2,
    v3,
    ...
}

RACH-SubChannelNumbers ::= BIT STRING (SIZE (12))
-- Bit 0=Sub Channel Number 0, Bit 1=Sub Channel Number 1, .., Bit 11=Sub Channel Number 11

RepetitionLength ::= INTEGER (1..63)

RepetitionPeriod ::= ENUMERATED {
    v1,
    v2,
    v4,
    v8,
    v16,
    v32,
    v64,
    ...
}

RepetitionNumber ::= INTEGER (0..255)

ReftFCNumber ::= INTEGER (0..15)

ReportCharacteristics ::= CHOICE {
    onDemand          NULL,
    periodic          ReportCharacteristicsType-ReportPeriodicity,
    event-a           ReportCharacteristicsType-EventA,
    event-b           ReportCharacteristicsType-EventB,
    event-c           ReportCharacteristicsType-EventC,
    event-d           ReportCharacteristicsType-EventD,
    event-e           ReportCharacteristicsType-EventE,
```

```

    event-f          ReportCharacteristicsType-EventF,
    ...
}

ReportCharacteristicsType-EventA ::= SEQUENCE {
    measurementThreshold      ReportCharacteristicsType-MeasurementThreshold,
    measurementHysteresisTime ReportCharacteristicsType-ScaledMeasurementHysteresisTime OPTIONAL,
    iE-Extensions             ProtocolExtensionContainer { { ReportCharacteristicsType-EventA-ExtIEs } } OPTIONAL,
    ...
}

ReportCharacteristicsType-EventA-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventB ::= SEQUENCE {
    measurementThreshold      ReportCharacteristicsType-MeasurementThreshold,
    measurementHysteresisTime ReportCharacteristicsType-ScaledMeasurementHysteresisTime OPTIONAL,
    iE-Extensions             ProtocolExtensionContainer { { ReportCharacteristicsType-EventB-ExtIEs } } OPTIONAL,
    ...
}

ReportCharacteristicsType-EventB-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventC ::= SEQUENCE {
    measurementIncreaseThreshold ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold,
    measurementChangeTime        ReportCharacteristicsType-ScaledMeasurementChangeTime,
    iE-Extensions                 ProtocolExtensionContainer { { ReportCharacteristicsType-EventC-ExtIEs } } OPTIONAL,
    ...
}

ReportCharacteristicsType-EventC-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventD ::= SEQUENCE {
    measurementDecreaseThreshold ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold,
    measurementChangeTime        ReportCharacteristicsType-ScaledMeasurementChangeTime,
    iE-Extensions                 ProtocolExtensionContainer { { ReportCharacteristicsType-EventD-ExtIEs } } OPTIONAL,
    ...
}

ReportCharacteristicsType-EventD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventE ::= SEQUENCE {
    measurementThreshold1      ReportCharacteristicsType-MeasurementThreshold,
    measurementThreshold2      ReportCharacteristicsType-MeasurementThreshold OPTIONAL,

```

```

measurementHysteresisTime      ReportCharacteristicsType-ScaledMeasurementHysteresisTime  OPTIONAL,
reportPeriodicity              ReportCharacteristicsType-ReportPeriodicity                  OPTIONAL,
iE-Extensions                  ProtocolExtensionContainer { { ReportCharacteristicsType-EventE-ExtIEs } }  OPTIONAL,
    ...
}

ReportCharacteristicsType-EventE-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventF ::= SEQUENCE {
    measurementThreshold1      ReportCharacteristicsType-MeasurementThreshold,
    measurementThreshold2      ReportCharacteristicsType-MeasurementThreshold  OPTIONAL,
    measurementHysteresisTime  ReportCharacteristicsType-ScaledMeasurementHysteresisTime  OPTIONAL,
    reportPeriodicity          ReportCharacteristicsType-ReportPeriodicity  OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { ReportCharacteristicsType-EventF-ExtIEs } }  OPTIONAL,
    ...
}

ReportCharacteristicsType-EventF-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold ::= CHOICE {
    rssi                        RSSI-Value-IncrDecrThres,
    transmitted-carrier-power   Transmitted-Carrier-Power-Value,
    acknowledged-ra-tries      Acknowledged-RA-Tries-Value,
    timeslot-iscp               TimeSlot-ISCP-Value-IncrDecrThres,
    sir                         SIR-Value-IncrDecrThres,
    sir-error                   SIR-Error-Value-IncrDecrThres,
    transmitted-code-power      Transmitted-Code-Power-Value-IncrDecrThres,
    rscp                         RSCP-Value-IncrDecrThres,
    ...
}

ReportCharacteristicsType-MeasurementThreshold ::= CHOICE {
    rssi                        RSSI-Value,
    transmitted-carrier-power   Transmitted-Carrier-Power-Value,
    acknowledged-ra-tries      Acknowledged-RA-Tries-Value,
    timeslot-iscp               TimeSlot-ISCP-Value,
    sir                         SIR-Value,
    sir-error                   SIR-Error-Value,
    transmitted-code-power      Transmitted-Code-Power-Value,
    rscp                         RSCP-Value,
    ...
}

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

ResourceOperationalState ::= ENUMERATED {
    enabled,
    disabled,
    ...
}

LimitedPowerIncrease ::= ENUMERATED {
    used,
    not-used
}

RL-ID ::= INTEGER (0..31)

RL-Set-ID          ::= INTEGER (0..31)

RSCP-Value ::= INTEGER (0..81)
-- According to mapping in 25.225

RSCP-Value-IncrDecrThres ::= INTEGER (0..80)

RSSI-Value ::= INTEGER(0..63)
-- According to mapping in 25.215/25.225

RSSI-Value-IncrDecrThres ::= INTEGER (0..62)

-- =====
-- S
-- =====

ScaledMaxAdjustmentPeriod          ::= INTEGER(1..50)
-- MaxAdjustmentPeriod (slots) = 10 * ScaledMaxAdjustmentPeriod

ScaledMaxAdjustmentStep            ::= INTEGER(1..10)
-- MaxAdjustmentStep (dB) = ScaledMaxAdjustmentStep / 10
```

```
ScramblingCodeChange ::= ENUMERATED {
    code-change,
    no-code-change,
    ...
}

ScramblingCodeWordNumber ::= INTEGER (0..255)

SecondaryCCPCH-SlotFormat ::= INTEGER(0..17)

S-FieldLength ::= ENUMERATED {
    v1,
    v2,
    ...
}

-- 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,
    ...
}

SIR-Error-Value ::= INTEGER (0..125)

SIR-Error-Value-IncrDecrThres ::= INTEGER (0..124)

SIR-Value ::= INTEGER (0..63)
-- According to mapping in 25.215/25.225

SIR-Value-IncrDecrThres ::= INTEGER (0..62)

SSDT-Cell-Identity ::= ENUMERATED {a, b, c, d, e, f, g, h}

SSDT-CellID-Length ::= ENUMERATED {
    short,
    medium,
    long,
    ...
}
```



```
SSDT-Indication ::= ENUMERATED {
    ssdt-active-in-the-UE,
    ssdt-not-active-in-the-UE,
    ...
}
```

```
STTD-Indicator ::= ENUMERATED {
    active,
    inactive,
    ...
}
```

```
SSDT-SupportIndicator ::= ENUMERATED {
    sSDT-Supported,
    sSDT-not-supported,
    ...
}
```

```
SyncCase ::= INTEGER (1..2)
```

```
-- =====
-- T
-- =====
```

```
T-Cell ::= ENUMERATED {
    v0,
    v1,
    v2,
    v3,
    v4,
    v5,
    v6,
    v7,
    v8,
    v9,
    ...
}
```

```
TDD-ChannelisationCode ::= ENUMERATED {
    chCode1div1,
    chCode2div1,
    chCode2div2,
    chCode4div1,
    chCode4div2,
    chCode4div3,
    chCode4div4,
    chCode8div1,
    chCode8div2,
    chCode8div3,
    chCode8div4,
}
```

```

    chCode8div5,
    chCode8div6,
    chCode8div7,
    chCode8div8,
    chCode16div1,
    chCode16div2,
    chCode16div3,
    chCode16div4,
    chCode16div5,
    chCode16div6,
    chCode16div7,
    chCode16div8,
    chCode16div9,
    chCode16div10,
    chCode16div11,
    chCode16div12,
    chCode16div13,
    chCode16div14,
    chCode16div15,
    chCode16div16,
    ...
}

TDD-PhysicalChannelOffset ::= INTEGER (0..63)

TDD-TPC-DownlinkStepSize ::= ENUMERATED {
    step-size1,
    step-size2,
    step-size3,
    ...
}

TransportFormatCombination-Beta ::= CHOICE {
    signalledGainFactors      SEQUENCE {
        betaC                 BetaCD,
        betaD                 BetaCD,
        refTFCNumber          RefTFCNumber OPTIONAL
    },
    computedGainFactors       RefTFCNumber
}

TFCI-Coding ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32,
    ...
}

TFCI-Presence ::= ENUMERATED {
    present,

```

```
    not-present,
    ...
}

TFCI-SignallingMode ::= SEQUENCE {
    tFCI-SignallingOption TFCI-SignallingMode-TFCI-SignallingOption,
    splitType TFCI-SignallingMode-SplitType OPTIONAL,
    -- This IE is only present if TFCI signalling option is split --
    lengthOfTFCI2 TFCI-SignallingMode-LengthOfTFCI2 OPTIONAL,
    -- This IE is only present if split type is logical --
    iE-Extensions ProtocolExtensionContainer { { TFCI-SignallingMode-ExtIEs } } OPTIONAL,
    ...
}

TFCI-SignallingMode-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCI-SignallingMode-LengthOfTFCI2 ::= INTEGER (1..10)

TFCI-SignallingMode-SplitType ::= ENUMERATED {
    hard,
    logical,
    ...
}

TFCI-SignallingMode-TFCI-SignallingOption ::= ENUMERATED {
    normal,
    split,
    ...
}

TGD ::= INTEGER (0..3839)

TGL ::= INTEGER (3| 4| 7| 10| 14)

TimeSlot ::= INTEGER (0..14)

TimeSlotDirection ::= ENUMERATED {
    ul,
    dl,
    ...
}

TimeSlot-ISCP-Value ::= INTEGER (0..81)
-- According to mapping in 25.225

TimeSlot-ISCP-Value-IncrDecrThres ::= INTEGER (0..80)

TimeSlotStatus ::= ENUMERATED {
    active,
```

```

    not-active,
    ...
}

ToAWE ::= INTEGER (0..2559)
-- Unit ms

ToAWS ::= INTEGER (0..1279)
-- Unit ms

Transmitted-Carrier-Power-Value ::= INTEGER(0..100)
-- According to mapping in 25.215/25.225

Transmitted-Code-Power-Value ::= INTEGER (0..127)
-- According to mapping in 25.215/25.225

Transmitted-Code-Power-Value-IncrDecrThres ::= INTEGER (0..112,...)

TransmissionDiversityApplied ::= BOOLEAN
-- true: applied, false: not applied

TransmitDiversityIndicator ::= ENUMERATED {
    active,
    inactive,
    ...
}

TFCS ::= SEQUENCE {
    dSCH
        CHOICE {
            no-Split-in-TFCI          TFCS-TFCSList,
            split-in-TFCI             SEQUENCE {
                transportFormatCombination-DCH    TFCS-DCHList,
                signallingMethod                  CHOICE {
                    tFCI-Range                    TFCS-TFC-MapingOnDSCHList,
                    explicit                       TFCS-TFC-DSCHList
                }
            }
        },
    iE-Extensions      ProtocolExtensionContainer  { { TFCS-ExtIEs} }    OPTIONAL,
    ...
}

TFCS-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCS-TFCSList ::= SEQUENCE (SIZE (1..maxNrOfTFCS)) OF
    SEQUENCE {
        cTFC          TFCS-CTFC,
        tFC-Beta      TransportFormatCombination-Beta    OPTIONAL,
        iE-Extensions ProtocolExtensionContainer  { { TFCS-TFCSList-ExtIEs} }    OPTIONAL,

```

```

}
...
}
TFCS-TFCSList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
TFCS-CTFC ::= INTEGER (1..maxCTFC-1)
TFCS-DCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCI1Combs)) OF
SEQUENCE {
cTFC TFCS-CTFC-DCH,
iE-Extensions ProtocolExtensionContainer { { TFCS-DCHList-ExtIEs} } OPTIONAL,
...
}
TFCS-DCHList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
TFCS-CTFC-DCH ::= INTEGER (0..maxCTFC-DCH-1)
TFCS-TFC-MappingOnDSCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCIGroups)) OF
SEQUENCE {
maxTFCI-field2-Value TFCS-MaxTFCI-field2-Value,
cTFC-DSCH TFCS-CTFC-DSCH,
iE-Extensions ProtocolExtensionContainer { { TFCS-TFC-MappingOnDSCHList-ExtIEs} } OPTIONAL,
...
}
TFCS-TFC-MappingOnDSCHList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
TFCS-MaxTFCI-field2-Value ::= INTEGER (1..511)
TFCS-CTFC-DSCH ::= INTEGER (0..maxCTFC-DSCH-1)
TFCS-TFC-DSCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCI2Combs)) OF
SEQUENCE {
cTFC-DSCH TFCS-CTFC-DSCH,
iE-Extensions ProtocolExtensionContainer { { TFCS-TFC-DSCHList-ExtIEs} } OPTIONAL,
...
}
TFCS-TFC-DSCHList-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..maxNrOfTFs)) OF
SEQUENCE {
    nrOfTransportBlocks      TransportFormatSet-NrOfTransportBlocks,
    transportBlockSize      TransportFormatSet-TransportBlockSize    OPTIONAL,
    -- This IE is only present if "Number of Transport Blocks" is greater than 0
    mode                    TransportFormatSet-ModeDP,
    iE-Extensions          ProtocolExtensionContainer { { TransportFormatSet-DynamicPartList-ExtIEs} }    OPTIONAL,
    ...
}

TransportFormatSet-DynamicPartList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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 {
    transmissionTimeInterval      TransportFormatSet-TransmissionTimeInterval    OPTIONAL,
    -- This IE is mandatory if not defined sa dynamic parameter. Otherwise it is absent
    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,
    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)

TransportLayerAddress ::= BIT STRING (SIZE (1..160, ...))

TSTD-Indicator ::= ENUMERATED {
    active,
    inactive,
    ...
}

-- =====
-- U
-- =====

UARFCN ::= INTEGER (0..16383, ...)
-- corresponds to 1885.2MHz .. 2024.8MHz

UL-CapacityCredit ::= INTEGER (0..65535)

UL-DL-CompressedModeSelection ::= ENUMERATED {
    ul-only,
    dl-only,
    both,
    ...
}

UL-DeltaSIR ::= INTEGER (-60..100)
-- UL-DeltaSIR = DeltaSIR * 10
-- Unit dB, Range -6dB .. 10dB, Step 0.1dB

UL-DeltaSIR-after ::= INTEGER (-60..100)
-- UL-DeltaSIR = DeltaSIR * 10
-- Unit dB, Range -6dB .. 10dB, Step 0.1dB

UL-DPCCH-SlotFormat ::= INTEGER (0..5)

UL-SIR ::= INTEGER (-82..173)
-- According to mapping in 25.427

UL-FP-Mode ::= ENUMERATED {
    normal,
    silent,
    ...
}

UL-InterferenceLevel ::= INTEGER (-1280..-600)
-- UL-InterferenceLevel = InterferenceLevel * 10
-- Unit dBm, Range -128dBm .. -60dBm, Step 0.1dBm

UL-ScramblingCode ::= SEQUENCE {
    uL-ScramblingCodeNumber          UL-ScramblingCodeNumber,
```



```

    uL-ScramblingCodeLength      UL-ScramblingCodeLength,
    iE-Extensions                 ProtocolExtensionContainer { { UL-ScramblingCode-ExtIEs } }    OPTIONAL,
    ...
}

UL-ScramblingCode-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-ScramblingCodeNumber ::= INTEGER (0..16777215)

UL-ScramblingCodeLength ::= ENUMERATED {
    short,
    long,
    ...
}

USCH-ID ::= INTEGER (0..255)

-- =====
-- V
-- =====

-- =====
-- W
-- =====

-- =====
-- X
-- =====

-- =====
-- Y
-- =====

-- =====
-- Z
-- =====

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 }
```

```
PrivateIE-ID ::= 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 ::= CHOICE {
  shortTransActionId  INTEGER (0..127),
  longTransActionId   INTEGER (0..32767)
}
```

```
TriggeringMessage ::= ENUMERATED { initiating-message, successful-outcome, unsuccessful-outcome, outcome }
```

```
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,
    PrivateIE-ID,
    ProtocolExtensionID,
    ProtocolIE-ID
FROM NBAP-CommonDataTypes

    maxProtocolExtensions,
    maxPrivateIEs,
    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,
    &presence    Presence
}
WITH SYNTAX {
    ID          &id
    CRITICALITY &criticality
    EXTENSION   &Extension
    PRESENCE    &presence
}

-- *****
--
-- Class Definition for Private IEs
--
-- *****

NBAP-PRIVATE-IES ::= CLASS {
    &id          PrivateIE-ID,
    &criticality Criticality,
    &Value,
    &presence    Presence
}
WITH SYNTAX {
    ID          &id
    CRITICALITY &criticality
    TYPE        &Value
    PRESENCE    &presence
}

-- *****
--
-- Container for Protocol IEs
--
-- *****

```

```

ProtocolIE-Container {NBAP-PROTOCOL-IES : IEsSetParam} ::=
    SEQUENCE (SIZE (0..maxProtocolIEs)) OF
    ProtocolIE-Field {{IEsSetParam}}

ProtocolIE-Field {NBAP-PROTOCOL-IES : IEsSetParam} ::= SEQUENCE {
    id          NBAP-PROTOCOL-IES.&id          ({IEsSetParam}),
    criticality NBAP-PROTOCOL-IES.&criticality ({IEsSetParam}@id),
    value       NBAP-PROTOCOL-IES.&Value      ({IEsSetParam}@id)
}

-- *****
--
-- Container for Protocol IE Pairs
--
-- *****

ProtocolIE-ContainerPair {NBAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=
    SEQUENCE (SIZE (0..maxProtocolIEs)) OF
    ProtocolIE-FieldPair {{IEsSetParam}}

ProtocolIE-FieldPair {NBAP-PROTOCOL-IES-PAIR : IEsSetParam} ::= SEQUENCE {
    id          NBAP-PROTOCOL-IES-PAIR.&id          ({IEsSetParam}),
    firstCriticality NBAP-PROTOCOL-IES-PAIR.&firstCriticality ({IEsSetParam}@id),
    firstValue      NBAP-PROTOCOL-IES-PAIR.&FirstValue ({IEsSetParam}@id),
    secondCriticality NBAP-PROTOCOL-IES-PAIR.&secondCriticality ({IEsSetParam}@id),
    secondValue     NBAP-PROTOCOL-IES-PAIR.&SecondValue ({IEsSetParam}@id)
}

-- *****
--
-- Container Lists for Protocol IE Containers
--
-- *****

ProtocolIE-ContainerList {INTEGER : lowerBound, INTEGER : upperBound, NBAP-PROTOCOL-IES : IEsSetParam} ::=
    SEQUENCE (SIZE (lowerBound..upperBound)) OF
    ProtocolIE-Container {{IEsSetParam}}

ProtocolIE-ContainerPairList {INTEGER : lowerBound, INTEGER : upperBound, NBAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=
    SEQUENCE (SIZE (lowerBound..upperBound)) OF
    ProtocolIE-ContainerPair {{IEsSetParam}}

-- *****
--
-- Container for Protocol Extensions
--
-- *****

ProtocolExtensionContainer {NBAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::=
    SEQUENCE (SIZE (1..maxProtocolExtensions)) OF

```

```

ProtocolExtensionField {{ExtensionSetParam}}

ProtocolExtensionField {NBAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::= SEQUENCE {
    id          NBAP-PROTOCOL-EXTENSION.&id  ({ExtensionSetParam}),
    criticality NBAP-PROTOCOL-EXTENSION.&criticality  ({ExtensionSetParam}{@id}),
    extensionValue NBAP-PROTOCOL-EXTENSION.&Extension  ({ExtensionSetParam}{@id})
}

-- *****
--
-- Container for Private IEs
--
-- *****

PrivateIE-Container {NBAP-PRIVATE-IES : IEsSetParam} ::=
    SEQUENCE (SIZE (1..maxPrivateIEs)) OF
    PrivateIE-Field {{IEsSetParam}}

PrivateIE-Field {NBAP-PRIVATE-IES : IEsSetParam} ::= SEQUENCE {
    id          NBAP-PRIVATE-IES.&id
    ({IEsSetParam}),
    criticality NBAP-PRIVATE-IES.&criticality
    ({IEsSetParam}{@id}),
    value      NBAP-PRIVATE-IES.&Value
    ({IEsSetParam}{@id})
}

END

```

9.3.7 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-commonTransportChannelDelete INTEGER ::= 10
id-commonTransportChannelReconfigure INTEGER ::= 11
id-commonTransportChannelSetup INTEGER ::= 12
id-compressedModeCancellation INTEGER ::= 13
id-compressedModeCommit   INTEGER ::= 14
id-compressedModePreparation 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-physicalSharedChannelReconfiguration INTEGER ::= 37
id-privateMessage         INTEGER ::= 22
id-radioLinkAddition      INTEGER ::= 23
id-radioLinkDeletion      INTEGER ::= 24
id-radioLinkFailure       INTEGER ::= 25
id-radioLinkRestoration   INTEGER ::= 26
id-radioLinkSetup         INTEGER ::= 27
id-resourceStatusIndication INTEGER ::= 28
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
```

```
--
```

```
-- *****
```

```

maxPrivateIEs             INTEGER ::= 65535
maxProtocolExtensions     INTEGER ::= 65535
maxProtocolIEs            INTEGER ::= 65535

```

```
-- *****
```

```
--
```

```
-- Lists
```

```
--
```

```
-- *****
```

```
maxNrOfCodes                INTEGER ::= 10
maxNrOfCMPatterns           INTEGER ::= 8
maxNrOfDLCodes              INTEGER ::= 10
maxNrOfErrors                INTEGER ::= 10
maxNrOfTFs                  INTEGER ::= 10
maxNrOfTFsCs                 INTEGER ::= 10
maxNrOfRLs                  INTEGER ::= 10
maxNrOfRLSets               INTEGER ::= 10
maxNrOfDPCHs                INTEGER ::= 10
maxNrOfSCCPCHs              INTEGER ::= 10
maxNrOfPRACHs               INTEGER ::= 10
maxNrOfDCHs                  INTEGER ::= 10
maxNrOfDSCHs                INTEGER ::= 10
maxNrOfFACHs                 INTEGER ::= 10
maxNrOfCCTrCHs              INTEGER ::= 10
maxNrOfPDSCHs               INTEGER ::= 10
maxNrOfPUSCHs                INTEGER ::= 10
maxNrOfPDSCHSets            INTEGER ::= 10
maxNrOfPUSCHSets            INTEGER ::= 10
maxNrOfULTs                  INTEGER ::= 15
maxNrOfUSCHs                 INTEGER ::= 10
maxSF                        INTEGER ::= 10
maxCellInNodeB              INTEGER ::= 10
maxCCPinNodeB               INTEGER ::= 10
maxCTFC-1                    INTEGER ::= 10
maxLocalCellInNodeB         INTEGER ::= 10
maxRACHCell                  INTEGER ::= 10
maxPRACHCell                 INTEGER ::= 10
maxSCCPCHCell               INTEGER ::= 10
maxSCPICHCell                INTEGER ::= 10
maxTTI-count                 INTEGER ::= 10
maxIBSEG                     INTEGER ::= 10
maxIB                        INTEGER ::= 10
maxFACHCell                  INTEGER ::= 10
maxRateMatching              INTEGER ::= 10
maxCodeNrComp-1              INTEGER ::= 10
maxNrOfCodeGroups            INTEGER ::= 10
maxNrOfTFCIGroups            INTEGER ::= 10
maxNrOfTFCI1Combs            INTEGER ::= 10
maxNrOfTFCI2Combs            INTEGER ::= 10
maxCTFC-DCH-1                INTEGER ::= 10
maxCTFC-DSCH-1              INTEGER ::= 10
maxNrOfSF                     INTEGER ::= 8

-- *****
--
-- IEs
--
-- *****
```


id-AICH-InformationItem-AuditRsp	INTEGER ::= 0
id-AICH-InformationItem-ResourceStatusInd	INTEGER ::= 1
id-AICH-ParametersList-CTCH-ReconfRqstFDD	INTEGER ::= 2
id-AllRLItem-DM-Rprt	INTEGER ::= 3
id-AllRLItem-DM-Rsp	INTEGER ::= 4
id-AllRLItem-Set-DM-Rprt	INTEGER ::= 5
id-AllRLItem-Set-DM-Rsp	INTEGER ::= 6
id-BCH-InformationItem-AuditRsp	INTEGER ::= 7
id-BCH-InformationItem-ResourceStatusInd	INTEGER ::= 8
id-BCCH-ModificationTime	INTEGER ::= 9
id-BlockingPriorityIndicator	INTEGER ::= 10
id-Case1Item-Cell-SetupRqstTDD	INTEGER ::= 11
id-Case2Item-Cell-SetupRqstTDD	INTEGER ::= 12
id-Cause	INTEGER ::= 13
id-CCP-InformationItem-AuditRsp	INTEGER ::= 14
id-CCP-InformationList-AuditRsp	INTEGER ::= 15
id-CCP-InformationItem-ResourceStatusInd	INTEGER ::= 16
id-Cell-InformationItem-AuditRsp	INTEGER ::= 17
id-Cell-InformationItem-ResourceStatusInd	INTEGER ::= 18
id-Cell-InformationList-AuditRsp	INTEGER ::= 19
id-CellItem-CM-Rprt	INTEGER ::= 20
id-CellItem-CM-Rqst	INTEGER ::= 21
id-CellItem-CM-Rsp	INTEGER ::= 22
id-CellParameterID	INTEGER ::= 23
id-CFN	INTEGER ::= 24
id-C-ID	INTEGER ::= 25
id-CombiningItem-RL-AdditionFailureFDD	INTEGER ::= 26
id-CombiningItem-RL-AdditionRspFDD	INTEGER ::= 27
id-CombiningItem-RL-AdditionRspTDD	INTEGER ::= 28
id-CombiningItem-RL-SetupFailureFDD	INTEGER ::= 29
id-CombiningItem-RL-SetupRspFDD	INTEGER ::= 30
id-CommonMeasurementObjectType-CM-Rprt	INTEGER ::= 31
id-CommonMeasurementObjectType-CM-Rqst	INTEGER ::= 32
id-CommonMeasurementObjectType-CM-Rsp	INTEGER ::= 33
id-CommonMeasurementType	INTEGER ::= 34
id-CommonPhysicalChannelID	INTEGER ::= 35
id-CommonPhysicalChannelType-CTCH-SetupRqstFDD	INTEGER ::= 36
id-CommonPhysicalChannelType-CTCH-SetupRqstTDD	INTEGER ::= 37
id-CommonTransportChannelType-CTCH-ReconfRqstTDD	INTEGER ::= 38
id-CommonTransportChannelType-CTCH-SetupRsp	INTEGER ::= 39
id-CommunicationControlPortID	INTEGER ::= 40
id-CM-PatternInformationItem-CompressedModePrep	INTEGER ::= 41
id-CM-PatternInformationList-CompressedModePrep	INTEGER ::= 42
id-ConfigurationGenerationID	INTEGER ::= 43
id-CRNC-CommunicationContextID	INTEGER ::= 44
id-CriticalityDiagnostics	INTEGER ::= 45
id-DCH-AddListIE-RL-ReconfReady	INTEGER ::= 46
id-DCH-AddListIE-RL-ReconfRsp	INTEGER ::= 47
id-DCH-AddList-RL-ReconfPrepFDD	INTEGER ::= 48
id-DCH-AddList-RL-ReconfPrepTDD	INTEGER ::= 49
id-DCH-AddList-RL-ReconfRqstFDD	INTEGER ::= 50

id-DCH-AddList-RL-ReconfRqstTDD	INTEGER ::= 51
id-DCH-DeleteList-RL-ReconfPrepFDD	INTEGER ::= 52
id-DCH-DeleteList-RL-ReconfPrepTDD	INTEGER ::= 53
id-DCH-DeleteList-RL-ReconfRqstFDD	INTEGER ::= 54
id-DCH-DeleteList-RL-ReconfRqstTDD	INTEGER ::= 55
id-DCH-InformationList-RL-SetupRqstFDD	INTEGER ::= 56
id-DCH-InformationList-RL-SetupRqstTDD	INTEGER ::= 57
id-DCH-InformationResponseItem-RL-SetupRspTDD	INTEGER ::= 58
id-DCH-InformationResponseListIE-RL-SetupRspTDD	INTEGER ::= 59
id-DCH-ModifyListIE-RL-ReconfReady	INTEGER ::= 60
id-DCH-ModifyListIE-RL-ReconfRsp	INTEGER ::= 61
id-DCH-ModifyList-RL-ReconfPrepFDD	INTEGER ::= 62
id-DCH-ModifyList-RL-ReconfPrepTDD	INTEGER ::= 63
id-DCH-ModifyList-RL-ReconfRqstFDD	INTEGER ::= 64
id-DCH-ModifyList-RL-ReconfRqstTDD	INTEGER ::= 65
id-DedicatedMeasurementObjectType	INTEGER ::= 66
id-DedicatedMeasurementObjectType-DM-Rprt	INTEGER ::= 67
id-DedicatedMeasurementObjectType-DM-Rqst	INTEGER ::= 68
id-DedicatedMeasurementObjectType-DM-Rsp	INTEGER ::= 69
id-DedicatedMeasurementType	INTEGER ::= 70
id-DL-CCTrCH-InformationItem-RL-ReconfRqstTDD	INTEGER ::= 71
id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD	INTEGER ::= 72
id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD	INTEGER ::= 73
id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD	INTEGER ::= 74
id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD	INTEGER ::= 75
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD	INTEGER ::= 76
id-DL-DPCH-InformationItem-RL-AdditionRqstTDD	INTEGER ::= 77
id-DL-DPCH-InformationList-RL-AdditionRqstTDD	INTEGER ::= 78
id-DL-DPCH-InformationList-RL-SetupRqstTDD	INTEGER ::= 79
id-DL-DPCH-InformationListIE-RL-ReconfPrepTDD	INTEGER ::= 80
id-DL-DPCH-Information-RL-ReconfPrepFDD	INTEGER ::= 81
id-DL-DPCH-Information-RL-ReconfRqstFDD	INTEGER ::= 82
id-DL-DPCH-Information-RL-SetupRqstFDD	INTEGER ::= 83
id-DL-ReferencePowerInformationItem-DL-PC-Rqst	INTEGER ::= 84
id-DLReferencePower	INTEGER ::= 85
id-DLReferencePowerList-DL-PC-Rqst	INTEGER ::= 86
id-DSCH-AddItem-RL-ReconfPrepFDD	INTEGER ::= 87
id-DSCH-AddItem-RL-ReconfRqstFDD	INTEGER ::= 88
id-DSCH-AddList-RL-ReconfPrepFDD	INTEGER ::= 89
id-DSCH-AddList-RL-ReconfRqstFDD	INTEGER ::= 90
id-DSCH-DeleteItem-RL-ReconfPrepFDD	INTEGER ::= 91
id-DSCH-DeleteItem-RL-ReconfRqstFDD	INTEGER ::= 92
id-DSCH-DeleteList-RL-ReconfPrepFDD	INTEGER ::= 93
id-DSCH-DeleteList-RL-ReconfRqstFDD	INTEGER ::= 94
id-DSCH-ID	INTEGER ::= 95
id-DSCH-information-AddList-RL-ReconfPrepTDD	INTEGER ::= 96
id-DSCH-Information-AddList-RL-ReconfRqstTDD	INTEGER ::= 97
id-DSCH-Information-DeleteList-RL-ReconfPrepTDD	INTEGER ::= 98
id-DSCH-Information-DeleteList-RL-ReconfRqstTDD	INTEGER ::= 99
id-DSCH-Information-ModifyList-RL-ReconfPrepTDD	INTEGER ::= 100
id-DSCH-Information-ModifyList-RL-ReconfRqstTDD	INTEGER ::= 101

id-DSCH-InformationResponseListIE-RL-AdditionRspTDD	INTEGER ::= 102
id-DSCH-InformationRespListIE-RL-SetupFailureFDD	INTEGER ::= 103
id-DSCH-InformationResponseListIE-RL-SetupRspFDD	INTEGER ::= 104
id-DSCH-InformationResponseListIE-RL-SetupRspTDD	INTEGER ::= 105
id-DSCH-InformationList-RL-SetupRqstFDD	INTEGER ::= 106
id-DSCH-InformationList-RL-SetupRqstTDD	INTEGER ::= 107
id-DSCH-ModifyItem-RL-ReconfPrepFDD	INTEGER ::= 108
id-DSCH-ModifyItem-RL-ReconfRqstFDD	INTEGER ::= 109
id-DSCH-ModifyListIE-RL-ReconfReady	INTEGER ::= 110
id-DSCH-ModifyListIE-RL-ReconfRsp	INTEGER ::= 111
id-DSCH-ModifyList-RL-ReconfPrepFDD	INTEGER ::= 112
id-DSCH-ModifyList-RL-ReconfRqstFDD	INTEGER ::= 113
id-DSCH-SetupListIE-RL-ReconfReady	INTEGER ::= 114
id-DSCH-SetupListIE-RL-ReconfRsp	INTEGER ::= 115
id-FACH-InformationItem-AuditRsp	INTEGER ::= 116
id-FACH-InformationItem-ResourceStatusInd	INTEGER ::= 117
id-FACHItem-CTCH-SetupRsp	INTEGER ::= 118
id-FACH-ParametersList-CTCH-ReconfRqstFDD	INTEGER ::= 119
id-FACH-ParametersList-CTCH-ReconfRqstTDD	INTEGER ::= 120
id-FACH-ParametersListIE-CTCH-SetupRqstFDD	INTEGER ::= 121
id-FACH-ParametersListIE-CTCH-SetupRqstTDD	INTEGER ::= 122
id-IndicationType-ResourceStatusInd	INTEGER ::= 123
id-Local-Cell-ID	INTEGER ::= 124
id-Local-Cell-InformationItem-AuditRsp	INTEGER ::= 125
id-Local-Cell-InformationItem-ResourceStatusInd	INTEGER ::= 126
id-Local-Cell-InformationItem2-ResourceStatusInd	INTEGER ::= 127
id-Local-Cell-InformationList-AuditRsp	INTEGER ::= 128
id-MaxAdjustmentPeriod	INTEGER ::= 129
id-MaxAdjustmentStep	INTEGER ::= 130
id-MaximumTransmissionPower	INTEGER ::= 131
id-MeasurementFilterCoefficient	INTEGER ::= 132
id-MeasurementID	INTEGER ::= 133
id-MIB-SIB-InformationList-SystemInfoUpdateRqst	INTEGER ::= 134
id-NodeBInformation-AuditRep	INTEGER ::= 135
id-No-DeletionItem-SystemInfoUpdate	INTEGER ::= 136
id-No-FailureItem-ResourceStatusInd	INTEGER ::= 137
id-Non-CombiningItem-RL-AdditionFailureFDD	INTEGER ::= 138
id-Non-CombiningItem-RL-AdditionRspFDD	INTEGER ::= 139
id-Non-CombiningItem-RL-AdditionRspTDD	INTEGER ::= 140
id-NonCombiningOrIENotPrsentItem-RL-SetupFailureFDD	INTEGER ::= 141
id-NonCombiningOrIENotPrsentItem-RL-SetupRspFDD	INTEGER ::= 142
id-NodeB-CommunicationContextID	INTEGER ::= 143
id-P-CCPCH-InformationItem-AuditRsp	INTEGER ::= 144
id-P-CCPCH-InformationItem-ResourceStatusInd	INTEGER ::= 145
id-P-CPICH-InformationItem-AuditRsp	INTEGER ::= 146
id-P-CPICH-InformationItem-ResourceStatusInd	INTEGER ::= 147
id-P-SCH-InformationItem-AuditRsp	INTEGER ::= 148
id-P-SCH-InformationItem-ResourceStatusInd	INTEGER ::= 149
id-PCCPCH-Information-Cell-ReconfRqstTDD	INTEGER ::= 150
id-PCCPCH-Information-Cell-SetupRqstTDD	INTEGER ::= 151
id-PCH-InformationItem-ResourceStatusInd	INTEGER ::= 152

id-PCHItem-CTCH-SetupRsp	INTEGER ::= 153
id-PCH-Parameters-CTCH-ReconfRqstFDD	INTEGER ::= 154
id-PCH-Parameters-CTCH-ReconfRqstTDD	INTEGER ::= 155
id-PCH-ParametersItem-CTCH-SetupRqstFDD	INTEGER ::= 156
id-PCH-ParametersItem-CTCH-SetupRqstTDD	INTEGER ::= 157
id-PCH-InformationItem-AuditRsp	INTEGER ::= 158
id-PICH-InformationItem-ResourceStatusInd	INTEGER ::= 159
id-PD	INTEGER ::= 160
id-PDSCH-Information-AddListIE-PSCH-ReconfRqst	INTEGER ::= 161
id-PDSCH-Information-ModifyListIE-PSCH-ReconfRqst	INTEGER ::= 162
id-PDSCHSets-AddList-PSCH-ReconfRqst	INTEGER ::= 163
id-PDSCHSets-DeleteList-PSCH-ReconfRqst	INTEGER ::= 164
id-PDSCHSets-ModifyList-PSCH-ReconfRqst	INTEGER ::= 165
id-PICH-InformationItem-AuditRsp	INTEGER ::= 166
id-PICH-Parameters-CTCH-ReconfRqstFDD	INTEGER ::= 167
id-PICH-Parameters-CTCH-ReconfRqstTDD	INTEGER ::= 168
id-PowerAdjustmentType	INTEGER ::= 169
id-PRACH-InformationItem-AuditRsp	INTEGER ::= 170
id-PRACH-InformationItem-ResourceStatusInd	INTEGER ::= 171
id-PRACHItem-CTCH-SetupRqstFDD	INTEGER ::= 172
id-PRACHItem-CTCH-SetupRqstTDD	INTEGER ::= 173
id-PRACH-ParametersList-CTCH-ReconfRqstFDD	INTEGER ::= 174
id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD	INTEGER ::= 175
id-PrimaryCCPCH-Information-Cell-SetupRqstFDD	INTEGER ::= 176
id-PrimaryCPICH-Information-Cell-ReconfRqstFDD	INTEGER ::= 177
id-PrimaryCPICH-Information-Cell-SetupRqstFDD	INTEGER ::= 178
id-PrimarySCH-Information-Cell-ReconfRqstFDD	INTEGER ::= 179
id-PrimarySCH-Information-Cell-SetupRqstFDD	INTEGER ::= 180
id-PrimaryScramblingCode	INTEGER ::= 181
id-ProcedureScopeType-DL-PC-Rqst	INTEGER ::= 182
id-SCH-Information-Cell-ReconfRqstTDD	INTEGER ::= 183
id-SCH-Information-Cell-SetupRqstTDD	INTEGER ::= 184
id-PUSCH-Information-AddListIE-PSCH-ReconfRqst	INTEGER ::= 185
id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst	INTEGER ::= 186
id-PUSCHSets-AddList-PSCH-ReconfRqst	INTEGER ::= 187
id-PUSCHSets-DeleteList-PSCH-ReconfRqst	INTEGER ::= 188
id-PUSCHSets-ModifyList-PSCH-ReconfRqst	INTEGER ::= 189
id-RACH-InformationItem-AuditRsp	INTEGER ::= 190
id-RACH-InformationItem-ResourceStatusInd	INTEGER ::= 191
id-RACHItem-CTCH-SetupRsp	INTEGER ::= 192
id-RACHItem-CM-Rprt	INTEGER ::= 193
id-RACHItem-CM-Rqst	INTEGER ::= 194
id-RACHItem-CM-Rsp	INTEGER ::= 195
id-RACH-ParametersItem-CTCH-SetupRqstFDD	INTEGER ::= 196
id-RACH-ParameterItem-CTCH-SetupRqstTDD	INTEGER ::= 197
id-ReportCharacteristics	INTEGER ::= 198
id-Reporting-Object-RL-FailureInd	INTEGER ::= 199
id-Reporting-Object-RL-RestoreInd	INTEGER ::= 200
id-RL-ID	INTEGER ::= 201
id-RL-InformationItem-DM-Rprt	INTEGER ::= 202
id-RL-InformationItem-DM-Rqst	INTEGER ::= 203

id-RL-InformationItem-DM-Rsp	INTEGER ::= 204
id-RL-InformationItem-RL-AdditionRqstFDD	INTEGER ::= 205
id-RL-informationItem-RL-DeletionRqst	INTEGER ::= 206
id-RL-InformationItem-RL-FailureInd	INTEGER ::= 207
id-RL-InformationItem-RL-ReconfPrepFDD	INTEGER ::= 208
id-RL-InformationItem-RL-ReconfRqstFDD	INTEGER ::= 209
id-RL-InformationItem-RL-RestoreInd	INTEGER ::= 210
id-RL-InformationItem-RL-SetupRqstFDD	INTEGER ::= 211
id-RL-InformationList-RL-AdditionRqstFDD	INTEGER ::= 212
id-RL-informationList-RL-DeletionRqst	INTEGER ::= 213
id-RL-InformationList-RL-ReconfPrepFDD	INTEGER ::= 214
id-RL-InformationList-RL-ReconfRqstFDD	INTEGER ::= 215
id-RL-InformationList-RL-SetupRqstFDD	INTEGER ::= 216
id-RL-InformationResponseItem-RL-AdditionRspFDD	INTEGER ::= 217
id-RL-InformationResponseItem-RL-ReconfReady	INTEGER ::= 218
id-RL-InformationResponseItem-RL-ReconfRsp	INTEGER ::= 219
id-RL-InformationResponseItem-RL-SetupRspFDD	INTEGER ::= 220
id-RL-InformationResponseList-RL-AdditionRspFDD	INTEGER ::= 221
id-RL-InformationResponseList-RL-ReconfReady	INTEGER ::= 222
id-RL-InformationResponseList-RL-ReconfRsp	INTEGER ::= 223
id-RL-InformationResponseList-RL-SetupRspFDD	INTEGER ::= 224
id-RL-InformationResponse-RL-AdditionRspTDD	INTEGER ::= 225
id-RL-InformationResponse-RL-SetupRspTDD	INTEGER ::= 226
id-RL-Information-RL-AdditionRqstTDD	INTEGER ::= 227
id-RL-Information-RL-ReconfRqstTDD	INTEGER ::= 228
id-RL-Information-RL-ReconfPrepTDD	INTEGER ::= 229
id-RL-Information-RL-SetupRqstTDD	INTEGER ::= 230
id-RLItem-DM-Rprt	INTEGER ::= 231
id-RLItem-DM-Rqst	INTEGER ::= 232
id-RLItem-DM-Rsp	INTEGER ::= 233
id-RLItem-RL-FailureInd	INTEGER ::= 234
id-RLItem-RL-RestoreInd	INTEGER ::= 235
id-RL-ReconfigurationFailureItem-RL-ReconfFailure	INTEGER ::= 236
id-RL-ReconfigurationFailureList-RL-ReconfFailure	INTEGER ::= 237
id-RL-Set-InformationItem-DM-Rprt	INTEGER ::= 238
id-RL-SetItem-DM-Rqst	INTEGER ::= 239
id-RL-Set-InformationItem-DM-Rsp	INTEGER ::= 240
id-RL-Set-InformationItem-RL-FailureInd	INTEGER ::= 241
id-RL-Set-InformationItem-RL-RestoreInd	INTEGER ::= 242
id-RL-SetItem-DM-Rprt	INTEGER ::= 243
id-RL-SetItem-DM-Rsp	INTEGER ::= 244
id-RL-SetItem-RL-FailureInd	INTEGER ::= 245
id-RL-SetItem-RL-RestoreInd	INTEGER ::= 246
id-S-CCPCH-InformationItem-AuditRsp	INTEGER ::= 247
id-S-CCPCH-InformationItem-ResourceStatusInd	INTEGER ::= 248
id-S-CPICH-InformationItem-AuditRsp	INTEGER ::= 249
id-S-CPICH-InformationItem-ResourceStatusInd	INTEGER ::= 250
id-SCH-InformationItem-AuditRsp	INTEGER ::= 251
id-SCH-InformationItem-ResourceStatusInd	INTEGER ::= 252
id-S-SCH-InformationItem-AuditRsp	INTEGER ::= 253
id-S-SCH-InformationItem-ResourceStatusInd	INTEGER ::= 254

id-Secondary-CCPCHItem-CTCH-SetupRqstFDD	INTEGER ::= 255
id-Secondary-CCPCHItem-CTCH-SetupRqstTDD	INTEGER ::= 256
id-Secondary-CCPCHListIE-CTCH-ReconfRqstTDD	INTEGER ::= 257
id-Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD	INTEGER ::= 258
id-Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD	INTEGER ::= 259
id-SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD	INTEGER ::= 260
id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD	INTEGER ::= 261
id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD	INTEGER ::= 262
id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD	INTEGER ::= 263
id-SecondarySCH-Information-Cell-ReconfRqstFDD	INTEGER ::= 264
id-SecondarySCH-Information-Cell-SetupRqstFDD	INTEGER ::= 265
id-SegmentInformationListIE-SystemInfoUpdate	INTEGER ::= 266
id-ServiceImpactingItem-ResourceStatusInd	INTEGER ::= 267
id-SFN	INTEGER ::= 268
id-ShutdownTimer	INTEGER ::= 269
id-Successful-RL-InformationRespItem-RL-AdditionFailureFDD	INTEGER ::= 270
id-Successful-RL-InformationRespItem-RL-SetupFailureFDD	INTEGER ::= 271
id-Successful-RL-InformationRespList-RL-AdditionFailureFDD	INTEGER ::= 272
id-Successful-RL-InformationRespList-RL-SetupFailureFDD	INTEGER ::= 273
id-SyncCase	INTEGER ::= 274
id-SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH	INTEGER ::= 275
id-T-Cell	INTEGER ::= 276
id-TimeSlotConfigurationList-Cell-ReconfRqstTDD	INTEGER ::= 277
id-TimeSlotConfigurationList-Cell-SetupRqstTDD	INTEGER ::= 278
id-TransmissionDiversityApplied	INTEGER ::= 279
id-UARFCNforNt	INTEGER ::= 280
id-UARFCNforNd	INTEGER ::= 281
id-UARFCNforNu	INTEGER ::= 282
id-UL-CCTrCH-InformationItem-RL-ReconfRqstTDD	INTEGER ::= 283
id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD	INTEGER ::= 284
id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD	INTEGER ::= 285
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD	INTEGER ::= 286
id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD	INTEGER ::= 287
id-UL-CCTrCH-InformationList-RL-SetupRqstTDD	INTEGER ::= 288
id-UL-DPCH-InformationItem-RL-AdditionRqstTDD	INTEGER ::= 289
id-UL-DPCH-InformationList-RL-AdditionRqstTDD	INTEGER ::= 290
id-UL-DPCH-InformationList-RL-SetupRqstTDD	INTEGER ::= 291
id-UL-DPCH-InformationListIE-RL-ReconfPrepTDD	INTEGER ::= 292
id-UL-DPCH-Information-RL-ReconfPrepFDD	INTEGER ::= 293
id-UL-DPCH-Information-RL-ReconfRqstFDD	INTEGER ::= 294
id-UL-DPCH-Information-RL-SetupRqstFDD	INTEGER ::= 295
id-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD	INTEGER ::= 296
id-Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD	INTEGER ::= 297
id-Unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD	INTEGER ::= 298
id-Unsuccessful-RL-InformationRespList-RL-SetupFailureFDD	INTEGER ::= 299
id-Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD	INTEGER ::= 300
id-Unsuccessful-RL-InformationResp-RL-SetupFailureTDD	INTEGER ::= 301
id-USCH-information-AddList-RL-ReconfPrepTDD	INTEGER ::= 302
id-USCH-Information-AddList-RL-ReconfRqstTDD	INTEGER ::= 303
id-USCH-Information-DeleteList-RL-ReconfPrepTDD	INTEGER ::= 304
id-USCH-Information-DeleteList-RL-ReconfRqstTDD	INTEGER ::= 305

id-USCH-Information-ModifyList-RL-ReconfPrepTDD	INTEGER ::= 306
id-USCH-Information-ModifyList-RL-ReconfRgstTDD	INTEGER ::= 307
id-USCH-InformationResponseListIE-RL-AdditionRspTDD	INTEGER ::= 308
id-USCH-InformationResponseListIE-RL-SetupRspTDD	INTEGER ::= 309
id-USCH-InformationList-RL-SetupRgstTDD	INTEGER ::= 310
id-USCH-ModifyListIE-RL-ReconfReady	INTEGER ::= 311
id-USCH-ModifyListIE-RL-ReconfRsp	INTEGER ::= 312
id-USCH-SetupListIE-RL-ReconfReady	INTEGER ::= 313
id-USCH-SetupListIE-RL-ReconfRsp	INTEGER ::= 314

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 three classes:

- Transfer Syntax Error
- Abstract Syntax Error
- Logical Error

Protocol errors can occur in the following functions within a receiving node:



Figure 38: Protocol Errors in NBAP.

10.2 Transfer Syntax Error

A Transfer Syntax Error occurs when the receiver is not able to decode the received physical message. Transfer syntax errors are always detected in the process of ASN.1 decoding. If a Transfer Syntax Error occurs, the receiver should initiate Error Indication procedure with appropriate cause value for the Transfer Syntax protocol error.

Examples for Transfer Syntax Errors are:

- Violation of value ranges in ASN.1 definition of messages. e.g.: If an IE has a defined value range of 0 to 10 (ASN.1: INTEGER (0..10)), and 12 will be received, then this will be treated as a transfer syntax error.
- Violation in list element constraints. e.g.: If a list is defined as containing 1 to 10 elements, and 12 elements will be received, then this case will be handled as a transfer syntax error.
- Missing mandatory elements in ASN.1 SEQUENCE definitions (as sent by the originator of the message).
- Wrong order of elements in ASN.1 SEQUENCE definitions (as sent by the originator of the message).

10.3 Abstract Syntax Error

An Abstract Syntax Error occurs when the receiving functional NBAP entity receives IEs or IE groups that cannot be understood. The abstract syntax error also appears if the logical range of an IE is violated (e.g.: ASN.1 definition: 0 to 15, the logical range is 0 to 10 (values 11 to 15 are undefined), and 12 will be received; this case will be handled as an abstract syntax error using criticality information sent by the originator of the message)

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 Definition of Criticality Information

In the NBAP messages there is criticality information set for individual IEs and/or IE groups. This criticality information instructs the receiver how to act when receiving an IE or an IE group that is not comprehended, i.e. the entire item (IE or IE group) which is not (fully or partially) comprehended shall be treated in accordance with its own criticality information as specified in chapter 10.3.3.

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/IE group due to which Abstract Syntax Error occurred in accordance with chapter 10.3.3.

The receiving node shall take different actions depending on the value of the Criticality Information. The three possible values of the Criticality Information for an IE/IE group are:

- Reject IE
- Ignore IE and Notify Sender
- Ignore IE

10.3.3 Handling of the Criticality Information at Reception

10.3.3.1 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.

10.3.3.2 IEs other than the Procedure Code

The receiving node shall treat the different types of criticality information of an IE/IE group other than the *Procedure Code* according to the following:

Reject IE:

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the rejection of one or more IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure.
- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall initiate the Error Indication procedure.
- If a *response* message is received containing one or more IEs/IE groups marked with "*Reject IE*" that the receiving node does not comprehend, the receiving node shall initiate local error handling.

Ignore IE and Notify Sender:

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using only the understood IEs/IE groups and report in the response message of the procedure that one or more IEs/IE groups have been ignored.
- If a *response* message is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups and initiate the Error Indication procedure.

Ignore IE:

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups and continue with the procedure as if the not comprehended IEs/IE groups were not received using only the understood IEs/IE groups.

10.4 Logical Error

Logical error situations occur when a message is comprehended correctly, but the information contained within the message is not valid (i.e. semantic error), or describes a procedure which is not compatible with the state of the receiver. In these conditions, the following behaviour shall be performed (unless otherwise specified) as defined by the class of the elementary procedure, irrespective of the criticality of the IEs/IE groups containing the erroneous values.

Class 1:

Where the logical error occurs in a request message of a class 1 procedure, and the procedure has a failure message, the failure message shall be sent with an appropriate cause value.

Typical cause values are:

- Protocol Causes:
 1. Semantic Error

2. Message not compatible with receiver state

Where the logical error is contained in a request message of a class 1 procedure, and the procedure does not have a failure message, the 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.

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
RAN_07	3.0.0	-	-	3.1.0	Approved at TSG RAN #7

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History

Document history		
V3.1.0	March 2000	Publication