

**TSG-RAN Meeting #9
Hawaii, US, 20 - 22 September 2000**

TSGRP#9(00)0388

Title: Agreed CRs to TS 25.433

Source: TSG-RAN WG3

Agenda item: 5.3.3

Tdoc_Num	Specification	CR_Num	Revision_Num	CR_Subject	CR_Category	WG_Status	Cur_Ver_Num	New_Ver_Num
R3-002184	25.433	221		RACH Transport format Correction in TDD	F	agreed	3.2.0	3.3.0
R3-002209	25.433	222	1	Measurement alignment	F	agreed	3.2.0	3.3.0
R3-002320	25.433	224	2	Non-core Features in NBAP	F	agreed	3.2.0	3.3.0
R3-002205	25.433	225		Limited power increase chapter	F	agreed	3.2.0	3.3.0
R3-002207	25.433	226	1	Correction of UL-FP mode and Measurement filter	F	agreed	3.2.0	3.3.0
R3-002227	25.433	227		Remove Unnecessary use of the ProtocolIE-Container	F	agreed	3.2.0	3.3.0
R3-002234	25.433	228		Correction to Compressed Mode	F	agreed	3.2.0	3.3.0
R3-002261	25.433	233		Editorial Correction - Min SF	F	agreed	3.2.0	3.3.0
R3-002362	25.433	234	3	Update of RL-SETUP procedure text, addressing	F	agreed	3.2.0	3.3.0
R3-002334	25.433	235	1	Physical Shared Channel procedure clarifications	F	agreed	3.2.0	3.3.0
R3-002294	25.433	236		Clarification of the Resource Status Indication procedure	F	agreed	3.2.0	3.3.0
R3-002363	25.433	237	1	RL addition procedure text update.	F	agreed	3.2.0	3.3.0

R3-002319	25.433	238		Procedure text proposal for optional IE in common	F	agreed	3.2.0	3.3.0
R3-002325	25.433	239		New Abstract syntax error for wrong order or number or IEs	F	agreed	3.2.0	3.3.0
R3-002383	25.433	240	4	NBAP Common IEs extensibility corrections	F	agreed	3.2.0	3.3.0
R3-002374	25.433	241	1	NBAP FDD IE's extension capability	F	agreed	3.2.0	3.3.0
R3-002380	25.433	242	2	Extensibility for NBAP-TDD-les	F	agreed	3.2.0	3.3.0
R3-002381	25.433	243	3	Updated NBAP Sync RL Reconfiguration Procedure	F	agreed	3.2.0	3.3.0
R3-002366	25.433	244		procedure rejection in NBAP due to unknown procedure ID	F	agreed	3.2.0	3.3.0
R3-002370	25.433	246		Correction to range of repetition indicator	F	agreed	3.2.0	3.3.0

CHANGE REQUEST

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

TS 25.433 CR 221

Current Version: **3.2.0**

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

↑ CR number as allocated by MCC support team

For submission to: **RAN#9**
 list expected approval meeting # here ↑

For approval
 For information

Strategic
 Non-strategic (for SMG use only)

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

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

Source: R-WG3 **Date:** 08/2000

Subject: RACH Transport format Correction in TDD

Work item:

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

Reason for change: The TFCS and TFS for the RACH in TDD were not included in the Common channel setup

Clauses affected: 9.1.3, 9.3

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

Other comments:

9.1.3 COMMON TRANSPORT CHANNEL SETUP REQUEST

9.1.3.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject
CHOICE common physical channel to be configured					YES	ignore
>Secondary CCPCH					YES	reject
>Secondary CCPCH		1				
>>Common Physical Channel ID	M		9.2.1.13		–	
>>FDD S-CCPCH Offset	M		9.2.2.15	Corresponds to [7]: s-CCPCH,k	–	
>>DL Scrambling Code	M		9.2.2.13		–	
>>FDD DL Channelisation Code Number	M		9.2.2.14		–	
>>TFCS	M		9.2.1.54	For the DL.	–	
>>Secondary CCPCH Slot Format	M		9.2.2.43		–	
>>>TFCI Presence	C – SlotFormat		9.2.1.57		–	
>>Multiplexing Position	M		9.2.2.23		–	
>>Power Offset Information		1			–	
>>>PO1	M		Power Offset	Power offset for the TFCI bits	–	
>>>PO3	M		Power Offset	Power offset for the pilot bits	–	
>>STTD Indicator	M		9.2.2.47		–	
>>FACH Parameters	C-choiceCh	0..<maxnoofFACHs>			GLOBAL	reject
>>>Common transport channel ID	M		9.2.1.14		–	
>>>Transport Format Set	M		9.2.1.59	For the DL.	–	
>>>ToAWS	M		9.2.1.61		–	
>>>ToAWE	M		9.2.1.60		–	
>>>Max FACH Power	M		DL Power 9.2.1.21	Maximum allowed power on the FACH.	–	
>>PCH Parameters	C-choiceCh	0..1			YES	reject
>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>Transport Format Set	M		9.2.1.59	For the DL.	–	
>>>ToAWS	M		9.2.1.61		–	
>>>ToAWE	M		9.2.1.60		–	

>>>PCH Power	M		DL Power 9.2.1.21		-	
>>>PICH Parameters		1			-	
>>>>Common Physical Channel ID	M		9.2.1.13		-	
>>>>DL Scrambling Code	M		9.2.2.13		-	
>>>>FDD DL Channelisation Code Number	M		9.2.2.14		-	
>>>>PICH Power	M		DL Power 9.2.1.21	Power to be used on the PICH.	-	
>>>>PICH Mode	M		9.2.2.26	Number of PI per frame	-	
>>>>STTD Indicator	M		9.2.2.48		-	
>PRACH					YES	reject
>PRACH		1				
>>Common Physical Channel ID	M		9.2.1.13		-	
>>Scrambling Code Number	M		9.2.2.42		-	
>>TFCS	M		9.2.1.58	For the UL.	-	
>>Preamble Signatures	M		9.2.2.31		-	
>>Allowed Slot Format Information		1..<Maximum of Slots PRA CH>			-	
>>>RACH Slot Format	M		9.2.2.37		-	
>>RACH Sub Channel Numbers	M		9.2.2.38		-	
>>Puncture Limit	M		9.2.1.50	For the UL	-	
>>Preamble threshold	M		9.2.2.32		-	
>>RACH Parameters		1			YES	reject
>>>Common Transport Channel ID	M		9.2.1.14		-	
>>>Transport Format Set	M		9.2.1.59	For the UL.	-	
>>>AICH Parameters		1			-	
>>>>Common Physical Channel ID	M		9.2.1.13		-	
>>>>DL Scrambling Code	M		9.2.2.13		-	
>>>>AICH Transmission Timing	M		9.2.2.1		-	
>>>>FDD DL Channelisation Code Number	M		9.2.2.14		-	
>>>>AICH Power	M		DL Power 9.2.1.21		-	
>>>>STTD Indicator	M		9.2.2.47		-	
>PCPCHes					YES	Reject
>>CPCH Parameters		1			-	
>>>Common Transport Channel ID	M				-	
>>>Transport Format Set	M			For the UL.	-	
>>>AP Preamble Scrambling Code	M		CPCH Scrambling Code Number		-	
>>>CD Preamble	M		CPCH		-	

Scrambling Code			Scrambling Code Number			
>>>TFCS	M			For the UL	-	
>>>CD Signatures	O		Preamble Signatures	Note: When not present, all CD signatures are to be used.	-	
>>>CD Sub Channel Numbers	C-CDSig				-	
>>>Puncture Limit	M			For the UL	-	
>>>CPCH UL DPCCH Slot Format	M			For UL CPCH message control part	-	
>>>UL SIR	M		UL SIR		-	
>>>Initial DL transmission Power	M		DL Power		-	
>>>Maximum DL Power	M		DL Power		-	
>>>Minimum DL Power	M		DL Power		-	
>>>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				-	
>>>N_Start_Message	M				-	
>>>N_EOT	M				-	
>>>Channel Assignment Indication	M				-	
>>>CPCH Allowed Total Rate	M				-	
>>> PCPCH Channel Information		<i>1..<maxnoofPCPCHs></i>			-	
>>>>Common Physical Channel ID	M				-	
>>>>CPCH Scrambling Code Number	M			For UL PCPCH	-	
>>>>DL Scrambling Code	M			For DL CPCH message part	-	
>>>>FDD DL Channelisation Code Number	M			For DL CPCH message part	-	
>>>>PCP Length	M				-	
>>>> UCSM Information	C-NCA	<i>1</i>			-	
>>>>>Min UL Channelisation Code Length	M				-	
>>>>>NF_max	M				-	
>>>>> Channel		<i>0..<max></i>			-	

Request Parameters		<i>xAPSig Num></i>				
>>>>>AP Preamble Signature	M				-	
>>>>>AP Sub Channel Number	O				-	
>>>VCAM Mapping Information	C-CA	<i>1..<max noofL en></i>		Refer to TS [18]	-	
>>>>Min UL Channelisation Code Length	M				-	
>>>>NF_max	M				-	
>>>>Max Number of PCPCHes	M				-	
>>>>SF Request Parameters		<i>1..<max APSig Num></i>			-	
>>>>>AP Preamble Signature	M				-	
>>>>>AP Sub Channel Number	O				-	
>>>AP-AICH Parameters		<i>1</i>			-	
>>>>>Common Physical Channel ID	M				-	
>>>>>DL Scrambling Code	M				-	
>>>>>FDD DL Channelisation Code Number	M				-	
>>>>>AP-AICH Power	M		DL Power		-	
>>>>>CSICH Power	M		DL Power	For CSICH bits at end of AP-AICH slot	-	
>>>>>STTD Indicator	O				-	
>>>CD/CA-ICH Parameters		<i>1</i>			-	
>>>>>Common Physical Channel ID	M				-	
>>>>>DL Scrambling Code	M				-	
>>>>>FDD DL Channelisation Code Number	M				-	
>>>>>CD/CA-ICH Power	M		DL Power		-	
>>>>>STTD Indicator	O				-	

Condition	Explanation
SlotFormat	This IE is present only if the Secondary CCPCH Slot Format is equal to any of the value 8 to 17
ChoiceCh	One of the channels FACH or PCH or both must be present.
CDSig	The IE may be present if the Available CD Signatures is present.
CA	The IE must be present if the Channel Assignment Indication is set to 'CA Active'.
NCA	The IE must be present if the Channel Assignment Indication is set to 'CA Inactive'.

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

9.1.3.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject
CHOICE <i>common physical channels to be configured</i>					YES	ignore
<i>Secondary CCPCHs</i>					YES	reject
>CCTrCH ID	M		9.2.3.3	For DL CCTrCH supporting one or several Secondary CCPCHs	–	
>TFCS	M		9.2.1.5	For DL CCTrCH supporting one or several Secondary CCPCHs	–	
>Secondary CCPCH		<i>1..<maxnoofS - CCPCHs></i>			GLOBAL	reject
>>Common physical channel ID	M		9.2.1.13		–	
>>TDD Channelisation Code	M		9.2.3.19		–	
>>Time Slot	M		9.2.3.23		–	
>>Burst Type	M		9.2.3.2	Long or short midamble	–	
>>Midamble shift	M		9.2.3.7		–	
>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>S-CCPCH Power	M		DL Power 9.2.1.21		–	
>>FACH	C ChoiceCh	<i>0..<maxnoofF</i>			GLOBAL	reject

		<i>ACHs></i>				
>>>Common transport channel ID	M		9.2.1.61		–	
>>>Transport Format Set	M		9.2.1.59	For the DL.	–	
>>>ToAWS	M		9.2.1.61		–	
>>>ToAWE	M		9.2.1.60		–	
>>PCH	C ChoiceCh	0..1			GLOBAL	reject
>>>Common transport channel ID	M		9.2.1.13		–	
>>>Transport Format Set	M		9.2.1.59	For the DL.	–	
>>>ToAWS	M		9.2.1.61		–	
>>>ToAWE	M		9.2.1.60		–	
>>>PICH Parameters		1			–	
>>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>>TDD Channelisation Code	M		9.2.3.19		–	
>>>>Time Slot	M		9.2.3.23		–	
>>>>Burst type	O		9.2.3.2		–	
>>>>Midamble shift	M		9.2.3.7		–	
>>>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>>>Repetition period	M		9.2.3.16		–	
>>>>Repetition length	M		9.2.3.15		–	
>>>>Paging Indicator Length	M		9.2.3.8		–	
>>>>PICH Power	M		DL Power 9.2.1.21		YES	reject
<i>PRACH</i>						
>PRACH	M	1				
>>Common physical channel ID	M		9.2.1.13			
>>TFCS	M		9.2.1.54			
>>Time Slot	M		9.2.3.23			
>>TDD Channelisation Code	M		9.2.3.19			
>>Max PRACH Midamble Shifts	O		9.2.3.6			
>>PRACH Midamble	M		9.2.3.14			
>>RACH		1			–	
>>>Common transport channel ID	M		9.2.1.13		–	
>>>Transport Format Set	M		9.2.1.59	For the UL		

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.

```

-- *****
--
-- 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,
  tFCS                             TFCS,
  timeslot                          TimeSlot,
  tdd-ChannelisationCode            TDD-ChannelisationCode,
  maxPRACH-MidambleShifts          MaxPRACH-MidambleShifts  OPTIONAL,
  pRACH-Midamble                    PRACH-Midamble,

```

```

    rACH
    iE-Extensions
    ...
}

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,
    uL-TransportFormatSet TransportFormatSet,
    iE-Extensions ProtocolExtensionContainer { { RACH-ParameterItem-CTCH-SetupRqstTDD-ExtIEs } } OPTIONAL,
    ...
}

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

```

CHANGE REQUEST		Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.	
25.433	CR	222r1	Current Version: 3.2.0
GSM (AA.BB) or 3G (AA.BBB) specification number ↑		↑ CR number as allocated by MCC support team	
For submission to: TSG RAN #9 <i>list expected approval meeting # here</i> ↑	For approval For information	<input checked="" type="checkbox"/> <input type="checkbox"/>	strategic <input type="checkbox"/> non-strategic <input type="checkbox"/> (for SMG use only)

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

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

Source: R-WG3 **Date:** August 2000

Subject: Measurement alignment

Work item:

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

Reason for change:

R3-001811 contained a request to WG1, WG2 and WG4 to include relevant information for the Acknowledged PRACH preambles and SIRerror measurements in their specifications so that this information can be removed from the WG3 specifications. This CR proposes to remove information about the above measurements from 25.433. The following changes are proposed:

- Rename Acknowledged RA tries to Acknowledged PRACH preambles, as it is the same measurement and is defined in 25.215.
- Remove the definition of SIRerror as it is included in 25.215 (WG1)
- Remove mapping and accuracy requirements for both measurements as this information is planned to be included in 25.133 (WG4)

In addition, this CR proposes to correct the following measurement definitions:

- Tagging for FDD/TDD measurements added
- Measurement values in Measurement Initiation Response messages changed from mandatory to optional since these measured values are only present in case the Report Characteristics IE is set to "On-Demand".
- Timeslot ISCP in Common Measurement redefined to UL-Timeslot ISCP

CR222r1:

- Choice in Common/Dedicated Measurement Initiation Response modified to optional instead the Common/Dedicated Measurement values
- Modification for Choice Object Type "CPCH" in Common Measurement Initiation Request removed
- ASN.1 code added

Consequences if this CR is not accepted:

- TS in WG1, WG3 and WG4 are inconsistently
- Inconsistent definition of Measurement Initiation Response message in 25.433

Clauses affected: 8.2.8, 8.3.8, 9.1.18, 9.1.19, 9.1.21, 9.1.52, 9.1.53, 9.1.55, 9.2.1.11, 9.2.1.12, 9.2.1.23, 9.2.1.24, 9.2.1.43, 9.2.1.44, 9.3.3, 9.3.4

Other specs

Other 3G core specifications

X

→ List of CRs:
→ List of CRs:
→ List of CRs:
→ List of CRs:
→ List of CRs:

R1-000899/CR067 on 25.215
R3-002208/CR183r1 on 25.423

affected:

Other GSM core specifications
MS test specifications
BSS test specifications
O&M specifications

Other comments:

8.2.8 Common Measurement Initiation

8.2.8.1 General

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

8.2.8.2 Successful Operation

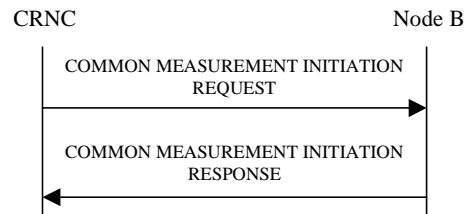


Figure 11: Common Measurement Initiation procedure: Successful Operation

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

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

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

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

Report characteristics

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

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

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

If the *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.

Higher layer filtering

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

The averaging shall be performed according to the following formula.

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

The variables in the formula are defined as follows

F_n is the updated filtered measurement result

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

M_n is the latest received measurement result from physical layer measurements

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

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

~~The physical layer measurement results are sampled once every measurement period. For most measurements the measurement period and the accuracy are defined in [22] / [23]. For those measurements not covered in [22] / [23], the following measurement period and accuracy are applicable:~~

Measurement	Accuracy	Measurement period
Acknowledged RA tries Value	±0%	20ms

Response message

If the Node B was able to initiate the measurement requested by the CRNC it shall respond with the COMMON MEASUREMENT INITIATION RESPONSE message sent over the Node B control port. The message shall include the same Measurement Id that was used in the measurement request. Only in the case when the *Report Characteristics* IE is set to "On-Demand", the COMMON MEASUREMENT INITIATION RESPONSE message shall contain the measurement result.

8.2.8.3 Unsuccessful Operation

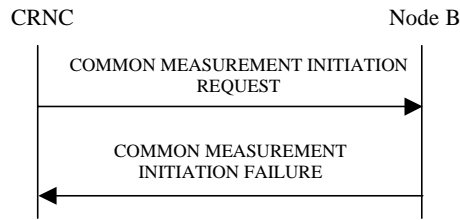


Figure 12: Common Measurement Initiation procedure: Unsuccessful Operation

If the Common Measurement Type received in the *Common Measurement Type* IE is not defined in ref. [4] or [5] to be measured on the Common Measurement Object Type received in the *Common Measurement Object Type* IE in the COMMON MEASUREMENT INITIATION REQUEST message the Node B shall regard the Common Measurement Initiation procedure as failed. ~~For measurements not defined in ref. [4] or [5] the Node B shall regard the measurement as failed unless the *Common Measurement Object Type* IE has the following value(s):~~

Common Measurement Type	Common Measurement Object Type
Acknowledged RA tries Value	"RACH"

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

Typical cause values are as follows:

Radio Network Layer Cause

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

8.2.8.4 Abnormal Conditions

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8.3.8 Dedicated Measurement Initiation

8.3.8.1 General

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

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

8.3.8.2 Successful Operation

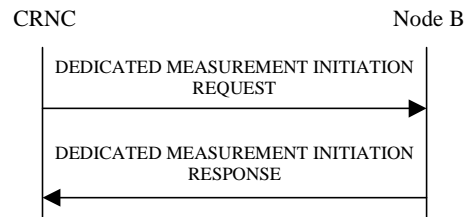


Figure 38: Dedicated Measurement Initiation procedure: Successful Operation

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 controlled via the Communication Control Port on which the DEDICATED MEASUREMENT INITIATION REQUEST message was received. Otherwise, this measurement request shall apply for the requested Node B Communication Context ID only.

If the *Dedicated Measurement Object Type* 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 Type* 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 Type* 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 Type* 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.]

Report characteristics

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

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

If the *Report Characteristics* IE is set to 'Periodic', the Node B shall periodically initiate 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.

Higher layer filtering

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

The averaging shall be performed according to the following formula.

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

The variables in the formula are defined as follows

F_n is the updated filtered measurement result

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

M_n is the latest received measurement result from physical layer measurements

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

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

~~The physical layer measurement results are sampled once every measurement period. For most measurements the measurement period and the accuracy are defined in [22] / [23]. For those measurements not covered in [22] / [23], the following measurement period and accuracy are applicable:~~

Measurement	Accuracy	Measurement period
SIR error	Determined by accuracy of SIR value used for calculating the SIR error (see [22]/[23])	See SIR measurement in [22]/[23]

Response message

If the Node B was able to initiate the measurement requested by the CRNC it shall respond with the DEDICATED

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

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

8.3.8.3 Unsuccessful Operation

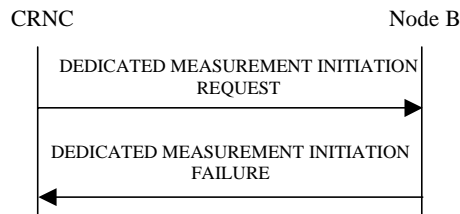


Figure 39: Dedicated Measurement Request procedure: Unsuccessful Operation

If the Dedicated Measurement Type received in the *Dedicated Measurement Type* IE is not defined in ref. [4] or [5] to be measured on the Dedicated Measurement Object Type received in the *Dedicated Measurement Object Type* IE in the DEDICATED MEASUREMENT INITIATION REQUEST message the Node B shall regard the Dedicated Measurement Initiation procedure as failed. ~~For measurements not defined in ref. [4] or [5] the Node B shall regard the measurement as failed unless the *Dedicated Measurement Object Type* IE has the following value(s):~~

Dedicated Measurement Type	Dedicated Measurement Object Type
SIR Error	"RLS" [FDD] or "RL" [FDD]

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
- Measurement Temporarily not Available

Miscellaneous Cause

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

8.3.8.4 Abnormal Conditions

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9.1.18 COMMON MEASUREMENT INITIATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction Id	M		9.2.1.62		–	
Measurement Id	M		9.2.1.42		YES	reject
Common Measurement Object Type	M		9.2.1.10		YES	reject
CHOICE Common Measurement Object Type					YES	ignore
>"Cell"					YES	reject
>>C-ID	M		9.2.1.9		–	
>>Time Slot	O		9.2.3.23	TDD only	–	
>"RACH"				FDD only	YES	reject
>>C-ID	M		9.2.1.9		–	
>>Common transport channel ID	M		9.2.1.14		–	
>"CPCH"				FDD only	YES	reject
>>C-ID	M		9.2.1.9		–	
>>Common transport channel ID	M		9.2.1.14		–	
>>Spreading Factor	O		Minimum UL Channelisation Code Length		–	
Common Measurement Type	M		9.2.1.11		YES	reject
Measurement Filter Coefficient	O		9.2.1.41		YES	reject
Report Characteristics	M		9.2.1.51		YES	reject

9.1.19 COMMON MEASUREMENT INITIATION RESPONSE

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

9.1.21 COMMON MEASUREMENT REPORT

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction Id	M		9.2.1.62		–	
Measurement Id	M		9.2.1.42		YES	ignore
CHOICE Common Measurement Object Type				Common Measurement Object Type that the measurement was initiated with.	YES	ignore
>"Cell"					YES	ignore
>>CHOICE Measurement Availability Indicator						
>>>"Measurement Available"					YES	ignore
>>>Common Measurement value	M		9.2.1.12		–	
>>>"Measurement not Available"			NULL		YES	ignore
>"RACH"				FDD only	YES	ignore
>>CHOICE Measurement Availability Indicator						
>>>"Measurement Available"					YES	ignore
>>>Common Measurement Value	M		9.2.1.12		–	
>>>"Measurement not Available"			NULL		YES	ignore
>"CPCH"				FDD only	YES	Ignore
>>Common Measurement Value	M		9.2.1.12		–	
SFN	O		9.2.1.53A	Common Measurement Time Reference	YES	ignore

9.1.52 DEDICATED MEASUREMENT INITIATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context Id	M		9.2.1.48	The reserved value "All NBCC" shall not be used when the Report characteristics type is set to "On-Demand".	YES	reject
Transaction Id	M		9.2.1.62		–	
Measurement Id	M		9.2.1.42		YES	reject
Dedicated Measurement Object Type	M		9.2.1.22		YES	reject
CHOICE <i>Dedicated Measurement Object Type</i>					YES	ignore
>"RL"					YES	reject
>>"RL Information"		1..<maxnoofRLs>			EACH	reject
>>>"RL ID"	M		9.2.1.53		–	
>>>"DPCH ID"	O		9.2.3.5	TDD only	–	
>"RLS"				FDD only		
>>"RL Set Information"		1..<maxnoofRLSets>				
>>>"RL Set ID"	M		9.2.2.39			
Dedicated Measurement Type	M		9.2.1.23		YES	reject
Measurement Filter Coefficient	O		9.2.1.41		YES	reject
Report Characteristics	M		9.2.1.51		YES	reject

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.

9.1.53 DEDICATED MEASUREMENT INITIATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context Id	M		9.2.1.18		YES	ignore
Transaction Id	M		9.2.1.62		–	
Measurement Id	M		9.2.1.42		YES	ignore
CHOICE <i>Dedicated Measurement Object Type</i>	O			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		9.2.1.53		–	
>>>DPCH ID	O		9.2.3.5	TDD only	–	
>>>Dedicated Measurement Value	M		9.2.1.24			
>"RLS" or "ALL RLS"				FDD only	YES	ignore
>>RL Set Information		1..<maxnoofRLSets>			–	
>>>RL Set ID	M		9.2.2.39			
>>>Dedicated Measurement Value	M		9.2.1.24			
CFN	O		9.2.1.7	Dedicated Measurement Time Reference	YES	ignore
Criticality diagnostics	O		9.2.1.17		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 REPORT

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
CRNC Communication Context Id	M		9.2.1.18		YES	ignore
Transaction Id	M		9.2.1.62		–	
Measurement Id	M		9.2.1.42		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		9.2.1.53		–	
>>>DPCH ID	O		9.2.3.5	TDD only	–	
>>>CHOICE <i>Measurement Availability Indicator</i>						
>>>>"Measurement Available"					YES	ignore
>>>>>Dedicated Measurement Value	M		9.2.1.24		–	
>>>>>"Measurement not Available"			NULL		YES	ignore
>"RLS" or "ALL RLS"				FDD only		
>>RL Set Information		1..<maxnoofRLSets>				
>>>RL Set ID	M		9.2.1.39			
>>>CHOICE <i>Measurement Availability Indicator</i>						
>>>>"Measurement Available"					YES	ignore
>>>>>Dedicated Measurement Value	M		9.2.1.24			
>>>>>"Measurement not Available"			NULL		YES	ignore
CFN	O		9.2.1.7	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.

9.2.1.11 Common Measurement Type

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Common Measurement Type			ENUMERATED (RSSI, Transmitted Carrier Power, Acknowledged PRACH tries preambles , UL Timeslot ISCP , Acknowledged PCPCH Access Preambles, Detected PCPCH Access Preambles, ...)	UL Timeslot ISCP is used by TDD only , Acknowledged PRACH preambles , Acknowledged PCPCH Access Preambles , Detected PCPCH Access Preambles are used by FDD only

9.2.1.12 Common Measurement Value

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
>Transmitted Carrier Power Value	C <i>MeasValue</i>		INTEGER(0..100)	According to mapping in [422] and [523]
>RSSI Value	C <i>MeasValue</i>		INTEGER(0..621)	According to mapping in [422] and [523]
>Acknowledged PRACH tries preambles Value (FDD only)	C <i>MeasValue</i>		INTEGER(0..240, ...)	According to mapping in [22]The number of L1 acknowledged random access tries per every 20 ms period.
> UL Timeslot ISCP (TDD only)	C <i>MeasValue</i>		INTEGER(0..81)	According to mapping in [523]
>Acknowledged PCPCH Access Preambles (FDD only)	C <i>MeasValue</i>		INTEGER(0..15)	According to mapping in [422]
>Detected PCPCH Access Preambles (FDD only)	C <i>MeasValue</i>		INTEGER(0..240)	According to mapping in [422]

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

9.2.1.23 Dedicated Measurement Type

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dedicated Measurement Type			ENUMERATED (SIR, SIR Error, Transmitted Code Power, RSCP, Rx Timing Deviation, Round Trip Time,...)	RSCP, Rx Timing Deviation are used by TDD only, Round Trip Time, SIR Error is-are used by FDD only.

Note. For definitions of the measurement types refer to [4] and [5].

9.2.1.24 Dedicated Measurement Value

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dedicated measurement Value				
>SIR value	C <i>MeasValue</i>		INTEGER(0..63)	According to mapping in [422] and [523]
>SIR error Value	C <i>MeasValue</i>		INTEGER(0..125)	According to mapping in [22], (FDD only) $SIR_Error = SIR_target$ 0: $< -31.0\text{ dB}$ 1: $-31.0\text{ dB} \leq SIR_Error < 30.5\text{ dB}$ 2: $30.5\text{ dB} \leq SIR_Error < 30.0\text{ dB}$... 62: $-0.5\text{ dB} \leq SIR_Error < 0\text{ dB}$ 63: $0\text{ dB} \leq SIR_Error < 0.5\text{ dB}$... 124: $30.5\text{ dB} \leq SIR_Error < 31\text{ dB}$ 125: $\geq 31\text{ dB}$
>Transmitted Code Power Value	C <i>MeasValue</i>		INTEGER(0..127)	According to mapping in [422] and [523]
>RSCP	C <i>MeasValue</i>		INTEGER(0..81)	According to mapping in [523], (TDD only)
>Rx Timing Deviation	C <i>MeasValue</i>		INTEGER(0..2047)	According to mapping in [523], (TDD only)
>Round Trip Time	C <i>MeasValue</i>		INTEGER(0..8191)	According to mapping in [422], (FDD only)

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

9.2.1.43 Measurement Increase/Decrease Threshold

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

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
RSSI	<i>C – Threshold</i>		INTEGER(0..620)	0: 0 dB 1: 0.1 dB 2: 0.2 dB ... 620: 62dB
Transmitted Carrier Power	<i>C – Threshold</i>		INTEGER(0..100)	According to mapping in [422] and [523]
Acknowledged PRACH tries preambles	<i>C – Threshold</i>		INTEGER(0..240,...)	According to mapping in [22], (FDD only) The number of L4 acknowledged random access tries per every 20 ms period.
UL Timeslot ISCP	<i>C – Threshold</i>		INTEGER(0..80)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 80: 40dB, (TDD only)
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, (FDD only)
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, (TDD only)
Round Trip Time	<i>C – Threshold</i>		INTEGER(0..8190)	0: 0 chips 1: 0.25 chips 2: 0.5 chips ... 8190: 2047.5 chips, (FDD only)
Acknowledged PCPCH Access Preambles	<i>C – Threshold</i>		INTEGER(0..15)	According to mapping in [422] (FDD only)
Detected PCPCH Access Preambles	<i>C – Threshold</i>		INTEGER(0..240)	According to mapping in [422] (FDD only)

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

9.2.1.44 Measurement Threshold

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

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
RSSI	C – Threshold		INTEGER(0. .621)	According to mapping in [422] and [523]
Transmitted Carrier Power	C – Threshold		INTEGER(0. .100)	According to mapping in [422] and [523]
Acknowledged PRACH tries/preambles	C – Threshold		INTEGER(0. .240,...)	According to mapping in [22]. (FDD only) The number of L1 acknowledged random access tries per every 20 ms period.
UL Timeslot ISCP	C – Threshold		INTEGER(0. .81)	According to mapping in [523] (TDD only)
SIR	C – Threshold		INTEGER(0. .63)	According to mapping in [422] and [523]
SIR Error	C – Threshold		INTEGER(0. .125)	According to mapping in [22]. (FDD only) 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	C – Threshold		INTEGER(0. .127)	According to mapping in [422] and [523]
RSCP	C – Threshold		INTEGER(0. .81)	According to mapping in [523] (TDD only)
Rx Timing Deviation	C - Threshold		INTEGER(0. .2047)	According to mapping in [523] (TDD only)
Round Trip Time	C – Threshold		INTEGER(0. .8191)	According to mapping in [422] (FDD only)
Acknowledged PCPCH Access Preambles	C – Threshold		INTEGER(0. .15)	According to mapping in [422] (FDD only)
Detected PCPCH Access Preambles	C – Threshold		INTEGER(0. .240)	According to mapping in [422] (FDD only)

Condition	Explanation
Threshold	Only one measurement threshold can be present at the same time.

9.3.3 NBAP PDU Content Definitions

```

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

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

TimeSlot-ISCP-Value ::= INTEGER (0..81)
-- According to mapping in [5]

TimeSlot-ISCP-Value-IncrDecrThres ::= INTEGER (0..80)

TimeSlotStatus ::= ENUMERATED {
    active,
    not-active,
    ...
}

PARTLY OMITTED

-- *****
--
-- COMMON MEASUREMENT INITIATION RESPONSE
--
-- *****

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

CommonMeasurementInitiationResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-MeasurementID          PRESENCE    CRITICALITY ignore          TYPE
MeasurementID                          PRESENCE    mandatory    }|
    { ID      id-CommonMeasurementObjectType-CM-Rsp    PRESENCE    CRITICALITY ignore          TYPE
CommonMeasurementObjectType-CM-Rsp    PRESENCE    mandatoryoptional    }|
    { ID      id-SFN                      PRESENCE    optional          CRITICALITY ignore          TYPE
                                           PRESENCE    optional          }|
    { ID      id-CriticalityDiagnostics    PRESENCE    optional          CRITICALITY ignore          TYPE
CriticalityDiagnostics                PRESENCE    optional          },
    ...
}

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

CommonMeasurementObjectType-CM-Rsp ::= CHOICE {
    cell          Cell-CM-Rsp,
    rACH          RACH-CM-Rsp,
    cPCH         CPCH-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 ::= {
  ...
}
CPCH-CM-Rsp ::= ProtocolIE-Container {{ CPCHIE-CM-Rsp }}
CPCHIE-CM-Rsp NBAP-PROTOCOL-IES ::= {
  { ID id-CPCHItem-CM-Rsp    CRITICALITY ignore    TYPE CPCHItem-CM-Rsp    PRESENCE optional },
  ...
}
CPCHItem-CM-Rsp ::= SEQUENCE {
  commonMeasurementValue      CommonMeasurementValue,
  iE-Extensions                ProtocolExtensionContainer { { CPCHItem-CM-Rsp-ExtIEs } }
  OPTIONAL,
  ...
}
CPCHItem-CM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

PARTLY OMITTED

```

-- *****
--
-- 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    mandatoryoptional } |
  { 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           RL-DM-Rsp,
    all-RLS          RL-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 { { RLItem-DM-Rsp-ExtIEs } }
    OPTIONAL,
    ...
}

RLItem-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 ::= {
    ...
}

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 ::= {
  ...
}
```

9.3.4 NBAP Information Elements

```

--*****
--
-- Information Element Definitions
--
--*****

NBAP-IEs
DEFINITIONS AUTOMATIC TAGS ::=
BEGIN

IMPORTS
    maxNrOfTFCs,
    maxNrOfErrors,
    maxCTFC,
    maxNrOfTFs,
    maxTTI-count,
    maxRateMatching,
    maxCodeNrComp-1,
    maxNrOfCodeGroups,
    maxNrOfTFCIGroups,
    maxNrOfTFCI1Combs,
    maxNrOfTFCI2Combs,
    maxNrOfTFCI2Combs-1,
    maxNrOfSF,
    maxTGPS
FROM NBAP-Constants

    Criticality,
    ProcedureCode,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage
FROM NBAP-CommonDataTypes

    ProtocolExtensionContainer{,
    NBAP-PROTOCOL-EXTENSION
FROM NBAP-Containers;

-- =====
-- A
-- =====

Acknowledged-PCPCH-access-preambles ::= INTEGER (0..15)
-- According to mapping in [4]

| Acknowledged-RAPRACH-preamblesTries-Value ::= INTEGER(0..240,...)
-- The number of L1 acknowledged random access tries per every 20 ms period.

AddorDeleteIndicator ::= ENUMERATED {
    add,
    delete,
    ...
}

Active-Pattern-Sequence-Information ::= SEQUENCE {
    cMConfigurationChangeCFN                CFN,
    transmission-Gap-Pattern-Sequence-Status  Transmission-Gap-Pattern-Sequence-Status-List
OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer { {Active-Pattern-
Sequence-Information-ExtIEs} } OPTIONAL,
    ...
}

Active-Pattern-Sequence-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Transmission-Gap-Pattern-Sequence-Status-List ::= SEQUENCE (SIZE (0..maxTGPS)) OF
SEQUENCE {
    tGPSI                TGPSI,
    tGPRC                TGPRC,

```

```

        tGCFN          CFN,
        iE-Extensions  ProtocolExtensionContainer { { Transmission-Gap-Pattern-Sequence-Status-
List-ExtIEs } } OPTIONAL,
        ...
    }

Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AICH-TransmissionTiming ::= ENUMERATED {
    v0,
    v1
}

APPreambleSignature ::= INTEGER (0..15)

APSubChannelNumber ::= INTEGER (0..11)

AvailabilityStatus ::= ENUMERATED {
    empty,
    in-test,
    failed,
    power-off,
    off-line,
    off-duty,
    dependency,
    degraded,
    not-installed,
    log-full,
    ...
}

-- =====
-- B
-- =====

BCCH-ModificationTime ::= INTEGER (0..511)
-- Time = BCCH-ModificationTime * 8
-- Range 0 to 4088, step 8
-- All SFN values in which MIB may be mapped are allowed

BindingID ::= OCTET STRING (SIZE (1..4, ...))

BetaCD ::= INTEGER (0..15)

BlockingPriorityIndicator ::= ENUMERATED {
    high,
    normal,
    low,
    ...
}
-- High priority: Block resource immediately.
-- Normal priority: Block resource when idle or upon timer expiry.
-- Low priority: Block resource when idle.

BlockSTTD-Indicator ::= ENUMERATED {
    active,
    inactive
}

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-ActivatedOrAllocated,
    nodeB-Resources-unavailable,
    insufficient-physical-channel-resources,
    measurement-not-supported-for-the-object,
    combining-resources-not-available,
    reconfiguration-not-allowed,
    requested-configuration-not-supported,
    synchronisation-failure,
    sIB-Origination-in-Node-B-not-Supported,
    unspecified,
    priority-transport-channel-established,
    bCCH-scheduling-error,
    measurement-temporarily-not-available,
    no-closed-loop-timing-adjustment-mode-configured,
    invalid-CM-settings,
    ...
}

CauseTransport ::= ENUMERATED {
    transport-link-failure,
    transmission-port-not-available,
    transport-resource-unavailable,
    unspecified,
    ...
}

CCTrCH-ID ::= INTEGER (0..15)

CDSubChannelNumbers ::= BIT STRING (SIZE (12))

CellParameterID ::= INTEGER (0..127)

CFN ::= INTEGER (0..255)

Channel-Assignment-Indication ::= ENUMERATED {
    cA-Active,
    cA-Inactive
}

ChipOffset ::= INTEGER (0..38399)
-- Unit Chip

C-ID ::= INTEGER (0..65535)

Closedlooptimingadjustmentmode ::= ENUMERATED {
    adj-1-slot,
    adj-2-slot,
    ...
}

```

```

}

CommonChannelsCapacityConsumptionLaw ::= SEQUENCE (SIZE(1..maxNrOfSF)) OF
  SEQUENCE {
    dl-Cost      INTEGER (0..65535),
    ul-Cost      INTEGER (0..65535)
  }

CommonMeasurementType ::= ENUMERATED {
  rssi,
  transmitted-carrier-power,
  acknowledged-raprach-preamblestries,
  ul-timeslot-iscptime-slot-isep,
  acknowledged-PCPCH-access-preambles,
  detected-PCPCH-access-preambles,
  ...
}

CommonMeasurementValue ::= CHOICE {
  transmitted-carrier-power      Transmitted-Carrier-Power-Value,
  rssi                           RSSI-Value,
  acknowledged-raprach-preamblestries      Acknowledged-PRACHRA-preamblesFries-Value,
  ul-timeslot-iscptime-slot-isep          UL-TimeSlot-ISCP-Value,
  acknowledged-PCPCH-access-preambles      Acknowledged-PCPCH-access-preambles,
  detected-PCPCH-access-preambles          Detected-PCPCH-access-preambles,
  ...
}

CommonPhysicalChannelID ::= INTEGER (0..255)

CommonTransportChannelID ::= INTEGER (0..255)

CommunicationControlPortID ::= INTEGER (0..65535)

Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD ::= ENUMERATED {
  on,
  off
}
-- on=deactivate

ConfigurationGenerationID ::= INTEGER (0..255)
-- Value '0' means "No configuration"

ConstantValue ::= INTEGER (-10..10)
-- -10 dB - +10 dB
-- unit dB
-- step 1 dB

CPCH-Allowed-Total-Rate ::= ENUMERATED {
  v15,
  v30,
  v60,
  v120,
  v240,
  v480,
  v960,
  v1920,
  v2880,
  v3840,
  v4800,
  v5760,
  ...
}

CPCHScramblingCodeNumber ::= INTEGER (0..79)

CPCH-UL-DPCCH-SlotFormat ::= INTEGER (0..2)

CriticalityDiagnostics ::= SEQUENCE {
  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-ID ::= INTEGER (0..255)

DedicatedChannelsCapacityConsumptionLaw ::= SEQUENCE ( SIZE(1..maxNrOfSF) ) OF
  SEQUENCE {
    dl-Cost    INTEGER (0..65535),
    ul-Cost    INTEGER (0..65535)
  }

DedicatedMeasurementType ::= ENUMERATED {
  sir,
  sir-error,
  transmitted-code-power,
  rscp,
  round-trip-time,
  rx-timing-deviation,
  ...
}

DedicatedMeasurementValue ::= CHOICE {
  sir-Value          SIR-Value,
  sir-ErrorValue    SIR-Error-Value,
  transmittedCodePowerValue Transmitted-Code-Power-Value,
  rSCP              RSCP-Value,
  roundTripTime    Round-Trip-Time-Value,
  rxTimingDeviationValue Rx-Timing-Deviation-Value,
  ...
}

Detected-PCPCH-access-preambles ::= INTEGER (0..240)
-- According to mapping in [4]

D-FieldLength ::= ENUMERATED {
  v1,
  v2,
  ...
}

DeltaSIR ::= INTEGER (0..30)
-- Step 0.1 (Range 0..3).

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

DLPowerAveragingWindowSize ::= INTEGER (1..60)

DL-ScramblingCode ::= INTEGER (0..15)
-- 0= Primary scrambling code of the cell, 1..15= Secondary scrambling code --

DL-TimeslotISCP ::= INTEGER (0..91)

DL-TPC-Pattern01Count ::= INTEGER (0..30,...)

Downlink-Compressed-Mode-Method ::= ENUMERATED {
    puncturing,
    sFdiv2,
    higher-layer-scheduling
}

DPCH-ID ::= INTEGER (0..239)

DSCH-ID ::= INTEGER (0..255)

-- 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 [7] --

FDD-TPC-DownlinkStepSize ::= ENUMERATED {
    step-size0-5,
    step-size1,
    step-size1-5,
    step-size2,
    ...
}

FirstRLS-Indicator ::= ENUMERATED {
    first-RLS,
    not-first-RLS,
    ...
}

FrameHandlingPriority ::= INTEGER (0..15)
-- 0=lower priority, 15=higher priority --

FrameOffset ::= INTEGER (0..255)

-- =====

```

```

-- G
-- =====

GapLength          ::= INTEGER (1..14)

GapDuration        ::= INTEGER (1..144)

-- =====
-- H
-- =====

-- =====
-- I
-- =====

IB-SG-DATA ::= BIT STRING

IB-SG-POS ::= INTEGER (0..2046)
-- 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,
    ...
}

ITPPRM          ::= ENUMERATED {
    mode-0,
    mode-1
}

-- =====
-- J
-- =====

-- =====
-- K
-- =====

-- =====
-- L
-- =====

Local-Cell-ID ::= INTEGER (0..268435455)

-- =====
-- M
-- =====

MaximumDL-PowerCapability ::= INTEGER(0..500)
-- Unit dBm, Range 0dBm .. 50dBm, Step +0.1dB

```

```

MaximumTransmissionPower ::= INTEGER(0..500)
-- Unit dBm, Range 0dBm .. 50dBm, Step +0.1dB

MaxNrOfUL-DPDCHs ::= INTEGER (1..6)

Max-Number-of-PCPCHes ::= INTEGER (1..64)

MaxPRACH-MidambleShifts ::= ENUMERATED {
    shift4,
    shift8,
    ...
}

MeasurementAvailabilityIndicator ::= ENUMERATED {
    measurementAvailable,
    measurementnotAvailable
}

MeasurementFilterCoefficient ::= ENUMERATED {k0, k1, k2, k3, k4, k5, k6, k7, k8, k9, k11, k13, k15,
k17, k19}
-- Measurement Filter Coefficient to be used for measurement

MeasurementID ::= INTEGER (0..1048575)

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
-- =====

NEOT ::= INTEGER (0..8)

NFmax ::= INTEGER (1..64)

N-INSYNC-IND ::= INTEGER (1..256)

N-OUTSYNC-IND ::= INTEGER (1..256)

NodeB-CommunicationContextID ::= INTEGER (0..1048575)

NStartMessage ::= INTEGER (1..8)

-- =====
-- O
-- =====

-- =====
-- P
-- =====

```

```

PagingIndicatorLength ::= ENUMERATED {
    v2,
    v4,
    v8
}

PayloadCRC-PresenceIndicator ::= ENUMERATED {
    cRC-Included,
    cRC-NotIncluded,
    ...
}

PCCPCH-Power ::= INTEGER (-150..400)
-- PCCPCH-power = power * 10
-- If power <= -15 PCCPCH shall be set to -150
-- If power >= 40 PCCPCH shall be set to 400
-- Unit dBm, Range -15dBm .. +40 dBm, Step +0.1dBm

PCP-Length ::= ENUMERATED{
    v0,
    v8
}

PDSCH-CodeMapping ::= SEQUENCE {
    dl-ScramblingCode          DL-ScramblingCode,
    signallingMethod          CHOICE {
        code-Range            PDSCH-CodeMapping-PDSCH-CodeMappingInformationList,
        tFCI-Range            PDSCH-CodeMapping-DSCH-MappingInformationList,
        explicit               PDSCH-CodeMapping-PDSCH-CodeInformationList
    },
    iE-Extensions              ProtocolExtensionContainer { { PDSCH-CodeMapping-
ExtIEs} } OPTIONAL,
    ...
}

PDSCH-CodeMapping-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-CodeMapping-CodeNumberComp ::= INTEGER (0..maxCodeNrComp-1)

PDSCH-CodeMapping-SpreadingFactor ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32,
    v64,
    v128,
    v256,
    ...
}

PDSCH-CodeMapping-PDSCH-CodeMappingInformationList ::= SEQUENCE (SIZE (1..maxNrOfCodeGroups)) OF
SEQUENCE {
    spreadingFactor            PDSCH-CodeMapping-SpreadingFactor,
    multi-CodeInfo            PDSCH-Multi-CodeInfo,
    start-CodeNumber          PDSCH-CodeMapping-CodeNumberComp,
    stop-CodeNumber           PDSCH-CodeMapping-CodeNumberComp,
    iE-Extensions            ProtocolExtensionContainer { { PDSCH-CodeMapping-PDSCH-
CodeMappingInformationList-ExtIEs} } OPTIONAL,
    ...
}

PDSCH-CodeMapping-PDSCH-CodeMappingInformationList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-CodeMapping-DSCH-MappingInformationList ::= SEQUENCE (SIZE (1..maxNrOfTFCIGroups)) OF
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
}

PowerOffset ::= INTEGER (0..24)
-- PowerOffset = offset * 0.25
-- Unit dB, Range 0dB .. +6dB, Step +0.25dB

PowerRaiseLimit ::= INTEGER (0..10)

PRACH-Midamble ::= ENUMERATED {
    inverted,
    direct,
    ...
}

PreambleSignatures ::= BIT STRING (SIZE (16))
-- Bit 0=P0, Bit 1=P1, .. ,Bit 15=P15 [9] --

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,
    non-selected
}

-- =====
-- R
-- =====

RACH-SlotFormat ::= ENUMERATED {
    v0,
    v1,
    v2,
    v3,
    ...
}

RACH-SubChannelNumbers ::= BIT STRING (SIZE (12))
-- Bit 0=Sub Channel Number 0, Bit 1=Sub Channel Number 1, ..., Bit 11=Sub Channel Number 11

RepetitionLength ::= INTEGER (1..63)

RepetitionPeriod ::= ENUMERATED {
    v1,
    v2,
    v4,
    v8,
    v16,
    v32,
    v64,
    ...
}

RepetitionNumber ::= INTEGER (0..255)

RefTFCNumber ::= INTEGER (0..3)

ReportCharacteristics ::= CHOICE {
    onDemand          NULL,
    periodic          ReportCharacteristicsType-ReportPeriodicity,
    event-a           ReportCharacteristicsType-EventA,
    event-b           ReportCharacteristicsType-EventB,
    event-c           ReportCharacteristicsType-EventC,
    event-d           ReportCharacteristicsType-EventD,
    event-e           ReportCharacteristicsType-EventE,
    event-f           ReportCharacteristicsType-EventF,
    ...
}

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-rprach-preamblestries Acknowledged-RAPRACH-preamblesTries-Value,
    ul-timesslot-iscp                    UL-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,
    round-trip-time                   Round-Trip-Time-IncrDecrThres,
    acknowledged-PCPCH-access-preambles Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles   Detected-PCPCH-access-preambles,
    ...
}

ReportCharacteristicsType-MeasurementThreshold ::= CHOICE {
    rssi                             RSSI-Value,
    transmitted-carrier-power         Transmitted-Carrier-Power-Value,
    acknowledged-prachra-preamblestries Acknowledged-PRACHRA-preamblesTries-Value,
    ul-timesslot-iscp                    UL-TimeSlot-ISCP-Value,
    sir                               SIR-Value,

```



```
sir-error                SIR-Error-Value,
transmitted-code-power   Transmitted-Code-Power-Value,
rscp                     RSCP-Value,
round-trip-time          Round-Trip-Time-Value,
rx-timing-deviation      Rx-Timing-Deviation-Value,
acknowledged-PCPCH-access-preambles Acknowledged-PCPCH-access-preambles,
detected-PCPCH-access-preambles      Detected-PCPCH-access-preambles,
...
}
```

PARTLY OMITTED

```
| UL-TimeSlot-ISCP-Value ::= INTEGER (0..81)
-- According to mapping in [5]

| UL-TimeSlot-ISCP-Value-IncrDecrThres ::= INTEGER (0..80)

TimeSlotStatus ::= ENUMERATED {
    active,
    not-active,
    ...
}
```

CHANGE REQUEST

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

25.433

CR

224r2

Current Version: **3.2.0**

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

↑ CR number as allocated by MCC support team

For submission to: **RAN#9**

list expected approval meeting # here ↑

for approval
 for information

strategic
 non-strategic (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG

The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects:

(at least one should be marked with an X)

(U)SIM

ME

UTRAN / Radio

Core Network

Source

R-WG3

Date:

2000-08-20

Subject:

Non Core Features in NBAP

Work item:

Category:

(only one category shall be marked with an X)

F Correction

A Corresponds to a correction in an earlier release

B Addition of feature

C Functional modification of feature

D Editorial modification

<input checked="" type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

Release:

Phase 2

Release 96

Release 97

Release 98

Release 99

Release 00

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input checked="" type="checkbox"/>
<input type="checkbox"/>

Reason for change:

In version 3.2.0 of NBAP specification there are not any consistent way of handling situations where parts (or all) that is requested in a procedure is ignored (rejected). Two categories exist:
 1. It has been agreed that the following features shall be possible to reject (if requested and not supported) in NBAP

DCH (change required)

DSCH (change required)

USCH (change required)

CPCH (change required)

Compressed Mode (change required)

Tx Diversity (change required)

Diversity Combination in NodeB

Requested number of DL Codes not supported

Requested UL SF not supported (change required)

Requested DL SF not supported (change required)

Measurements on individual DPCHs

S-CPICH (change required)

System Information - NodeB origination -

2. It has been agreed that the following features shall be allowed to ignore (if requested and not supported) in NBAP:

Limited Power Increase (change required)

SSDT (change required)

This CR modifies the specification in the following way to take care of the above-described issues:

cause values are added for the "reject" cases marked with "change required" above specification text of the style "...shall, if supported,..." for the "ignore" case marked with "change required"

Consequences if this CR is not accepted:

The NBAP specification will be less clear on how non-core features are handled, which may lead to inter-working problems.

Clauses affected:

8.2.1 Common Transport Channel Setup
8.2.12 Cell Setup
8.2.17 Radio Link Setup
8.3.1 Radio Link Addition
8.3.2 Synchronised Radio Link Reconfiguration
8.3.5 Unsynchronised Radio Link Reconfiguration
9.2.1.6 cause
9.3.4 NBAP Information Elements

Other specs affected:

Other 3G core specifications	<input type="checkbox"/>	→ List of CRs:
Other GSM core specifications	<input type="checkbox"/>	→ List of CRs:
MS test specifications	<input type="checkbox"/>	→ List of CRs:
BSS test specifications	<input type="checkbox"/>	→ List of CRs:
O&M specifications	<input type="checkbox"/>	→ List of CRs:

Other comments:



help.doc

<----- [double-click here for help and instructions on how to create a CR.](#)

8.2.1 Common Transport Channel Setup

8.2.1.1 General

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

8.2.1.2 Successful Operation

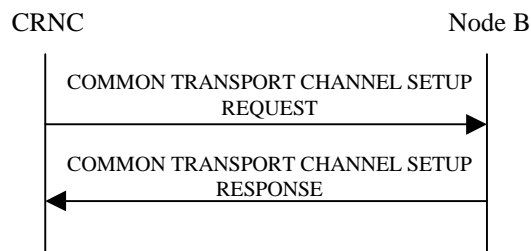


Figure 1: Common Transport Channel Setup procedure, Successful Operation

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

One message can configure only one of the following combinations:

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

[FDD-PCPCHes]:

When the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains PCPCHes, 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 AP-AICH and CD/CA-ICH is FFS.]

After a successful procedure, the defined common transport channels and the common physical channels shall adopt the state Enabled [6] in Node B and the common transport channels exist on the Uu interface. The Node B shall store the value of *Configuration Generation ID* IE and it shall respond with the COMMON TRANSPORT CHANNEL SETUP RESPONSE message with the transport layer information for the configured common transport channels.

8.2.1.3 Unsuccessful Operation

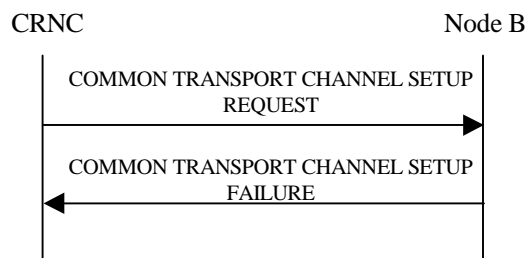


Figure 2: Common Transport Channel Setup procedure, Unsuccessful Operation

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

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

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

Typical cause values are as follows:

Radio Network Layer Cause

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

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error
- Message not compatible with receiver state

Miscellaneous Cause

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

8.2.1.4 Abnormal Conditions

-

8.2.12 Cell Setup

8.2.12.1 General

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

8.2.12.2 Successful Operation

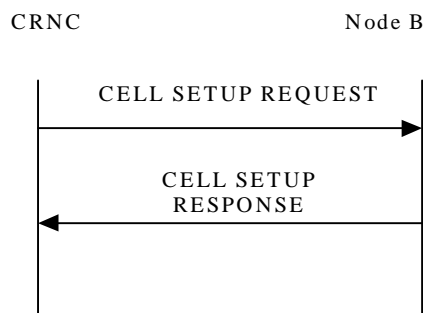


Figure 13: Cell Setup procedure: Successful Operation

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.

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

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

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

8.2.12.3 Unsuccessful Operation

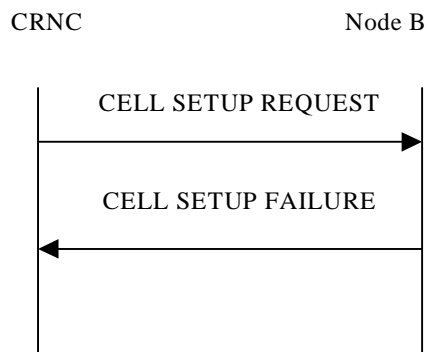


Figure 14: Cell Setup procedure: Unsuccessful Operation

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

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

In this case the cell is 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.

Typical cause values are as follows:

Radio Network Layer Cause

- S-CPICH not supported
- Requested Tx Diversity Mode not supported

8.2.12.4 Abnormal Conditions

-

8.2.17 Radio Link Setup

8.2.17.1 General

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

8.2.17.2 Successful Operation

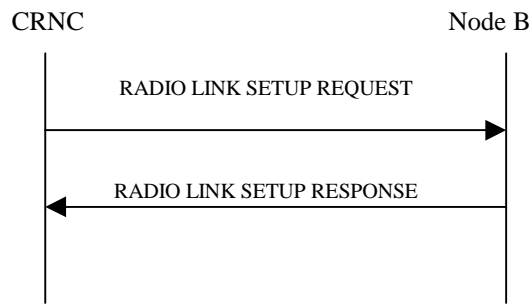


Figure 5: Radio Link Setup procedure: Successful Operation

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 *First RLS Indicator IE* indicates if the concerning RL shall be considered part of the first RLS established towards this UE. If the *First RLS indicator IE* is set to "first RLS", the Node B shall use a TPC pattern of $n \cdot "01" + "1"$ in the DL of the concerning RL and all RLs which are part of the same RLS, until UL synchronisation is achieved on the Uu. The parameter n shall be set equal to the value received in the *DL TPC pattern 01 count IE* in the Cell Setup procedure. The TPC pattern shall continuously be repeated but shall be restarted at the beginning of every frame with $CFN \bmod 4 = 0$. For all other RLs, the Node B shall use a TPC pattern of all "1"s in the DL until UL synchronisation is achieved on the Uu.]

[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. If the *Diversity Control Field IE* is set to "Must", the Node B shall combine the RL with one of the other RL. Diversity combining is applied to Dedicated Transport Channels (DCH), i.e. it is not applied to the DSCHs. When a new RL is to be combined, the Node B shall choose which RL(s) to combine it with.]

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

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

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

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

[TDD - For USCHs with the *QE-Selector IE* set to "selected", the Transport channel BER from that USCH shall be the base for the QE in the UL data frames. If no Transport channel BER is available for the selected USCH the Physical

channel BER shall be used for the QE, ref. [24]. If the QE-Selector is set to "non-selected", the Physical channel BER shall be used for the QE in the UL data frames, ref. [24]].

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.

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

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

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

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

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

[FDD - The Node B shall start the DL transmission using the initial DL power specified in the message on each DL channelisation code of the RL until either UL synchronisation is achieved for the RLS or a DL POWER CONTROL REQUEST message is received. No inner loop power control or balancing shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[10], chapter 5.2.1.2) with DPC MODE=0 and the power control procedure (see 8.3.7), but shall always be kept within the maximum and minimum limit specified in the RL SETUP REQUEST message.]

[TDD - The Node B shall start the DL transmission using the initial DL power specified in the message on each DL channelisation code and on each Time Slot of the RL until the UL synchronisation is achieved for the RL. No inner loop power control shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[22], chapter 4.2.3.3), 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 - If the RADIO LINK SETUP REQUEST message contains an *SSDT Cell Identity* IE the Node B shall activate SSDT, if supported, for the concerned new RL, with the indicated cell identity used for that RL.]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE, the Node B shall store the information about the Transmission Gap Pattern Sequences to be used when those are activated.]

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

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE and the *Active Pattern Sequence Information* IE, the Node B shall immediately activate the indicated Transmission Gap Pattern Sequences. For each sequence the *TGCFN* refers to the latest passed CFN with that value. If during the compressed mode measurement the gaps of two or more pattern sequences overlap, the Node B shall behave as specified in ref. [25].]

[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 [16].

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

8.2.17.3 Unsuccessful Operation

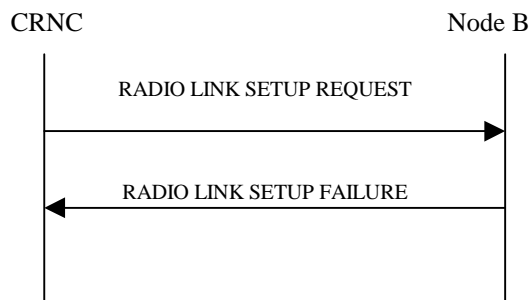


Figure 6: Radio Link Setup procedure: Unsuccessful Operation

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.

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

~~[FDD – If the value of the *Diversity Control Field* IE of one RL is 'Must', but the Node B cannot perform the requested combining, Node B shall indicate this with the cause value 'Combining Resources not available' in the RADIO LINK SETUP FAILURE message].~~

~~[FDD – When the *Diversity Mode* IE equals “*Closedloop mode1*” or “*Closedloop mode2*” and no Closed Loop Timing Adjustment Mode was configured for a cell during cell setup, establishment of the concerning RL shall fail with cause value “*No Closed Loop Timing Adjustment Mode configured*”.]~~

~~[FDD – If the Node B cannot provide the requested CM pattern sequences, the Node B shall regard the Radio Link Setup procedure as failed and shall respond with a RADIO LINK SETUP FAILURE message with the cause value “*Invalid CM settings*”.]~~

Typical cause values are as follows:

Radio Network Layer Cause

- ~~___~~—RL Already Activated/allocated
- Combining not supported
- ~~___~~—Combining Resources not available
- Requested Tx Diversity Mode not supported~~No Closed Loop Timing Adjustment Mode configured~~
- ~~___~~—Invalid CM Settings.
- UL SF not supported
- DL SF not supported
- Dedicated Transport Channel Type not supported
- Downlink Shared Channel Type not supported
- Uplink Shared Channel Type not supported
- CM not supported

Transport Layer Cause

- Transport Resources Unavailable

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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8.3.1 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

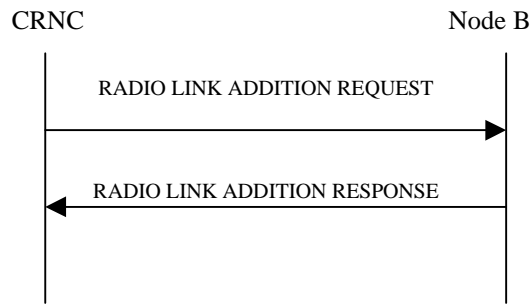


Figure: 28 Radio Link Addition procedure: Successful Operation

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. If the *Diversity Control Field IE* is set to "Must", the Node B shall combine the RL with one of the other RL. When a new RL is to be combined, the Node B shall choose which RL(s) to combine it with.

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

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

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

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

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

[FDD – If the RADIO LINK ADDITION REQUEST includes the *CM Deactivation Flag IE* with value "On", the Node B shall not activate any CM pattern sequence in the new RLs. In all the other cases (Flag set to "Off" or not present), the on going CM measurement (if existing) shall be applied also to the added RLs.]

[FDD- If the RADIO LINK ADDITION REQUEST contains the *Transmission Gap Pattern Sequence Code Information IE* Node B shall use or not the alternate scrambling code as indicated for each DL Channelisation Code.]

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]

[FDD – After addition of the new RL, the UL out-of-sync algorithm defined in [10] shall use the maximum value of the parameters N_OUTSYNC_IND and T_RLFAILURE, and the minimum value of the parameters N_INSYNC_IND, that are configured in the cells supporting the radio links of the RL Set].

8.3.1.3 Unsuccessful Operation

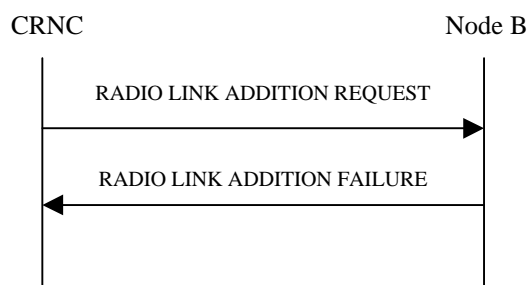


Figure 29: Radio Link Addition procedure: Unsuccessful Operation

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.

~~If the value of the *Diversity Control Field* IE of one RL is 'Must', but the Node B cannot perform the requested combining, Node B shall indicate this with the cause value 'Combining Resources not available' in the RADIO LINK ADDITION FAILURE message.~~

~~[FDD – When the *Diversity Mode* IE equals “Closedloop mode1” or “Closedloop mode2” and no Closed Loop Timing Adjustment Mode was configured for a cell during cell setup, establishment of the concerning RL shall fail with cause value “No Closed Loop Timing Adjustment Mode configured”].~~

[FDD - If the RADIO LINK ADDITION REQUEST contains the *CM Deactivation Flag* IE with the value "On", and at least one of the new RL is added in one cell that has the same UARCFN of at least one cell with an already existing RL,

the Node B shall regard the Radio Link Addition procedure as failed and shall respond with a RADIO LINK ADDITION FAILURE message with the cause value "Invalid CM settings".]

Typical cause values are as follows:

Radio Network Layer Cause

- ~~___~~—RL Already Activated/allocated
- Combining not supported
- Combining Resources not available
- ~~Requested Tx Diversity Mode not supported—No Closed Loop Timing Adjustment Mode configured~~
- UL SF not supported
- DL SF not supported
- ~~___~~—Invalid CM Settings.
- CM not supported

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

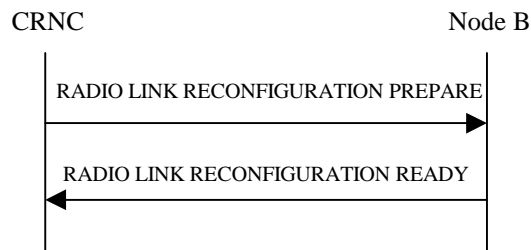


Figure 30: Synchronised Radio Link Reconfiguration procedure, Successful Operation

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

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

If the RADIO LINK RECONFIGURATION PREPARE message includes the *ToAWS* IE for a DCH or a DCH which belongs to a set of co-ordinated DCHs to be modified, the Node B shall apply the new ToAWS in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *ToAWE* IE for a DCH or a DCH which belongs to a set of co-ordinated DCHs to be modified, the Node B shall apply the new ToAWE in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

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

For DCHs which do not belong to a set of co-ordinated DCHs with the *QE-Selector* IE set to “selected”, the Transport channel BER from that DCH shall be the base for the QE in the UL data frames. If no Transport channel BER is

available for the selected DCH the Physical channel BER shall be used for the QE, ref. [16]. If the QE-Selector is set to "non-selected", the Physical channel BER shall be used for the QE in the UL data frames, ref. [16]].

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

[TDD - For USCHs with the *QE-Selector* IE set to "selected", the Transport channel BER from that USCH shall be the base for the QE in the UL data frames. If no Transport channel BER is available for the selected USCH the Physical channel BER shall be used for the QE, ref. [24]. If the QE-Selector is set to "non-selected", the Physical channel BER shall be used for the QE in the UL data frames, ref. [24].]

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

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

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

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

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.]

[FDD- If the RADIO LINK RECONFIGURATION PREPARE contains the *Transmission Gap Pattern Sequence Code Information* IE for any of the allocated DL Channelisation code, the Node B shall apply the new setting when new compressed mode measurement are activated.]

[FDD - 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 the new configuration.]

[FDD - 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 the new configuration.]

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

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *Limited Power Increase* IE and the IE is set to 'Used', the Node B shall, if supported, use Limited Power Increase according to ref. [10] section 5.2.1 for the inner loop DL power control in the new configuration.]

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

[TDD - UL/DL CCTrCH Modification]

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

[TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes any DPCH to be added , the Node B shall include this DPCH in the new configuration.]

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

[TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes any DPCH to be modified, and includes any of *TDD Channelisation Code* IE, *Burst Type* IE, *Midamble shift* IE, *Time Slot* IE, *TDD Physical Channel Offset* IE, *Repetition Period* IE, *Repetition Length* IE, or *TFCI presence* IE the Node B shall apply these as the new values, otherwise the old values specified for this DPCH are still applicable.]

[TDD – UL/DL CCTrCH Addition]

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

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

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 ~~shall~~ may activate SSDT, if supported, 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-information-response IE 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.

Compressed Mode Preparation:

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transmission Gap Pattern Sequence Information IE* the Node B shall store the new information about the Transmission Gap Pattern Sequences to be used in the new Compressed Mode Configuration.]

RL Information:

[TDD - If the *DL Time Slot ISCP IE* is present, the Node B may use the indicated value when deciding the DL TX Power for each timeslot.]

8.3.2.3 Unsuccessful Operation

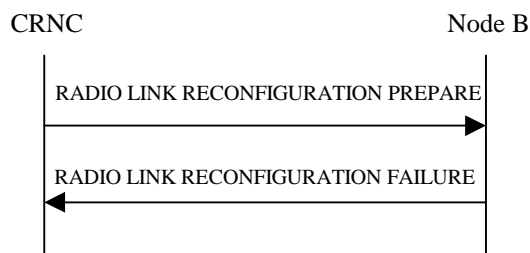


Figure 31: Synchronised Radio Link Reconfiguration procedure, Unsuccessful Operation

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.

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

~~[FDD—If the Node B cannot provide the requested CM pattern sequences, the Node B shall regard the Radio Link Reconfiguration Procedure as failed and shall respond with a RADIO LINK RECONFIGURATION FAILURE message with the cause value "Invalid CM settings".]~~

Typical cause values are as follows:

Radio Network Layer Cause

- ~~___~~—RL Already Activated/allocated
- ~~___~~ UL SF not supported
- ~~___~~ DL SF not supported
- ~~___~~—Invalid CM Settings.

- Downlink Shared Channel Type not supported
- Uplink Shared Channel Type not supported
- CM not supported

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.

-

8.3.5 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

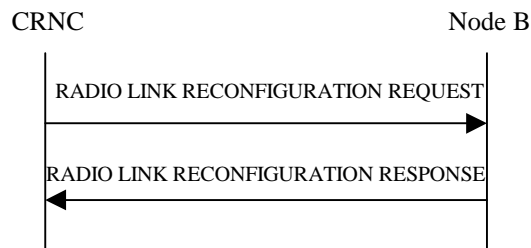


Figure 34: Unsynchronised Radio Link Reconfiguration Procedure, Successful Operation

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

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

If the RADIO LINK RECONFIGURATION REQUEST message includes the *ToAWS* IE for a DCH or a set of co-ordinated DCHs to be modified, the Node B shall apply the new ToAWS in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be modified, the Node B shall apply the new ToAWE in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

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

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

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

[TDD - For USCHs with the *QE-Selector* IE set to “selected”, the Transport channel BER from that USCH shall be the base for the QE in the UL data frames. If no Transport channel BER is available for the selected USCH the Physical channel BER shall be used for the QE, ref. [24]. If the *QE-Selector* is set to “non-selected”, the Physical channel BER shall be used for the QE in the UL data frames, ref. [24]].

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

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

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

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

DCH Deletion:

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

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

Physical Channel Modification:

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes on the *TFCS* IE for the UL, the Node B shall apply the new TFCS in the Uplink of the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes on the *TFCS* IE for the DL, the Node B shall apply the new TFCS in the Downlink 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.

[FDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *Limited Power Increase* IE and the IE is set to 'Used', the Node B shall, **if supported**, use Limited Power Increase **according to** ref. [10] section 5.2.1 for the inner loop DL power control in the new configuration.]

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

[FDD- If the RADIO LINK RECONFIGURATION REQUEST contains the *DL Code Information* IE group for any of the allocated DL Channelisation code, the Node B shall apply the new setting when new compressed mode measurement are activated.]

[TDD - UL/DL CCTrCH Modification]

[TDD - If the RADIO LINK RECONFIGURATION REQUEST includes *TFCS* IE, and/or *Puncture limit* IE the Node B shall apply these as the new values, otherwise the old values specified for this CCTrCH are still applicable.]

[TDD – UL/DL CCTrCH Deletion]

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

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-information-response IE 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.

Compressed Mode Preparation:

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE the Node B shall store the new information about the Transmission Gap Pattern Sequences to be used in the new Compressed Mode configuration.]

RL Information:

[TDD - If the *DL Time Slot ISCP* IE is present, the Node B may use the indicated value when deciding the DL TX Power for each timeslot.]

8.3.5.3 Unsuccessful Operation

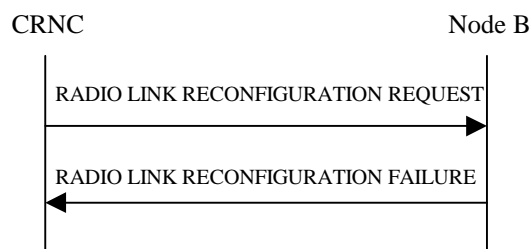


Figure 35: Unsynchronised Radio Link Reconfiguration procedure, Unsuccessful Operation

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.

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

~~[FDD – If the Node B cannot provide the requested CM pattern sequences, the Node B shall regard the Radio Link Reconfiguration Procedure as failed and shall respond with a RADIO LINK RECONFIGURATION FAILURE message with the cause value “Invalid CM settings”.]~~

Typical cause values are as follows:

Radio Network Layer Cause

- RL Already Activated/allocated

- ~~Invalid CM Settings.~~

- ~~CM not supported~~

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.

9.2.1.6 Cause

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE Cause group				
>Radio Network Layer				
>Radio Network Layer Cause	M		Enumerated (unknown C-ID, Cell not available, Power level not supported, 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, Combining Resources not available, Reconfiguration not allowed, Requested configuration not supported, Synchronization failure, Priority transport channel established,SIB Origination in Node B not Supported, <u>Requested Tx Diversity Mode not supported</u> <u>No Closed Loop Timing Adjustment Mode configured</u> , Unspecified, BCCH scheduling error, Measurement Temporarily not Available, Invalid CM Setting, <u>S-CPICH not supported</u> , <u>Combining not supported</u> , <u>UL SF not supported</u> , <u>DL SF not supported</u> , <u>Common Transport Channel Type not supported</u> , <u>Dedicated Transport Channel Type not supported</u> , <u>Downlink Shared Channel Type not supported</u> , <u>Uplink Shared Channel Type not supported</u> , <u>CM not supported</u> , ...)	
>Transport Layer				
>Transport Layer Cause	M		Enumerated (Transport link failure, Transmission port not available, Transport resource unavailable, Unspecified, ...)	
>Protocol				
>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, ...)	
>Misc				
>Miscellaneous Cause	M		Enumerated (Control processing overload Hardware failure, O&M intervention, Not enough user plane processing resources, Unspecified, ...)	

9.3.4 NBAP Information Elements

--- PARTLY OMITTED ---

```

-- =====
-- 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,
    combining-resources-not-available,
}

```

```
reconfiguration-not-allowed,  
requested-configuration-not-supported,  
synchronisation-failure,  
sIB-Origination-in-Node-B-not-Supported,  
unspecified,  
priority-transport-channel-established,  
bCCH-scheduling-error,  
measurement-temporarily-not-available,  
requested-tx-diversity-mode-not-supported, no-closed-loop-timing-adjustment-mode-configured,  
invalid-CM-settings,  
s-cipch-not-supported,  
combining-not-supported,  
ul-sf-not-supported,  
dl-SF-not-supported,  
common-transport-channel-type-not-supported,  
dedicated-transport-channel-type-not-supported,  
downlink-shared-channel-not-supported,  
uplink-shared-channel-not-supported,  
cm-not-supported,  
...  
}  
  
CauseTransport ::= ENUMERATED {  
    transport-link-failure,  
    transmission-port-not-available,  
    transport-resource-unavailable,  
    unspecified,  
    ...  
}
```

--- PARTLY OMITTED ---

CHANGE REQUEST

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

25.433 CR 225

Current Version: **3.2.0**

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

↑ CR number as allocated by MCC support team

For submission to: **TSG RAN #9**

list expected approval meeting # here
↑

For approval

For information

strategic

non-strategic

(for SMG use only)

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

Proposed change affects:

(at least one should be marked with an X)

(U)SIM

ME

UTRAN / Radio

Core Network

Source:

R-WG3

Date:

August 2000

Subject:

Limited power increase chapter

Work item:

Category:

(only one category shall be marked with an X)

- F Correction
- A Corresponds to a correction in an earlier release
- B Addition of feature
- C Functional modification of feature
- D Editorial modification

Release:

- Phase 2
- Release 96
- Release 97
- Release 98
- Release 99
- Release 00

Reason for change:

“Limited Power Increase IE” is moved from the chapter “Common Parameters” to the chapter “FDD specific parameters”, because this IE is used in FDD mode only. This corrects an editorial inconsistency.

Clauses affected:

8.2.17.2, 8.3.2.2, 8.3.5.2

Other specs affected:

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

Other comments:

9.2.1.37 Limited Power Increase

Void.

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

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

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

9.2.2.x Limited Power Increase

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

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

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

9.2.1.41 Measurement Filter Coefficient

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Measurement Filter Coefficient			<u>INTEGER</u> (1..256) <u>ENUMERAT</u> <u>ED(0, 1, 2,</u> <u>3, 4, 5, 6, 7,</u> <u>8, 9, 11, 13,</u> <u>15, 17, 19)</u>	

9.2.1.66 UL FP mode

This parameter defines if normal or silent mode of the Frame Protocol shall be used for the UL.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL FP mode			ENUMERATED(0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 13, 15, 17, 19) ENUMERATED(Normal, Silent)	

3GPP- RAN-WG3 Meeting #15
Berlin, Germany, 21st - 25th August 2000

Document R3-002227

e.g. for 3GPP use the format TP-99xxx
 or for SMG, use the format P-99-xxx

CHANGE REQUEST

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

25.433

CR 227

Current Version: **3.2.0**

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

↑ CR number as allocated by MCC support team

For submission to: **TSG-RAN#9**

list expected approval meeting # here

↑

for approval
for information

X

Strategic
non-strategic

(for SMG
use only)

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

Proposed change affects:

(at least one should be marked with an X)

(U)SIM

ME

UTRAN / Radio

Core Network

Source:

R-WG3

Date:

August 2000

Subject:

Removal of Unnecessary use of the ProtocolIE-Container in NBAP

Work item:

Category:

(only one category shall be marked with an X)

F Correction

A Corresponds to a correction in an earlier release

B Addition of feature

C Functional modification of feature

D Editorial modification

X

Release:

Phase 2

Release 96

Release 97

Release 98

Release 99

Release 00

X

Reason for change:

In version 3.2.0 of NBAP specification the usage of the ASN.1 definition ProtocolIE-Container is used frequently. It is used for two purposes:

- at the top level of each message to carry multiple IEs
- for IEs not being at the top level of a message that requires criticality assignment.

The ASN.1 definition of the ProtocolIE-Container is a SEQUENCE OF the ASN.1 definition ProtocolIE-Field, carrying the IE-Id, criticality of the IE, and the IE itself. Since the definition of the ProtocolIE-Container is a SEQUENCE OF with the range 0 to 65535 items this means that there will be a 2 octet length indicator included each time the ProtocolIE-Container is used. Since the only time the ProtocolIE-Container is used to carry more than one IE is case "a)" above the other cases where the ProtocolIE-Container is used (case "b)" above) includes the length octet with the value 1. This causes unnecessary long messages, especially when the ProtocolIE-Container is used to carry multiple repetitions of an object, e.g. RL Information.

This CR corrects the above-described deficiency by defining a new container, the ProtocolIE-Single-Container that is a single ProtocolIE-Field to avoid the two length octets.

Clauses affected:

9.3.3, 9.3.6

Other specs affected:

Other 3G core specifications

Other GSM core specifications

MS test specifications

BSS test specifications

O&M specifications

→ List of CRs:

→ List of CRs:

→ List of CRs:

→ List of CRs:

→ List of CRs:

Other

comments:

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
    Active-Pattern-Sequence-Information,
    AddorDeleteIndicator,
    AICH-TransmissionTiming,
    APPreambleSignature,
    APSubChannelNumber,
    AvailabilityStatus,
    BCCH-ModificationTime,
    BindingID,
    BlockingPriorityIndicator,
    BlockSTTD-Indicator,
    BurstType,
    Cause,
    CCH-TRCH-ID,
    CDSubChannelNumbers,
    CellParameterID,
    CFN,
    Channel-Assignment-Indication,
    ChipOffset,
    C-ID,
    ClosedloopTimingAdjustmentMode,
    CommonChannelsCapacityConsumptionLaw,
    Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD,
    CommonMeasurementType,
    CommonMeasurementValue,
    CommonPhysicalChannelID,
    CommonTransportChannelID,
    CommunicationControlPortID,
    ConfigurationGenerationID,
    ConstantValue,
    CriticalityDiagnostics,
    CPCH-Allowed-Total-Rate,
    CPCHScramblingCodeNumber,
    CPCH-UL-DPCH-SlotFormat,
    CRNC-CommunicationContextID,
    DCH-ID,
    DedicatedChannelsCapacityConsumptionLaw,
    DedicatedMeasurementType,
    DedicatedMeasurementValue,
    D-FieldLength,
    DiversityControlField,
    DiversityMode,
    DL-DPCH-SlotFormat,
    DL-or-Global-CapacityCredit,
    DL-Power,
    DLPowerAveragingWindowSize,
    DL-ScramblingCode,
    DL-TimeslotISCP,
    DL-TPC-Pattern01Count,
    DPCH-ID,
    DSCH-ID,
-- to do
    DSCH-TFS,
    FDD-DL-ChannelisationCodeNumber,
    FDD-S-CCPCH-Offset,
    FDD-TPC-DownlinkStepSize,
    FirstRLS-Indicator,

```

FrameHandlingPriority,
 FrameOffset,
 IB-SG-DATA,
 IB-SG-POS,
 IB-SG-REP,
 IB-Type,
 IndicationType,
 LimitedPowerIncrease,
 Local-Cell-ID,
 MaximumDL-PowerCapability,
 MaximumTransmissionPower,
 Max-Number-of-PCPCHes,
 MaxNrOfUL-DPDCHs,
 MaxPRACH-MidambleShifts,
 MeasurementFilterCoefficient,
 MeasurementID,
 MidambleShift,
 MinSpreadingFactor,
 MinUL-ChannelisationCodeLength,
 MultiplexingPosition,
 NEOT,
 NFmax,
 N-INSYNC-IND,
 N-OUTSYNC-IND,
 NodeB-CommunicationContextID,
 NStartMessage,
 PagingIndicatorLength,
 PayloadCRC-PresenceIndicator,
 PCCPCH-Power,
 PCP-Length,
 PDSCH-CodeMapping,
 PDSCHSet-ID,
 PDSCH-ID,
 PICH-Mode,
 PowerAdjustmentType,
 PowerOffset,
 PowerRaiseLimit,
 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,
 AdjustmentPeriod,
 ScaledAdjustmentRatio,
 MaxAdjustmentStep,
 ScramblingCodeNumber,
 SecondaryCCPCH-SlotFormat,
 S-FieldLength,
 SFN,
 ShutdownTimer,
 SIB-Originator,
 SSST-Cell-Identity,
 SSST-CellID-Length,
 SSST-Indication,
 STTD-Indicator,
 SSST-SupportIndicator,
 SyncCase,
 T-Cell,
 T-RLFAILURE,
 TDD-ChannelisationCode,
 TDD-TPC-DownlinkStepSize,
 TDD-PhysicalChannelOffset,
 TFCI-Coding,
 TFCI-Presence,

```

TFCI-SignallingMode,
TFCS,
TimeSlot,
TimeSlotDirection,
TimeSlotStatus,
ToAWE,
ToAWS,
TransmissionDiversityApplied,
TransmitDiversityIndicator,

TransmissionGapPatternSequenceCodeInformation,
Transmission-Gap-Pattern-Sequence-Information,
TransportFormatSet,
TransportLayerAddress,
TSTD-Indicator,
UARFCN,
UL-CapacityCredit,
UL-DPCCH-SlotFormat,
UL-SIR,
UL-FP-Mode,
UL-InterferenceLevel,
UL-ScramblingCode,
USCH-ID
FROM NBAP-IES

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

id-Active-Pattern-Sequence-Information,
id-AdjustmentRatio,
id-AICH-InformationItem-AuditRsp,
id-AICH-InformationItem-ResourceStatusInd,
id-AICH-ParametersListIE-CTCH-ReconfRqstFDD,
id-AllRLItem-DM-Rqst,
id-AllRLItem-Set-DM-Rqst,
id-AP-AICH-InformationItem-AuditRsp,
id-AP-AICH-InformationItem-ResourceStatusInd,
id-AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD,
id-BCH-InformationItem-AuditRsp,
id-BCH-InformationItem-ResourceStatusInd,
id-BCCH-ModificationTime,
id-BlockingPriorityIndicator,
id-Case1Item-Cell-SetupRqstTDD,
id-Case2Item-Cell-SetupRqstTDD,
id-Cause,
id-CauseLevel-PSCH-ReconfFailureTDD,
id-CauseLevel-RL-AdditionFailureFDD,
id-CauseLevel-RL-AdditionFailureTDD,
id-CauseLevel-RL-ReconfFailure,
id-CauseLevel-RL-SetupFailureFDD,
id-CauseLevel-RL-SetupFailureTDD,
id-CCP-InformationItem-AuditRsp,
id-CCP-InformationList-AuditRsp,
id-CCP-InformationItem-ResourceStatusInd,
id-CDCA-ICH-InformationItem-AuditRsp,
id-CDCA-ICH-InformationItem-ResourceStatusInd,
id-CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD,
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-Closed-Loop-Timing-Adjustment-Mode,
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-ReconfRqstFDD ,
 id-CommonPhysicalChannelType-CTCH-SetupRqstFDD ,
 id-CommonPhysicalChannelType-CTCH-SetupRqstTDD ,
 id-CommonTransportChannelType-CTCH-ReconfRqstTDD ,
 id-CommunicationControlPortID ,
 id-Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD ,
 id-ConfigurationGenerationID ,
 id-CPCH-InformationItem-AuditRsp ,
 id-CPCH-InformationItem-ResourceStatusInd ,
 id-CPCHItem-CM-Rprt ,
 id-CPCHItem-CM-Rqst ,
 id-CPCHItem-CM-Rsp ,
 id-CPCHListItem-CTCH-ReconfRqstFDD ,
 id-CPCH-Parameters-CTCH-SetupRsp ,
 id-CPCH-ParametersListIE-CTCH-ReconfRqstFDD ,
 id-CRNC-CommunicationContextID ,
 id-CriticalityDiagnostics ,
 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-InformationResponseListIE-RL-ReconfReady ,
 id-DCH-InformationResponseListIE-RL-ReconfRsp ,
 id-DCH-InformationResponseItem-RL-SetupRspTDD ,
 id-DCH-InformationResponseListIE-RL-SetupRspTDD ,
 id-DCH-ModifyList-RL-ReconfPrepFDD ,
 id-DCH-ModifyList-RL-ReconfPrepTDD ,
 id-DCH-ModifyList-RL-ReconfRqstFDD ,
 id-DCH-ModifyList-RL-ReconfRqstTDD ,
 id-DedicatedMeasurementObjectType-DM-Rprt ,
 id-DedicatedMeasurementObjectType-DM-Rqst ,
 id-DedicatedMeasurementObjectType-DM-Rsp ,
 id-DedicatedMeasurementType ,
 id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD ,
 id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ,
 id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD ,
 id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ,
 id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD ,
 id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD ,
 id-DL-CCTrCH-InformationList-RL-SetupRqstTDD ,
 id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ,
 id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD ,
 id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD ,
 id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD ,
 id-DL-DPCH-InformationDeleteListIE-RL-ReconfPrepTDD ,
 id-DL-DPCH-InformationItem-RL-AdditionRqstTDD ,
 id-DL-DPCH-InformationList-RL-AdditionRqstTDD ,
 id-DL-DPCH-InformationList-RL-SetupRqstTDD ,
 id-DL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD ,
 id-DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD ,
 id-DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD ,
 id-DL-DPCH-Information-RL-ReconfPrepFDD ,
 id-DL-DPCH-Information-RL-ReconfRqstFDD ,
 id-DL-DPCH-Information-RL-SetupRqstFDD ,
 id-DL-ReferencePowerInformationItem-DL-PC-Rqst ,
 id-DLReferencePower ,
 id-DLReferencePowerList-DL-PC-Rqst ,
 id-DL-TPC-Pattern01Count ,
 id-DPCHConstant ,
 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-InformationResponseListIE-RL-ReconfReady,
 id-DSCH-InformationResponseListIE-RL-ReconfRsp,
 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-ModifyList-RL-ReconfPrepFDD,
 id-DSCH-ModifyList-RL-ReconfRqstFDD,
 id-FACH-InformationItem-AuditRsp,
 id-FACH-InformationItem-ResourceStatusInd,
 id-FACHItem-CTCH-SetupRsp,
 id-FACH-ParametersList-CTCH-ReconfRqstTDD,
 id-FACH-ParametersList-CTCH-SetupRsp,
 id-FACH-ParametersListIE-CTCH-ReconfRqstFDD,
 id-FACH-ParametersListIE-CTCH-SetupRqstFDD,
 id-FACH-ParametersListIE-CTCH-SetupRqstTDD,
 id-GeneralCauseItem-PSCH-ReconfFailureTDD,
 id-GeneralCauseItem-RL-AdditionFailureFDD,
 id-GeneralCauseItem-RL-AdditionFailureTDD,
 id-GeneralCauseItem-RL-ReconfFailure,
 id-GeneralCauseItem-RL-SetupFailureFDD,
 id-GeneralCauseItem-RL-SetupFailureTDD,
 id-IndicationType-ResourceStatusInd,
 id-Limited-power-increase-information-Cell-SetupRqstFDD,
 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-AdjustmentPeriod,
 id-MaxAdjustmentStep,
 id-MaximumTransmissionPower,
 id-MeasurementAvailableItem-CommonMeasurementReport,
 id-MeasurementnotAvailableItem-CommonMeasurementReport,
 id-MeasurementAvailableItem-DedicatedMeasurementReport,
 id-MeasurementnotAvailableItem-DedicatedMeasurementReport,
 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-NonCombiningOrFirstRLItem-RL-SetupFailureFDD,
 id-NonCombiningOrFirstRLItem-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-ReconfRqstTDD,
 id-PCH-Parameters-CTCH-SetupRsp,
 id-PCH-ParametersItem-CTCH-ReconfRqstFDD,
 id-PCH-ParametersItem-CTCH-SetupRqstFDD,
 id-PCH-ParametersItem-CTCH-SetupRqstTDD,
 id-PCH-InformationItem-AuditRsp,
 id-PCPCH-InformationItem-AuditRsp,
 id-PCPCH-InformationItem-ResourceStatusInd,
 id-PCPCHItem-CTCH-SetupRqstFDD,

id-PCPCH-ParametersList-CTCH-ReconfRqstFDD,
 id-PICH-ParametersItem-CTCH-ReconfRqstFDD,
 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-ReconfRqstTDD,
 id-PowerAdjustmentType,
 id-PRACH-InformationItem-AuditRsp,
 id-PRACH-InformationItem-ResourceStatusInd,
 id-PRACHConstant,
 id-PRACHItem-CTCH-SetupRqstFDD,
 id-PRACHItem-CTCH-SetupRqstTDD,
 id-PRACHListIE-CTCH-ReconfRqstFDD,
 id-PRACH-ParametersListIE-CTCH-ReconfRqstFDD,
 id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD,
 id-PrimaryCCPCH-Information-Cell-SetupRqstFDD,
 id-PrimaryCPICH-Information-Cell-ReconfRqstFDD,
 id-PrimaryCPICH-Information-Cell-SetupRqstFDD,
 id-PrimarySCH-Information-Cell-ReconfRqstFDD,
 id-PrimarySCH-Information-Cell-SetupRqstFDD,
 id-PrimaryScramblingCode,
 id-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-PUSCHConstant,
 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-Rpvt,
 id-RACHItem-CM-Rqst,
 id-RACHItem-CM-Rsp,
 id-RACH-Parameters-CTCH-SetupRsp,
 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-Rpvt,
 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-Rpvt,

id-RLItem-DM-Rqst,
 id-RLItem-DM-Rsp,
 id-RLItem-RL-FailureInd,
 id-RLItem-RL-RestoreInd,
 id-RL-ReconfigurationFailureItem-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-RLSpecificCauseItem-RL-AdditionFailureFDD,
 id-RLSpecificCauseItem-RL-AdditionFailureTDD,
 id-RLSpecificCauseItem-RL-ReconfFailure,
 id-RLSpecificCauseItem-RL-SetupFailureFDD,
 id-RLSpecificCauseItem-RL-SetupFailureTDD,
 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-ReconfRqstFDD,
 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-SetSpecificCauseItem-PSCH-ReconfFailureTDD,
 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-Synchronisation-Configuration-Cell-ReconfRqst,
 id-Synchronisation-Configuration-Cell-SetupRqst,
 id-SyncCase,
 id-SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH,
 id-T-Cell,
 id-Transmission-Gap-Pattern-Sequence-Information,
 id-TimeSlotConfigurationList-Cell-ReconfRqstTDD,
 id-TimeSlotConfigurationList-Cell-SetupRqstTDD,
 id-TransmissionDiversityApplied,
 id-UARFCNforNt,
 id-UARFCNforNd,
 id-UARFCNforNu,
 id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD,
 id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD,
 id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD,
 id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD,
 id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD,
 id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD,
 id-UL-CCTrCH-InformationList-RL-SetupRqstTDD,
 id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD,
 id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD,
 id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD,
 id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD,
 id-UL-DPCH-InformationItem-RL-AdditionRqstTDD,
 id-UL-DPCH-InformationList-RL-AdditionRqstTDD,
 id-UL-DPCH-InformationList-RL-SetupRqstTDD,
 id-UL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD,
 id-UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD,
 id-UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD,
 id-UL-DPCH-Information-RL-ReconfPrepFDD,


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id-UL-DPCH-Information-RL-ReconfRqstFDD,
id-UL-DPCH-Information-RL-SetupRqstFDD,
id-Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD,
id-Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD,
id-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD,
id-Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD,
id-Unsuccessful-RL-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-ReconfReady,
id-USCH-InformationResponseListIE-RL-ReconfRsp,
id-USCH-InformationResponseListIE-RL-SetupRspTDD,
id-USCH-InformationList-RL-SetupRqstTDD,

maxNrOfCCTrCHs,
maxNrOfCodes,
maxNrOfCPCHs,
maxNrOfDCHs,
maxNrOfDLCodes,
maxNrOfDLTSs,
maxNrOfDPCHs,
maxNrOfDSCHs,
maxNrOfFACHs,
maxNrOfRLs,
maxNrOfRLSets,
maxNrOfPCPCHs,
maxNrOfPDSCHs,
maxNrOfPUSCHs,
maxNrOfPDSCHSets,
maxNrOfPUSCHSets,
maxNrOfSCCPCHs,
maxNrOfULTSs,
maxNrOfUSCHs,
maxAPSigNum,
maxCPCHCell,
maxFACHCell,
maxNoofLen,
maxRACHCell,
maxPCPCHCell,
maxPRACHCell,
maxSCCPCHCell,
maxSCPICHCell,
maxCellinNodeB,
maxCCPinNodeB,
maxLocalCellinNodeB,
maxNrOfSlotFormatsPRACH,
maxIB,
maxIBSEG
FROM NBAP-Constants;

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

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

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

CommonTransportChannelSetupRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
ID      ID      id-C-ID          PRESENCE      mandatory    reject    TYPE C-
}

```

```

    { ID id-ConfigurationGenerationID
      ConfigurationGenerationID PRESENCE mandatory } |
    { ID id-CommonPhysicalChannelType-CTCH-SetupRqstFDD
      CommonPhysicalChannelType-CTCH-SetupRqstFDD PRESENCE mandatory },
    ...
  }

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

Secondary-CCPCH-CTCH-SetupRqstFDD ::= ProtocolIE-Single-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,
  powerOffsetInformation PowerOffsetInformation-CTCH-SetupRqstFDD,
  sTTD-Indicator STTD-Indicator,
  fACH-Parameters FACH-ParametersList-CTCH-SetupRqstFDD OPTIONAL,
  -- One of the channels FACH or PCH or both must be present
  pCH-Parameters PCH-Parameters-CTCH-SetupRqstFDD OPTIONAL,
  -- One of the channels FACH or PCH or both must be present
  iE-Extensions ProtocolExtensionContainer { { Secondary-CCPCHItem-
CTCH-SetupRqstFDD-ExtIEs } } OPTIONAL,
  ...
}

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

PowerOffsetInformation-CTCH-SetupRqstFDD ::= SEQUENCE {
  p01-ForTFCI-Bits PowerOffset,
  p03-ForPilotBits PowerOffset,
  iE-Extensions ProtocolExtensionContainer { { PowerOffsetInformation-
CTCH-SetupRqstFDD-ExtIEs } } OPTIONAL,
  ...
}

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

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

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

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

FACH-ParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
  commonTransportChannelID CommonTransportChannelID,
  transportFormatSet TransportFormatSet,
  toAWS ToAWS,
  toAWE ToAWE,
  maxFACH-Power DL-Power,

```

```

        iE-Extensions
SetupRqstFDD-ExtIEs} }      OPTIONAL,
        ...
    }

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

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

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

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

    iE-Extensions
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
SetupRqstFDD-ExtIEs} }      OPTIONAL,
    ...
}

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

PRACH-CTCH-SetupRqstFDD ::= ProtocolIE-Single-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        CommonPhysicalChannelID,
    scramblingCodeNumber           ScramblingCodeNumber,
    tFCS                            TFCS,
    preambleSignatures             PreambleSignatures,
    allowedSlotFormatInformation    AllowedSlotFormatInformationList-CTCH-SetupRqstFDD,
    rACH-SubChannelNumbers         RACH-SubChannelNumbers,
    ul-punctureLimit               PunctureLimit,
    preambleThreshold              PreambleThreshold,
    rACH-Parameters                RACH-Parameters-CTCH-SetupRqstFDD,
    iE-Extensions
SetupRqstFDD-ExtIEs} }      OPTIONAL,
    ...
}

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

```

```

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

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

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

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

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

RACH-ParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    transportFormatSet            TransportFormatSet,
    aICH-Parameters               AICH-Parameters-CTCH-SetupRqstFDD,
    iE-Extensions                 ProtocolExtensionContainer { { RACH-ParametersItem-
CTCH-SetupRqstFDD-ExtIEs} }      OPTIONAL,
    ...
}

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 ::= {
    ...
}

PCPCH-CTCH-SetupRqstFDD ::= ProtocolIE-Single-Container {{ PCPCHIE-CTCH-SetupRqstFDD }}

PCPCHIE-CTCH-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-PCPCHItem-CTCH-SetupRqstFDD      CRITICALITY reject      TYPE PCPCHItem-CTCH-SetupRqstFDD
PRESENCE optional }T
    ...
}

PCPCHItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    cPCH-Parameters              CPCH-Parameters-CTCH-SetupRqstFDD,
    iE-Extensions                 ProtocolExtensionContainer { { PCPCHItem-CTCH-SetupRqstFDD-
ExtIEs} }      OPTIONAL,
    ...
}

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

CPCH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    transportFormatSet            TransportFormatSet,
    aPPreambleScramblingCode      CPCHScramblingCodeNumber,
    cDPreambleScramblingCode      CPCHScramblingCodeNumber,
    tFCS                           TFCS,
    cDSignatures                   PreambleSignatures      OPTIONAL,

```

```

cDSubChannelNumbers          CSubChannelNumbers          OPTIONAL,
-- this IE may be present only if the CD Signatures is present --
punctureLimit                PunctureLimit,
cPCH-UL-DPCCH-SlotFormat     CPCH-UL-DPCCH-SlotFormat,
uL-SIR                       UL-SIR,
initialDL-transmissionPower   DL-Power,
maximumDLPower               DL-Power,
minimumDLPower               DL-Power,
pO2-ForTPC-Bits              PowerOffset,
pO3-ForPilotBits             PowerOffset,
fDD-TPC-DownlinkStepSize     FDD-TPC-DownlinkStepSize,
nStartMessage                NStartMessage,
nEOT                          NEOT,
channel-Assignment-Indication Channel-Assignment-Indication,
cPCH-Allowed-Total-Rate       CPCH-Allowed-Total-Rate,
pCPCHChannelInformation       PCPCHChannelInformationList-CTCH-SetupRqstFDD,
vCAMMapping-Information       VCAMMapping-InformationList-CTCH-SetupRqstFDD          OPTIONAL,
-- this IE is only present if the Channel Assignment Indication is equal to CA Active --
aP-AICH-Parameters           AP-AICH-Parameters-CTCH-SetupRqstFDD,
cDCA-ICH-Parameters           CDCA-ICH-Parameters-CTCH-SetupRqstFDD,
iE-Extensions                 ProtocolExtensionContainer { { CPCH-Parameters-CTCH-
SetupRqstFDD-ExtIEs} }      OPTIONAL,
...
}

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

PCPCHChannelInformationList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfPCPCHs)) OF
PCPCHChannelInformationItem-CTCH-SetupRqstFDD

PCPCHChannelInformationItem-CTCH-SetupRqstFDD ::= SEQUENCE {
commonPhysicalChannelID       CommonPhysicalChannelID,
cPCHScramblingCodeNumber      CPCHScramblingCodeNumber,
dL-ScramblingCode             DL-ScramblingCode,
fdd-dl-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
pCP-Length                    PCP-Length,
uCSM-Information              UCSM-Information-CTCH-SetupRqstFDD          OPTIONAL,
-- this IE is only present if the Channel Assignment Indication is equal to CA Inactive --
iE-Extensions                 ProtocolExtensionContainer { { PCPCHChannelInformationItem-
CTCH-SetupRqstFDD-ExtIEs} }      OPTIONAL,
...
}

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

UCSM-Information-CTCH-SetupRqstFDD ::= SEQUENCE {
minUL-ChannelisationCodeLength MinUL-ChannelisationCodeLength,
nFmax                          NFmax,
channelRequestParameters       ChannelRequestParametersList-CTCH-SetupRqstFDD
OPTIONAL,
iE-Extensions                 ProtocolExtensionContainer { { UCSM-InformationItem-CTCH-
SetupRqstFDD-ExtIEs} }      OPTIONAL,
...
}

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

ChannelRequestParametersList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxAPSigNum)) OF
ChannelRequestParametersItem-CTCH-SetupRqstFDD

ChannelRequestParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
aPPreambleSignature           APPreambleSignature,
aPSubChannelNumber            APSubChannelNumber          OPTIONAL,
iE-Extensions                 ProtocolExtensionContainer { { ChannelRequestParametersItem-CTCH-
SetupRqstFDD-ExtIEs} }      OPTIONAL,
...
}

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

```

```

VCAMMapping-InformationList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNoofLen)) OF VCAMMapping-
InformationItem-CTCH-SetupRqstFDD

VCAMMapping-InformationItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    minUL-ChannelisationCodeLength    MinUL-ChannelisationCodeLength,
    nFmax                               NFmax,
    max-Number-of-PCPCHes              Max-Number-of-PCPCHes,
    sFRequestParameters                SFRequestParametersList-CTCH-SetupRqstFDD,
    iE-Extensions                       ProtocolExtensionContainer { { VCAMMapping-InformationItem-
CTCH-SetupRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

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

SFRequestParametersList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxAPSigNum)) OF
SFRequestParametersItem-CTCH-SetupRqstFDD

SFRequestParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    aPPreambleSignature                APPreambleSignature,
    aPSubChannelNumber                 APSubChannelNumber    OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { SFRequestParametersItem-CTCH-
SetupRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

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

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

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

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

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

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

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

CommonTransportChannelSetupRequestTDD-IEs NBAP-PROTOCOL-IES ::= {

```

```

    { ID id-C-ID
      PRESENCE mandatory CRITICALITY reject TYPE C-
    }|
  { ID id-ConfigurationGenerationID
    ConfigurationGenerationID PRESENCE mandatory }|
  { ID id-CommonPhysicalChannelType-CTCH-SetupRqstTDD
    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-Single-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 }7
  ...
}

Secondary-CCPCHItem-CTCH-SetupRqstTDD ::= SEQUENCE {
  cTrCH-ID CTrCH-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-Single-Container {{ Secondary-CCPCH-
parameterListIEs-CTCH-SetupRqstTDD }}

Secondary-CCPCH-parameterListIEs-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD CRITICALITY reject TYPE Secondary-
CCPCH-parameterListIE-CTCH-SetupRqstTDD PRESENCE mandatory }7
  ...
}

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-Single-Container {{ FACH-ParametersListIEs-
CTCH-SetupRqstTDD }}

FACH-ParametersListIEs-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-FACH-ParametersListIE-CTCH-SetupRqstTDD CRITICALITY reject TYPE FACH-
ParametersListIE-CTCH-SetupRqstTDD PRESENCE mandatory }7
  ...
}

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-Single-Container {{ PCH-ParametersIE-CTCH-
SetupRqstTDD }}

PCH-ParametersIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-PCH-ParametersItem-CTCH-SetupRqstTDD CRITICALITY reject TYPE PCH-ParametersItem-
CTCH-SetupRqstTDD PRESENCE mandatory }7
  ...
}

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-Single-Container {{ PRACHIE-CTCH-SetupRqstTDD }}

PRACHIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-PRACHItem-CTCH-SetupRqstTDD CRITICALITY reject TYPE PRACHItem-CTCH-SetupRqstTDD
PRESENCE mandatory }7
  ...
}

```



```

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-Single-Container {{ RACH-ParameterIE-CTCH-
SetupRqstTDD }}

RACH-ParameterIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-RACH-ParameterItem-CTCH-SetupRqstTDD    CRITICALITY reject    TYPE RACH-ParameterItem-
CTCH-SetupRqstTDD    PRESENCE mandatory }7
    ...
}

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-FACH-ParametersList-CTCH-SetupRsp    CRITICALITY ignore    TYPE FACH-
ParametersList-CTCH-SetupRsp    PRESENCE optional    }|
    { ID id-PCH-Parameters-CTCH-SetupRsp        CRITICALITY ignore    TYPE PCH-Parameters-
CTCH-SetupRsp                    PRESENCE optional    }|
    { ID id-RACH-Parameters-CTCH-SetupRsp        CRITICALITY ignore    TYPE RACH-Parameters-
CTCH-SetupRsp                    PRESENCE optional    }|
    { ID id-CPCH-Parameters-CTCH-SetupRsp        CRITICALITY ignore    TYPE CPCH-
Parameters-CTCH-SetupRsp        PRESENCE optional    }|
    { ID id-CriticalityDiagnostics                CRITICALITY ignore    TYPE
CriticalityDiagnostics                PRESENCE optional    },
    ...
}

CommonTransportChannelSetupResponse-Extensions 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} }          OPTIONAL,
    ...
}

```

```

FACH-ParametersItem-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} }            OPTIONAL,
  ...
}

PCH-Parameters-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 ::= {
  ...
}

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

CPCH-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
      PRESENCE mandatory } |
    { ID id-ConfigurationGenerationID
      PRESENCE mandatory } |
    { ID id-CommonPhysicalChannelType-CTCH-ReconfRqstFDD
      PRESENCE mandatory } |
    CRITICALITY reject TYPE C-ID
}

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

CommonPhysicalChannelType-CTCH-ReconfRqstFDD ::= CHOICE {
    secondary-CCPCH-parameters      Secondary-CCPCHList-CTCH-ReconfRqstFDD,
    pRACH-parameters                PRACHList-CTCH-ReconfRqstFDD,
    cPCH-parameters                  CPCHList-CTCH-ReconfRqstFDD,
    ...
}

Secondary-CCPCHList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ Secondary-CCPCHListIEs-
CTCH-ReconfRqstFDD }}

Secondary-CCPCHListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-Secondary-CCPCHListIE-CTCH-ReconfRqstFDD
      PRESENCE optional } |
    CRITICALITY reject TYPE Secondary-
    CCPCHListIE-CTCH-ReconfRqstFDD }T
}

Secondary-CCPCHListIE-CTCH-ReconfRqstFDD ::= SEQUENCE {
    fACH-ParametersList-CTCH-ReconfRqstFDD      FACH-ParametersList-CTCH-ReconfRqstFDD      OPTIONAL,
    pCH-ParametersList-CTCH-ReconfRqstFDD      PCH-ParametersList-CTCH-ReconfRqstFDD      OPTIONAL,
    pICH-ParametersList-CTCH-ReconfRqstFDD      PICH-ParametersList-CTCH-ReconfRqstFDD      OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { { Secondary-CCPCH-CTCH-
    ReconfRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

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

FACH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ FACH-ParametersListIEs-
CTCH-ReconfRqstFDD }}

FACH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-FACH-ParametersListIE-CTCH-ReconfRqstFDD
      PRESENCE mandatory } |
    CRITICALITY reject TYPE FACH-
    ParametersListIE-CTCH-ReconfRqstFDD }T
}

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

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

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

PCH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ PCH-ParametersIE-CTCH-
ReconfRqstFDD }}

PCH-ParametersIE-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {

```

```

    { ID id-PCH-ParametersItem-CTCH-ReconfRqstFDD CRITICALITY reject TYPE PCH-ParametersItem-
    CTCH-ReconfRqstFDD PRESENCE mandatory }τ
    ...
}

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

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

PICH-Parameters-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ PICH-ParametersIE-CTCH-
    ReconfRqstFDD }}

PICH-ParametersIE-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-PICH-ParametersItem-CTCH-ReconfRqstFDD CRITICALITY reject TYPE PICH-ParametersItem-
    CTCH-ReconfRqstFDD PRESENCE mandatory }τ
    ...
}

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

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

PRACHList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ PRACHListIEs-CTCH-ReconfRqstFDD }}

PRACHListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-PRACHListIE-CTCH-ReconfRqstFDD CRITICALITY reject TYPE PRACHListIE-CTCH-ReconfRqstFDD
    PRESENCE optional }τ
    ...
}

PRACHListIE-CTCH-ReconfRqstFDD ::= SEQUENCE {
    pRACH-ParametersList-CTCH-ReconfRqstFDD PRACH-ParametersList-CTCH-ReconfRqstFDD OPTIONAL,
    aICH-ParametersList-CTCH-ReconfRqstFDD AICH-ParametersList-CTCH-ReconfRqstFDD OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { { PRACH-CTCH-
    ReconfRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

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

PRACH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ PRACH-ParametersListIEs-
    CTCH-ReconfRqstFDD }}

PRACH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-PRACH-ParametersListIE-CTCH-ReconfRqstFDD CRITICALITY reject TYPE PRACH-
    ParametersListIE-CTCH-ReconfRqstFDD PRESENCE mandatory }τ
    ...
}

PRACH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxPRACHCell)) 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
CTCH-ReconfRqstFDD-ExtIEs} }          OPTIONAL,
        ...
    }

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

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

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

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

AICH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ AICH-ParametersListIEs-
CTCH-ReconfRqstFDD }}

AICH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-AICH-ParametersListIE-CTCH-ReconfRqstFDD    CRITICALITY reject    TYPE AICH-
ParametersListIE-CTCH-ReconfRqstFDD    PRESENCE    mandatory }7
    ...
}

AICH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxPRACHCell)) 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 ::= {
    ...
}

CPCHList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ CPCHListIE-CTCH-ReconfRqstFDD }}

CPCHListIE-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-CPCHListItem-CTCH-ReconfRqstFDD    CRITICALITY reject    TYPE CPCHListItem-CTCH-ReconfRqstFDD
PRESENCE    mandatory }7
    ...
}

CPCHListItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    cPCHListItem-CTCH-ReconfRqstFDD        CPCHListItem-CTCH-ReconfRqstFDD
OPTIONAL,
    aP-AICH-ParametersList-CTCH-ReconfRqstFDD    AP-AICH-ParametersList-CTCH-ReconfRqstFDD
OPTIONAL,
    cDCA-ICH-ParametersList-CTCH-ReconfRqstFDD    CDCA-ICH-ParametersList-CTCH-ReconfRqstFDD
OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer { { CPCHListItem-
CTCH-ReconfRqstFDD-ExtIEs} }          OPTIONAL,
    ...
}

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

CPCH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ CPCH-ParametersListIEs-
CTCH-ReconfRqstFDD }}

CPCH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-CPCH-ParametersListIE-CTCH-ReconfRqstFDD    CRITICALITY reject    TYPE CPCH-
ParametersListIE-CTCH-ReconfRqstFDD    PRESENCE    mandatory }7
    ...
}

```

```

}

CPCH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfCPCHs)) OF CPCH-
ParametersItem-CTCH-ReconfRqstFDD

CPCH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    uL-SIR                        UL-SIR                OPTIONAL,
    initialDL-transmissionPower    DL-Power            OPTIONAL,
    maximumDLPower                DL-Power            OPTIONAL,
    minimumDLPower                DL-Power            OPTIONAL,
    iE-Extensions                 ProtocolExtensionContainer { { CPCH-ParametersItem-CTCH-
ReconfRqstFDD-ExtIEs} }      OPTIONAL,
    ...
}

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

AP-AICH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ AP-AICH-
ParametersListIEs-CTCH-ReconfRqstFDD }}

AP-AICH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD CRITICALITY reject TYPE AP-AICH-
ParametersListIE-CTCH-ReconfRqstFDD PRESENCE mandatory }τ
    ...
}

AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfCPCHs)) OF AP-AICH-
ParametersItem-CTCH-ReconfRqstFDD

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

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

CDCA-ICH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ CDCA-ICH-
ParametersListIEs-CTCH-ReconfRqstFDD }}

CDCA-ICH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD CRITICALITY reject TYPE CDCA-ICH-
ParametersListIE-CTCH-ReconfRqstFDD PRESENCE mandatory }τ
    ...
}

CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfCPCHs)) OF AP-AICH-
ParametersItem-CTCH-ReconfRqstFDD

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

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

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

CommonTransportChannelReconfigurationRequestTDD ::= SEQUENCE {
    protocolIEs                 ProtocolIE-Container
    {{CommonTransportChannelReconfigurationRequestTDD-IEs}},

```

```

    protocolExtensions      ProtocolExtensionContainer
    {{CommonTransportChannelReconfigurationRequestTDD-Extensions}}    OPTIONAL,
    ...
}

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

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

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

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

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

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

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 } } OPTIONAL,
    ...
}

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 } } OPTIONAL,
    ...
}

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

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

FACH-ParametersItem-CTCH-ReconfRqstTDD ::= SEQUENCE {
    commonTransportChannelID CommonTransportChannelID,

```

```

    toAWS          ToAWS          OPTIONAL,
    toAWE          ToAWE          OPTIONAL,
    iE-Extensions  ProtocolExtensionContainer  { { FACH-ParametersItem-CTCH-
ReconfRqstTDD-ExtIEs } }  OPTIONAL,
    ...
}

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

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

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

-- *****
--
-- 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-Single-Container
{{ Cell-InformationItemIE-AuditRsp}}

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

Cell-InformationItem-AuditRsp ::= SEQUENCE {
  c-ID C-ID,
  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,
  pCPCH-InformationList PCPCH-InformationList-AuditRsp OPTIONAL,
  cPCH-InformationList CPCH-InformationList-AuditRsp OPTIONAL,
  aP-AICH-InformationList AP-AICH-InformationList-AuditRsp OPTIONAL,
  cDCA-ICH-InformationList CDCA-ICH-InformationList-AuditRsp OPTIONAL,
  sCH-Information SCH-Information-AuditRsp OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { Cell-InformationItem-
  AuditRsp-ExtIEs} } OPTIONAL,
  ...
}

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

P-SCH-Information-AuditRsp ::= ProtocolIE-Single-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 }T
  ...
}

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-Single-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 }T
  ...
}

S-SCH-InformationItem-AuditRsp ::= SEQUENCE {
  commonPhysicalChannelID CommonPhysicalChannelID,
  resourceOperationalState ResourceOperationalState,
  availabilityStatus AvailabilityStatus,

```

```

        iE-Extensions
AuditRsp-ExtIEs} } OPTIONAL,
        ...
    }

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

P-CPICH-Information-AuditRsp ::= ProtocolIE-Single-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 }7
    ...
}

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-Single-
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 }7
    ...
}

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-Single-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 }7
    ...
}

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-Single-Container {{ BCH-InformationIE-AuditRsp }}

BCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-BCH-InformationItem-AuditRsp CRITICALITY ignore TYPE BCH-InformationItem-AuditRsp
PRESENCE mandatory }7

```

```

| -----
| }
|
| 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-Single-
| 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 }T
|     ...
| }
|
| 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-Single-Container {{ PCH-InformationIE-AuditRsp }}
|
| PCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
|     { ID id-PCH-InformationItem-AuditRsp  CRITICALITY ignore  TYPE PCH-InformationItem-AuditRsp
| PRESENCE mandatory }T
|     ...
| }
|
| 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-Single-Container {{ PICH-InformationIE-AuditRsp }}
|
| PICH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
|     { ID id-PICH-InformationItem-AuditRsp  CRITICALITY ignore  TYPE PICH-InformationItem-AuditRsp
| PRESENCE mandatory }T
|     ...
| }
|
| 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-Single-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-Single-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-Single-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-Single-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 ::= {
    ...
}

PCPCH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxPCPCHCell)) OF ProtocolIE-Single-Container
{{ PCPCH-InformationItemIE-AuditRsp }}

PCPCH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-PCPCH-InformationItem-AuditRsp    CRITICALITY ignore TYPE PCPCH-InformationItem-AuditRsp
    PRESENCE optional }T
    ...
}

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

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

CPCH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{
CPCH-InformationItemIE-AuditRsp }}

CPCH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-CPCH-InformationItem-AuditRsp    CRITICALITY ignore TYPE CPCH-InformationItem-AuditRsp
    PRESENCE optional }T
    ...
}

CPCH-InformationItem-AuditRsp ::= SEQUENCE {
    commonTransportChannelID        CommonTransportChannelID,
    resourceOperationalState         ResourceOperationalState,
    availabilityStatus               AvailabilityStatus,
    iE-Extensions                    ProtocolExtensionContainer { { CPCH-InformationItem-
AuditRsp-ExtIEs} }                OPTIONAL,
    ...
}

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

AP-AICH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container
{{ AP-AICH-InformationItemIE-AuditRsp }}

AP-AICH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-AP-AICH-InformationItem-AuditRsp  CRITICALITY ignore TYPE AP-AICH-InformationItem-
AuditRsp PRESENCE mandatory }T
    ...
}

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

AP-AICH-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```



```

CDCA-ICH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ CDCA-ICH-InformationItemIE-AuditRsp }}

CDCA-ICH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-CDCA-ICH-InformationItem-AuditRsp    CRITICALITY ignore    TYPE CDCA-ICH-InformationItem-
  AuditRsp          PRESENCE mandatory }T
  ...
}

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

CDCA-ICH-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

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

SCH-InformationItem-AuditRsp ::= SEQUENCE {
  commonPhysicalChannelID      CommonPhysicalChannelID,
  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-Single-Container {{
  CCP-InformationItemIE-AuditRsp }}

CCP-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-CCP-InformationItem-AuditRsp    CRITICALITY ignore    TYPE CCP-
  InformationItem-AuditRsp          PRESENCE mandatory }T
  ...
}

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-
Single-Container {{ Local-Cell-InformationItemIE-AuditRsp }}

Local-Cell-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-Local-Cell-InformationItem-AuditRsp    CRITICALITY ignore    TYPE
  Local-Cell-InformationItem-AuditRsp          PRESENCE mandatory }T
  ...
}

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 }|
    -- This IE represents both the Common Measurement Object Type IE and the choice based on the
Common Measurement Object Type
    -- as described in the tabular message format in subclause 9.1.
    { ID id-CommonMeasurementType          CRITICALITY reject          TYPE
    CommonMeasurementType                PRESENCE mandatory }|
    { ID id-MeasurementFilterCoefficient    CRITICALITY reject          TYPE
    MeasurementFilterCoefficient          PRESENCE optional }|
    { ID id-ReportCharacteristics          CRITICALITY reject          TYPE
    ReportCharacteristics                PRESENCE mandatory },
    ...
}

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

CommonMeasurementObjectType-CM-Rqst ::= CHOICE {
    cell          Cell-CM-Rqst,
    rACH          RACH-CM-Rqst,
    cPCH          CPCH-CM-Rqst,
    ...
}

Cell-CM-Rqst ::= ProtocolIE-Single-Container {{ CellIE-CM-Rqst }}

CellIE-CM-Rqst NBAP-PROTOCOL-IES ::= {
    { ID id-CellItem-CM-Rqst  CRITICALITY reject  TYPE CellItem-CM-Rqst  PRESENCE mandatory
} }τ
...
}

CellItem-CM-Rqst ::= SEQUENCE {
    c-ID,
    timeSlot          TimeSlot      OPTIONAL,
    iE-Extensions     ProtocolExtensionContainer   { { CellItem-CM-Rqst-ExtIEs } }
    OPTIONAL,
    ...
}

CellItem-CM-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

RACH-CM-Rqst ::= ProtocolIE-Single-Container {{ RACHIE-CM-Rqst }}

RACHIE-CM-Rqst NBAP-PROTOCOL-IES ::= {
    { ID id-RACHItem-CM-Rqst  CRITICALITY reject  TYPE RACHItem-CM-Rqst  PRESENCE mandatory
} }τ

```

```

| -----
| }
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 ::= {
    ...
}

| CPCH-CM-Rqst ::= ProtocolIE-Single-Container {{ CPCHIE-CM-Rqst }}

CPCHIE-CM-Rqst NBAP-PROTOCOL-IES ::= {
| { ID id-CPCHItem-CM-Rqst    CRITICALITY reject    TYPE CPCHItem-CM-Rqst    PRESENCE optional }T
| -----
| }

CPCHItem-CM-Rqst ::= SEQUENCE {
    c-ID                               C-ID,
    commonTransportChannelID           CommonTransportChannelID,
    spreadingfactor                   MinUL-ChannelisationCodeLength    OPTIONAL,
    iE-Extensions                      ProtocolExtensionContainer  { { CPCHItem-CM-Rqst-ExtIEs} }
    OPTIONAL,
    ...
}

CPCHItem-CM-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON MEASUREMENT INITIATION RESPONSE
--
-- *****

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

CommonMeasurementInitiationResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID           CRITICALITY ignore           TYPE
    MeasurementID                   PRESENCE mandatory }|
    { ID id-CommonMeasurementObjectType-CM-Rsp   CRITICALITY ignore           TYPE
    CommonMeasurementObjectType-CM-Rsp   PRESENCE mandatory }|
    { ID id-SFN                       PRESENCE optional           CRITICALITY ignore           TYPE      SFN
    }|
    { 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,
    cPCH                             CPCH-CM-Rsp,
    ...
}

| Cell-CM-Rsp ::= ProtocolIE-Single-Container {{ CellIE-CM-Rsp }}

CellIE-CM-Rsp NBAP-PROTOCOL-IES ::= {
| { ID id-CellItem-CM-Rsp    CRITICALITY ignore    TYPE CellItem-CM-Rsp    PRESENCE mandatory
| }T
| -----
| }

```

```

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-Single-Container {{ RACHIE-CM-Rsp }}

RACHIE-CM-Rsp NBAP-PROTOCOL-IES ::= {
    { ID id-RACHItem-CM-Rsp    CRITICALITY ignore    TYPE RACHItem-CM-Rsp    PRESENCE mandatory
} }7
...
}

RACHItem-CM-Rsp ::= SEQUENCE {
    commonMeasurementValue      CommonMeasurementValue,
    iE-Extensions                ProtocolExtensionContainer  { { RACHItem-CM-Rsp-ExtIEs } }
    OPTIONAL,
    ...
}

RACHItem-CM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

| CPCH-CM-Rsp ::= ProtocolIE-Single-Container {{ CPCHIE-CM-Rsp }}

CPCHIE-CM-Rsp NBAP-PROTOCOL-IES ::= {
    { ID id-CPCHItem-CM-Rsp    CRITICALITY ignore    TYPE CPCHItem-CM-Rsp    PRESENCE optional } }7
...
}

CPCHItem-CM-Rsp ::= SEQUENCE {
    commonMeasurementValue      CommonMeasurementValue,
    iE-Extensions                ProtocolExtensionContainer  { { CPCHItem-CM-Rsp-ExtIEs } }
    OPTIONAL,
    ...
}

CPCHItem-CM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON MEASUREMENT INITIATION FAILURE
--
-- *****

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

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

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

-- *****
--

```

```

-- COMMON MEASUREMENT REPORT
--
-- *****

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

CommonMeasurementReport-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          PRESENCE    CRITICALITY ignore          TYPE
      MeasurementID                mandatory  }|
    { ID id-CommonMeasurementObjectType-CM-Rprt PRESENCE    CRITICALITY ignore          TYPE
      CommonMeasurementObjectType-CM-Rprt PRESENCE    mandatory  }|
    { ID id-SFN                    PRESENCE    optional    CRITICALITY ignore          TYPE    SFN
      ...
}

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

CommonMeasurementObjectType-CM-Rprt ::= CHOICE {
    cell          Cell-CM-Rprt,
    rACH          RACH-CM-Rprt,
    cPCH         CPCH-CM-Rprt,
    ...
}

Cell-CM-Rprt ::= ProtocolIE-Single-Container {{ CellIE-CM-Rprt }}

CellIE-CM-Rprt NBAP-PROTOCOL-IES ::= {
    { ID id-CellItem-CM-Rprt    CRITICALITY ignore    TYPE CellItem-CM-Rprt    PRESENCE mandatory
    }τ
    ...
}

CellItem-CM-Rprt ::= SEQUENCE {
    measurementAvailabilityIndicator MeasurementAvailabilityIndicator-CommonMeasurementReport,
    iE-Extensions                 ProtocolExtensionContainer {{ CellItem-CM-Rprt-ExtIEs }}
    OPTIONAL,
    ...
}

CellItem-CM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RACH-CM-Rprt ::= ProtocolIE-Single-Container {{ RACHIE-CM-Rprt }}

RACHIE-CM-Rprt NBAP-PROTOCOL-IES ::= {
    { ID id-RACHItem-CM-Rprt    CRITICALITY ignore    TYPE RACHItem-CM-Rprt    PRESENCE mandatory
    }τ
    ...
}

RACHItem-CM-Rprt ::= SEQUENCE {
    measurementAvailabilityIndicator MeasurementAvailabilityIndicator-CommonMeasurementReport,
    iE-Extensions                 ProtocolExtensionContainer {{ RACHItem-CM-Rprt-ExtIEs }}
    OPTIONAL,
    ...
}

RACHItem-CM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CPCH-CM-Rprt ::= ProtocolIE-Single-Container {{ CPCHIE-CM-Rprt }}

CPCHIE-CM-Rprt NBAP-PROTOCOL-IES ::= {
    { ID id-CPCHItem-CM-Rprt    CRITICALITY ignore    TYPE CPCHItem-CM-Rprt    PRESENCE optional }τ
    ...
}

```

```

CPCHItem-CM-Rprt ::= SEQUENCE {
    commonMeasurementValue      CommonMeasurementValue,
    iE-Extensions                ProtocolExtensionContainer {{ CPCHItem-CM-Rprt-ExtIEs }}
    OPTIONAL,
    ...
}

CPCHItem-CM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

MeasurementAvailabilityIndicator-CommonMeasurementReport ::= CHOICE {
    measurementAvailable      MeasurementAvailable-CommonMeasurementReport,
    measurementnotAvailable    MeasurementnotAvailable-CommonMeasurementReport,
    ...
}

MeasurementAvailable-CommonMeasurementReport ::= ProtocolIE-Single-Container {{
    MeasurementAvailableIE-CommonMeasurementReport }}

MeasurementAvailableIE-CommonMeasurementReport NBAP-PROTOCOL-IES ::= {
    { ID id-MeasurementAvailableItem-CommonMeasurementReport    CRITICALITY ignore TYPE
    MeasurementAvailableItem-CommonMeasurementReport            PRESENCE mandatory}T
    ...
}

MeasurementAvailableItem-CommonMeasurementReport ::= SEQUENCE {
    commonmeasurementValue      CommonMeasurementValue,
    ie-Extensions                ProtocolExtensionContainer { { MeasurementAvailableItem-
    CommonMeasurementReport-ExtTIES} }            OPTIONAL,
    ...
}

MeasurementAvailableItem-CommonMeasurementReport-ExtTIES NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

MeasurementnotAvailable-CommonMeasurementReport ::= ProtocolIE-Single-Container {{
    MeasurementnotAvailableIE-CommonMeasurementReport }}

MeasurementnotAvailableIE-CommonMeasurementReport NBAP-PROTOCOL-IES ::= {
    { ID id-MeasurementnotAvailableItem-CommonMeasurementReport CRITICALITY ignore TYPE
    MeasurementnotAvailableItem-CommonMeasurementReport        PRESENCE mandatory}T
    ...
}

MeasurementnotAvailableItem-CommonMeasurementReport ::= NULL

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

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

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

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

-- *****
--
-- COMMON MEASUREMENT FAILURE INDICATION
--
-- *****

```

```

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

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

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

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

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

CellSetupRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-Local-Cell-ID          CRITICALITY reject
    TYPE      Local-Cell-ID            PRESENCE mandatory }|
    { ID      id-C-ID                   CRITICALITY reject
    TYPE      C-ID                      PRESENCE mandatory }|
    { ID      id-ConfigurationGenerationID CRITICALITY reject
    TYPE      ConfigurationGenerationID PRESENCE mandatory }|
    { ID      id-T-Cell                  CRITICALITY reject
    TYPE      T-Cell                    PRESENCE mandatory }|
    { ID      id-UARFCNforNu             CRITICALITY reject
    TYPE      UARFCN                    PRESENCE mandatory }|
    { ID      id-UARFCNforNd            CRITICALITY reject
    TYPE      UARFCN                    PRESENCE mandatory }|
    { ID      id-MaximumTransmissionPower CRITICALITY reject
    TYPE      MaximumTransmissionPower PRESENCE mandatory }|
    { ID      id-Closed-Loop-Timing-Adjustment-Mode CRITICALITY reject
    TYPE      Closedlooptimingadjustmentmode PRESENCE optional }|
    { ID      id-PrimaryScramblingCode   CRITICALITY reject
    TYPE      PrimaryScramblingCode     PRESENCE mandatory }|
    { ID      id-DL-TPC-Pattern01Count   CRITICALITY reject
    TYPE      DL-TPC-Pattern01Count     PRESENCE mandatory }|
    { ID      id-Synchronisation-Configuration-Cell-SetupRqst CRITICALITY reject
    TYPE      Synchronisation-Configuration-Cell-SetupRqst PRESENCE mandatory }|
    { ID      id-PrimarySCH-Information-Cell-SetupRqstFDD CRITICALITY reject
    TYPE      PrimarySCH-Information-Cell-SetupRqstFDD PRESENCE mandatory }|
    { ID      id-SecondarySCH-Information-Cell-SetupRqstFDD CRITICALITY reject
    TYPE      SecondarySCH-Information-Cell-SetupRqstFDD PRESENCE mandatory }|
    { ID      id-PrimaryCPICH-Information-Cell-SetupRqstFDD CRITICALITY reject
    TYPE      PrimaryCPICH-Information-Cell-SetupRqstFDD PRESENCE mandatory }|
    { ID      id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD CRITICALITY reject
    TYPE      SecondaryCPICH-InformationList-Cell-SetupRqstFDD PRESENCE optional }|
    { ID      id-PrimaryCCPCH-Information-Cell-SetupRqstFDD CRITICALITY reject
    TYPE      PrimaryCCPCH-Information-Cell-SetupRqstFDD PRESENCE mandatory }|
    { ID      id-Limited-power-increase-information-Cell-SetupRqstFDD CRITICALITY reject
    TYPE      Limited-power-increase-information-Cell-SetupRqstFDD PRESENCE mandatory },
    ...
}

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

Synchronisation-Configuration-Cell-SetupRqst ::= SEQUENCE {
    n-INSYNC-IND          N-INSYNC-IND,
    n-OUTSYNC-IND         N-OUTSYNC-IND,
    t-RLFFAILURE          T-RLFFAILURE,
}

```

```

    iE-Extensions          ProtocolExtensionContainer { { Synchronisation-Configuration-Cell-
SetupRqst-ExtIEs} }      OPTIONAL,
    ...
}

Synchronisation-Configuration-Cell-SetupRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimarySCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    primarySCH-Power              DL-Power,
    tSTD-Indicator                TSTD-Indicator,
    iE-Extensions                 ProtocolExtensionContainer { { PrimarySCH-Information-
Cell-SetupRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

PrimarySCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondarySCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    secondarySCH-Power           DL-Power,
    tSTD-Indicator                TSTD-Indicator,
    iE-Extensions                 ProtocolExtensionContainer { { SecondarySCH-Information-
Cell-SetupRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

SecondarySCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimaryCPICH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    primaryCPICH-Power           PrimaryCPICH-Power,
    transmitDiversityIndicator    TransmitDiversityIndicator,
    iE-Extensions                 ProtocolExtensionContainer { { PrimaryCPICH-Information-
Cell-SetupRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

PrimaryCPICH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondaryCPICH-InformationList-Cell-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxSCPICHCell)) OF
ProtocolIE-Single-Container{{ SecondaryCPICH-InformationItemIE-Cell-SetupRqstFDD }}

SecondaryCPICH-InformationItemIE-Cell-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD      CRITICALITY    reject
    TYPE     SecondaryCPICH-InformationItem-Cell-SetupRqstFDD        PRESENCE      mandatory}
    ...
}

SecondaryCPICH-InformationItem-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    dl-ScramblingCode            DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    secondaryCPICH-Power         DL-Power,
    transmitDiversityIndicator    TransmitDiversityIndicator,
    iE-Extensions                 ProtocolExtensionContainer { { SecondaryCPICH-
InformationItem-Cell-SetupRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

SecondaryCPICH-InformationItem-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimaryCCPCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    bCH-information              BCH-Information-Cell-SetupRqstFDD,
    sTTD-Indicator                STTD-Indicator,
    iE-Extensions                 ProtocolExtensionContainer { { PrimaryCCPCH-Information-
Cell-SetupRqstFDD-ExtIEs} }    OPTIONAL,

```



```

}
...
PrimaryCCPCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
}
...
BCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    commonTransportChannelID          CommonTransportChannelID,
    bCH-Power                          DL-Power,
    iE-Extensions                      ProtocolExtensionContainer { { BCH-Information-Cell-
SetupRqstFDD-ExtIEs} }              OPTIONAL,
}
...
BCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
}
...
Limited-power-increase-information-Cell-SetupRqstFDD ::= SEQUENCE {
    powerRaiseLimit                    PowerRaiseLimit,
    dLPowerAveragingWindowSize         DLPowerAveragingWindowSize,
    iE-Extensions                      ProtocolExtensionContainer { { Limited-power-increase-
information-Cell-SetupRqstFDD-ExtIEs} }  OPTIONAL,
}
...
Limited-power-increase-information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
}
...
-- *****
--
-- 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
      Local-Cell-ID          PRESENCE    CRITICALITY    reject    TYPE
      { ID      id-C-ID
        C-ID                  PRESENCE    CRITICALITY    reject    TYPE
        { ID      id-ConfigurationGenerationID
          ConfigurationGenerationID  PRESENCE    CRITICALITY    reject    TYPE
          { ID      id-UARFCNforNt
            UARFCN              PRESENCE    CRITICALITY    reject    TYPE
            { ID      id-CellParameterID
              CellParameterID    PRESENCE    CRITICALITY    reject    TYPE
              { ID      id-MaximumTransmissionPower
                MaximumTransmissionPower  PRESENCE    CRITICALITY    reject    TYPE
                { ID      id-TransmissionDiversityApplied
                  TransmissionDiversityApplied  PRESENCE    CRITICALITY    reject    TYPE
                  { ID      id-SyncCase
                    SyncCase          PRESENCE    CRITICALITY    reject    TYPE
                    { ID      id-DPCHConstant
                      ConstantValue    PRESENCE    CRITICALITY    reject    TYPE
                      { ID      id-PUSCHConstant
                        ConstantValue    PRESENCE    CRITICALITY    reject    TYPE
                        { ID      id-PRACHConstant
                          ConstantValue  PRESENCE    CRITICALITY    reject    TYPE
                          { ID      id-Synchronisation-Configuration-Cell-SetupRqst
                            Synchronisation-Configuration-Cell-SetupRqst  PRESENCE    CRITICALITY    reject    TYPE
                            { ID      id-SCH-Information-Cell-SetupRqstTDD
                              SCH-Information-Cell-SetupRqstTDD  PRESENCE    CRITICALITY    reject    TYPE
                              { ID      id-PCCPCH-Information-Cell-SetupRqstTDD
                                PCCPCH-Information-Cell-SetupRqstTDD  PRESENCE    CRITICALITY    reject    TYPE
                                { ID      id-TimeSlotConfigurationList-Cell-SetupRqstTDD
                                  TimeSlotConfigurationList-Cell-SetupRqstTDD  PRESENCE    CRITICALITY    reject    TYPE
                                  ...
                                }
                              }
                            }
                          }
                        }
                      }
                    }
                  }
                }
              }
            }
          }
        }
      }
    }
  }
}

```

```

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

SCH-Information-Cell-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    syncCaseIndicator                SyncCaseIndicator-Cell-SetupRqstTDD-PSCH,
    sCH-Power                        DL-Power,
    tSTD-Indicator                   TSTD-Indicator,
    iE-Extensions                    ProtocolExtensionContainer { { SCH-Information-Cell-
SetupRqstTDD-ExtIEs} }              OPTIONAL,
    ...
}

SCH-Information-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SyncCaseIndicator-Cell-SetupRqstTDD-PSCH ::= ProtocolIE-Single-Container {{ SyncCaseIndicatorIE-
Cell-SetupRqstTDD-PSCH }}

SyncCaseIndicatorIE-Cell-SetupRqstTDD-PSCH NBAP-PROTOCOL-IES ::= {
    { ID id-SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH  CRITICALITY reject  TYPE
SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH          PRESENCE mandatory }T
    ...
}

SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH ::= CHOICE {
    case1                                Case1-Cell-SetupRqstTDD,
    case2                                Case2-Cell-SetupRqstTDD,
    ...
}

Case1-Cell-SetupRqstTDD ::= ProtocolIE-Single-Container {{ Case1IE-Cell-SetupRqstTDD }}

Case1IE-Cell-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-Case1Item-Cell-SetupRqstTDD  CRITICALITY reject  TYPE Case1Item-Cell-SetupRqstTDD
PRESENCE mandatory }T
    ...
}

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-Single-Container {{ Case2IE-Cell-SetupRqstTDD }}

Case2IE-Cell-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-Case2Item-Cell-SetupRqstTDD  CRITICALITY reject  TYPE Case2Item-Cell-SetupRqstTDD
PRESENCE mandatory }T
    ...
}

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
    PRESENCE    mandatory    }|
    { ID      id-CriticalityDiagnostics    CRITICALITY    ignore          TYPE
    CriticalityDiagnostics    PRESENCE    optional    },
    ...
}

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

-- *****
--
-- CELL RECONFIGURATION REQUEST FDD

```

```

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

CellReconfigurationRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-C-ID
      C-ID
      PRESENCE
      CRITICALITY reject
      mandatory }|
      TYPE
    { ID      id-ConfigurationGenerationID
      ConfigurationGenerationID
      PRESENCE
      CRITICALITY reject
      mandatory }|
      TYPE
    { ID      id-MaximumTransmissionPower
      MaximumTransmissionPower
      PRESENCE
      CRITICALITY reject
      optional }|
      TYPE
    { ID      id-Synchronisation-Configuration-Cell-ReconfRqst
      Synchronisation-Configuration-Cell-ReconfRqst
      PRESENCE
      CRITICALITY reject
      optional }|
      TYPE
    { ID      id-PrimarySCH-Information-Cell-ReconfRqstFDD
      PrimarySCH-Information-Cell-ReconfRqstFDD
      PRESENCE
      CRITICALITY reject
      optional }|
      TYPE
    { ID      id-SecondarySCH-Information-Cell-ReconfRqstFDD
      SecondarySCH-Information-Cell-ReconfRqstFDD
      PRESENCE
      CRITICALITY reject
      optional }|
      TYPE
    { ID      id-PrimaryCPICH-Information-Cell-ReconfRqstFDD
      PrimaryCPICH-Information-Cell-ReconfRqstFDD
      PRESENCE
      CRITICALITY reject
      optional }|
      TYPE
    { ID      id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD
      SecondaryCPICH-InformationList-Cell-ReconfRqstFDD
      PRESENCE
      CRITICALITY reject
      optional }|
      TYPE
    { ID      id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD
      PrimaryCCPCH-Information-Cell-ReconfRqstFDD
      PRESENCE
      CRITICALITY reject
      optional },
    ...
}

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

Synchronisation-Configuration-Cell-ReconfRqst ::= SEQUENCE {
    n-INSYNC-IND          N-INSYNC-IND,
    n-OUTSYNC-IND        N-OUTSYNC-IND,
    t-RLFFAILURE         T-RLFFAILURE,
    iE-Extensions        ProtocolExtensionContainer { { Synchronisation-Configuration-Cell-
ReconfRqst-ExtIEs} }
    OPTIONAL,
    ...
}

Synchronisation-Configuration-Cell-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimarySCH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    primarySCH-Power             DL-Power,
    iE-Extensions                ProtocolExtensionContainer { { PrimarySCH-Information-
Cell-ReconfRqstFDD-ExtIEs} }
    OPTIONAL,
    ...
}

PrimarySCH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondarySCH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    secondarySCH-Power           DL-Power,
    iE-Extensions                ProtocolExtensionContainer { { SecondarySCH-Information-
Cell-ReconfRqstFDD-ExtIEs} }
    OPTIONAL,
    ...
}

SecondarySCH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimaryCPICH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    primaryCPICH-Power           PrimaryCPICH-Power,
    iE-Extensions                ProtocolExtensionContainer { { PrimaryCPICH-Information-
Cell-ReconfRqstFDD-ExtIEs} }
    OPTIONAL,

```

```

}
...
}
PrimaryCPICH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
SecondaryCPICH-InformationList-Cell-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxSCPICHCell)) OF
ProtocolIE-Single-Container{{ SecondaryCPICH-InformationItemIE-Cell-ReconfRqstFDD }}
SecondaryCPICH-InformationItemIE-Cell-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
{ ID      id-SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD      CRITICALITY    reject
TYPE     SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD        PRESENCE        mandatory}T
...
}
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              PRESENCE    mandatory }|
{ ID      id-ConfigurationGenerationID      PRESENCE    mandatory }|
{ ID      id-Synchronisation-Configuration-Cell-ReconfRqst      CRITICALITY    reject    TYPE
Synchronisation-Configuration-Cell-ReconfRqst      PRESENCE    optional }|
{ ID      id-SCH-Information-Cell-ReconfRqstTDD      CRITICALITY    reject    TYPE
SCH-Information-Cell-ReconfRqstTDD      PRESENCE    optional }|
{ ID      id-PCCPCH-Information-Cell-ReconfRqstTDD      CRITICALITY    reject    TYPE
PCCPCH-Information-Cell-ReconfRqstTDD      PRESENCE    optional }|
{ ID      id-MaximumTransmissionPower      CRITICALITY    reject    TYPE
MaximumTransmissionPower      PRESENCE    optional }|

```

```

    { ID      id-DPCHConstant          CRITICALITY  reject      TYPE
    ConstantValue                      PRESENCE     optional   }|
    { ID      id-PUSCHConstant         CRITICALITY  reject      TYPE
    ConstantValue                      PRESENCE     optional   }|
    { ID      id-PRACHConstant         CRITICALITY  reject      TYPE
    ConstantValue                      PRESENCE     optional   }|
    { ID      id-TimeSlotConfigurationList-Cell-ReconfRqstTDD CRITICALITY  reject      TYPE
    TimeSlotConfigurationList-Cell-ReconfRqstTDD PRESENCE     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          PRESENCE optional },
  ...
}

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

IndicationType-ResourceStatusInd ::= CHOICE {
  no-Failure          No-Failure-ResourceStatusInd,
  serviceImpacting   ServiceImpacting-ResourceStatusInd,
  cellControl        NULL,
  ...
}

| No-Failure-ResourceStatusInd ::= ProtocolIE-Single-Container {{ No-FailureIE-ResourceStatusInd }}

No-FailureIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-No-FailureItem-ResourceStatusInd          CRITICALITY ignore          TYPE No-FailureItem-
  ResourceStatusInd          PRESENCE mandatory }T
  ...
}

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-Single-Container {{ Local-Cell-InformationItemIE-ResourceStatusInd }}

Local-Cell-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-Local-Cell-InformationItem-ResourceStatusInd          CRITICALITY ignore          TYPE Local-Cell-
  InformationItem-ResourceStatusInd          PRESENCE mandatory }T
  ...
}

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-Single-Container {{ ServiceImpactingIE-
ResourceStatusInd }}

ServiceImpactingIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
{ ID id-ServiceImpactingItem-ResourceStatusInd    CRITICALITY ignore TYPE ServiceImpactingItem-
ResourceStatusInd          PRESENCE mandatory }7
...
}

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,
pCPCH-InformationList             PCPCH-InformationList-ResourceStatusInd
OPTIONAL,
cPCH-InformationList              CPCH-InformationList-ResourceStatusInd
OPTIONAL,
aP-AICH-InformationList           AP-AICH-InformationList-ResourceStatusInd
OPTIONAL,
cDCA-ICH-InformationList          CDCA-ICH-InformationList-ResourceStatusInd
OPTIONAL,
sCH-Information                   SCH-Information-ResourceStatusInd
OPTIONAL,
iE-Extensions                    ProtocolExtensionContainer { { 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
Service-ResourceStatusInd-ExtIEs} } OPTIONAL,
    ...
}

NodeB-Information-Service-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Local-Cell-InformationList2-ResourceStatusInd ::= SEQUENCE(SIZE (1..maxLocalCellinNodeB)) OF
ProtocolIE-Single-Container {{ Local-Cell-InformationItemIE2-ResourceStatusInd }}

Local-Cell-InformationItemIE2-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-Local-Cell-InformationItem2-ResourceStatusInd CRITICALITY ignore TYPE Local-Cell-
InformationItem2-ResourceStatusInd PRESENCE mandatory }τ
    ...
}

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-Single-
Container {{ CCP-InformationItemIE-ResourceStatusInd }}

CCP-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-CCP-InformationItem-ResourceStatusInd CRITICALITY ignore TYPE CCP-InformationItem-
ResourceStatusInd PRESENCE mandatory }τ
    ...
}

CCP-InformationItem-ResourceStatusInd ::= SEQUENCE {
    communicationControlPortID CommunicationControlPortID,
    resourceOperationalState ResourceOperationalState,
    availabilityStatus AvailabilityStatus,
    iE-Extensions ProtocolExtensionContainer { { CCP-InformationItem-
ResourceStatusInd-ExtIEs} } OPTIONAL,
    ...
}

CCP-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

Cell-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-Cell-InformationItem-ResourceStatusInd CRITICALITY ignore TYPE Cell-InformationItem-
ResourceStatusInd PRESENCE mandatory }τ
    ...
}

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-Single-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 }T
  ...
}

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-Single-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 }T
  ...
}

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-Single-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 }T
  ...
}

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-
Single-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 }T
  ...
}

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-Single-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 }T
    ...
}

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-Single-Container {{ BCH-InformationIE-
ResourceStatusInd }}

BCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-BCH-InformationItem-ResourceStatusInd CRITICALITY ignore TYPE BCH-InformationItem-
ResourceStatusInd PRESENCE mandatory }T
    ...
}

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-
Single-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 }T
    ...
}

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-Single-Container {{ PCH-InformationIE-
ResourceStatusInd }}

```

```

PCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-PCH-InformationItem-ResourceStatusInd CRITICALITY ignore TYPE PCH-InformationItem-
ResourceStatusInd PRESENCE mandatory }T
  ...
}

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-Single-Container {{ PICH-InformationIE-
ResourceStatusInd }}

PICH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-PICH-InformationItem-ResourceStatusInd CRITICALITY ignore TYPE PICH-InformationItem-
ResourceStatusInd PRESENCE mandatory }T
  ...
}

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-Single-
Container {{ FACH-InformationItemIE-ResourceStatusInd }}

FACH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-FACH-InformationItem-ResourceStatusInd CRITICALITY ignore TYPE FACH-InformationItem-
ResourceStatusInd PRESENCE mandatory }T
  ...
}

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-Single-
Container {{ PRACH-InformationItemIE-ResourceStatusInd }}

PRACH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-PRACH-InformationItem-ResourceStatusInd CRITICALITY ignore TYPE PRACH-
InformationItem-ResourceStatusInd PRESENCE mandatory }T
  ...
}

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-Single-
Container {{ RACH-InformationItemIE-ResourceStatusInd }}

RACH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-RACH-InformationItem-ResourceStatusInd    CRITICALITY ignore TYPE RACH-InformationItem-
ResourceStatusInd      PRESENCE mandatory }T
  ...
}

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-Single-
Container {{ AICH-InformationItemIE-ResourceStatusInd }}

AICH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-AICH-InformationItem-ResourceStatusInd    CRITICALITY ignore TYPE AICH-InformationItem-
ResourceStatusInd      PRESENCE mandatory }T
  ...
}

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 ::= {
}
...
PCPCH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxPCPCHCell)) OF ProtocolIE-Single-
Container {{ PCPCH-InformationItemIE-ResourceStatusInd }}

PCPCH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-PCPCH-InformationItem-ResourceStatusInd    CRITICALITY ignore      TYPE PCPCH-
InformationItem-ResourceStatusInd      PRESENCE optional }T
  ...
}

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

PCPCH-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
}
...
CPCH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-
Container {{ CPCH-InformationItemIE-ResourceStatusInd }}

CPCH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-CPCH-InformationItem-ResourceStatusInd    CRITICALITY ignore TYPE CPCH-InformationItem-
ResourceStatusInd      PRESENCE optional }T

```

```

| -----
| }

CPCH-InformationItem-ResourceStatusInd ::= SEQUENCE {
    commonTransportChannelID          CommonTransportChannelID,
    resourceOperationalState          ResourceOperationalState,
    availabilityStatus                 AvailabilityStatus,
    iE-Extensions                      ProtocolExtensionContainer { { CPCH-
InformationItem-ResourceStatusInd-ExtIEs } } OPTIONAL,
    ...
}

CPCH-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AP-AICH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-
Container {{ AP-AICH-InformationItemIE-ResourceStatusInd }}

AP-AICH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-AP-AICH-InformationItem-ResourceStatusInd CRITICALITY ignore TYPE AP-AICH-
InformationItem-ResourceStatusInd PRESENCE optional }T
| -----
| }

AP-AICH-InformationItem-ResourceStatusInd ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    resourceOperationalState          ResourceOperationalState,
    availabilityStatus                 AvailabilityStatus,
    iE-Extensions                      ProtocolExtensionContainer { { AP-AICH-
InformationItem-ResourceStatusInd-ExtIEs } } OPTIONAL,
    ...
}

AP-AICH-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CDCA-ICH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-
Single-Container {{ CDCA-ICH-InformationItemIE-ResourceStatusInd }}

CDCA-ICH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-CDCA-ICH-InformationItem-ResourceStatusInd CRITICALITY ignore TYPE CDCA-ICH-
InformationItem-ResourceStatusInd PRESENCE optional }T
| -----
| }

CDCA-ICH-InformationItem-ResourceStatusInd ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    resourceOperationalState          ResourceOperationalState,
    availabilityStatus                 AvailabilityStatus,
    iE-Extensions                      ProtocolExtensionContainer { { CDCA-ICH-
InformationItem-ResourceStatusInd-ExtIEs } } OPTIONAL,
    ...
}

CDCA-ICH-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ SCH-InformationIE-
ResourceStatusInd }}

SCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-SCH-InformationItem-ResourceStatusInd CRITICALITY ignore TYPE SCH-InformationItem-
ResourceStatusInd PRESENCE mandatory }T
| -----
| }

SCH-InformationItem-ResourceStatusInd ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    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
      PRESENCE mandatory } |
    { ID    id-BCCH-ModificationTime
      BCCH-ModificationTime PRESENCE optional } |
    { ID    id-MIB-SIB-InformationList-SystemInfoUpdateRqst
      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,
    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,
    yes-Deletion           NULL,
    ...
}

| No-Deletion-SystemInfoUpdate ::= ProtocolIE-Single-Container {{ No-DeletionIE-SystemInfoUpdate }}

No-DeletionIE-SystemInfoUpdate NBAP-PROTOCOL-IES ::= {
    { ID id-No-DeletionItem-SystemInfoUpdate CRITICALITY reject 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              OPTIONAL,
    segmentInformationList SegmentInformationList-SystemInfoUpdate,
    iE-Extensions         ProtocolExtensionContainer { { No-DeletionItem-
SystemInfoUpdate-ExtIEs} }          OPTIONAL,
    ...
}

No-DeletionItem-SystemInfoUpdate-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

| SegmentInformationList-SystemInfoUpdate ::= ProtocolIE-Single-Container {{
SegmentInformationListIEs-SystemInfoUpdate }}

SegmentInformationListIEs-SystemInfoUpdate NBAP-PROTOCOL-IES ::= {

```



```

    { ID id-SegmentInformationListIE-SystemInfoUpdate CRITICALITY reject TYPE
SegmentInformationListIE-SystemInfoUpdate PRESENCE mandatory }
}

SegmentInformationListIE-SystemInfoUpdate ::= SEQUENCE (SIZE (1..maxIBSEG)) OF
SegmentInformationItem-SystemInfoUpdate

SegmentInformationItem-SystemInfoUpdate ::= SEQUENCE {
    iB-SG-POS IB-SG-POS OPTIONAL,
    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 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}},

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```

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 }|
  { ID id-Transmission-Gap-Pattern-Sequence-Information CRITICALITY reject          TYPE
  Transmission-Gap-Pattern-Sequence-Information PRESENCE optional }|
  { ID id-Active-Pattern-Sequence-Information   CRITICALITY reject          TYPE
  Active-Pattern-Sequence-Information   PRESENCE optional },
  ...
}

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

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,
  limitedPowerIncrease        LimitedPowerIncrease,
  iE-Extensions              ProtocolExtensionContainer { { DL-DPCH-Information-RL-
  SetupRqstFDD-ExtIEs} } OPTIONAL,
  ...
}

DL-DPCH-Information-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

PowerOffsetInformation-RL-SetupRqstFDD ::= SEQUENCE {
  pOl-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 {
    payloadCRC-PresenceIndicator    PayloadCRC-PresenceIndicator,
    ul-FP-Mode                      UL-FP-Mode,
    toAWS                           ToAWS,
    toAWE                            ToAWE,
    dCH-SpecificInformationList     DCH-SpecificInformationList-RL-SetupRqstFDD,
    iE-Extensions                   ProtocolExtensionContainer { { DCH-InformationItem-RL-
SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-InformationItem-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-SpecificInformationList-RL-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
SpecificItem-RL-SetupRqstFDD

DCH-SpecificItem-RL-SetupRqstFDD ::= SEQUENCE {
    dCH-ID                          DCH-ID,
    ul-TransportFormatSet           TransportFormatSet,
    dl-TransportFormatSet           TransportFormatSet,
    frameHandlingPriority           FrameHandlingPriority,
    qE-Selector                     QE-Selector,
    iE-Extensions                   ProtocolExtensionContainer { { DCH-SpecificItem-RL-
SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-SpecificItem-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-Single-Container{{ RL-InformationItemIE-RL-SetupRqstFDD }}

RL-InformationItemIE-RL-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-RL-InformationItem-RL-SetupRqstFDD      CRITICALITY    notify      TYPE
    RL-InformationItem-RL-SetupRqstFDD      PRESENCE      mandatory} }
    ...
}

RL-InformationItem-RL-SetupRqstFDD ::= SEQUENCE {
    rL-ID                          RL-ID,
    c-ID                            C-ID,
    firstRLS-indicator              FirstRLS-Indicator,

```

```

frameOffset                FrameOffset,
chipOffset                  ChipOffset,
propagationDelay            PropagationDelay            OPTIONAL,
diversityControlField      DiversityControlField        OPTIONAL,
-- This IE is present only if the RL is not the first one in the RL Information
dl-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,
transmissionGapPatternSequenceCodeInformation
TransmissionGapPatternSequenceCodeInformation    OPTIONAL,
-- This IE is present only if Downlink compressed mode method is set to "SF/2" in the
Transmission Gap Pattern Sequence Information IE.
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-Single-Container{{ UL-CCTrCH-InformationItemIE-RL-SetupRqstTDD }}

UL-CCTrCH-InformationItemIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID      id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD      CRITICALITY    notify      TYPE
  UL-CCTrCH-InformationItem-RL-SetupRqstTDD      PRESENCE      mandatory}7
  ...
}

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-
Single-Container{{ DL-CCTrCH-InformationItemIE-RL-SetupRqstTDD }}

DL-CCTrCH-InformationItemIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID      id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD      CRITICALITY    notify
  TYPE     DL-CCTrCH-InformationItem-RL-SetupRqstTDD      PRESENCE      mandatory}7
  ...
}

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 {
payloadCRC-PresenceIndicator  PayloadCRC-PresenceIndicator,
ul-FP-Mode                    UL-FP-Mode,
toAWS                          ToAWS,
toAWE                          ToAWE,
dCH-SpecificInformationList    DCH-SpecificInformationList-RL-SetupRqstTDD,
iE-Extensions                 ProtocolExtensionContainer { { DCH-InformationItem-RL-
SetupRqstTDD-ExtIEs} }      OPTIONAL,
...
}

DCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-SpecificInformationList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
SpecificItem-RL-SetupRqstTDD

DCH-SpecificItem-RL-SetupRqstTDD ::= SEQUENCE {
dCH-ID                        DCH-ID,
ul-CCTrCH-ID                  CCTrCH-ID,
dl-CCTrCH-ID                  CCTrCH-ID,
ul-TransportFormatSet        TransportFormatSet,
dl-TransportFormatSet        TransportFormatSet,
frameHandlingPriority         FrameHandlingPriority      OPTIONAL,
qE-Selector                   QE-Selector,
iE-Extensions                 ProtocolExtensionContainer { { DCH-SpecificItem-RL-
SetupRqstTDD-ExtIEs} }      OPTIONAL,
...
}

DCH-SpecificItem-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,
cCCTrCH-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,
cCCTrCH-ID                     CCTrCH-ID,
transportFormatSet             TransportFormatSet,

```

```

    qE-Selector                QE-Selector,
    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-Single-
Container{{ RL-InformationResponseItemIE-RL-SetupRspFDD }}

| RL-InformationResponseItemIE-RL-SetupRspFDD NBAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-SetupRspFDD CRITICALITY ignore          TYPE
RL-InformationResponseItem-RL-SetupRspFDD PRESENCE mandatory} }7
    ...
}

RL-InformationResponseItem-RL-SetupRspFDD ::= SEQUENCE {
    rL-ID                      RL-ID,
    rL-Set-ID                  RL-Set-ID,
    ul-InterferenceLevel      UL-InterferenceLevel,
    diversityIndication        DiversityIndication-RL-SetupRspFDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity
indication as described in
-- the tabular message format in subclause 9.1.
    dSCH-InformationResponseList DSCH-InformationResponseList-RL-SetupRspFDD
    OPTIONAL,
    sSDT-SupportIndicator      SSdT-SupportIndicator,

```

```

        iE-Extensions
InformationResponseItem-RL-SetupRspFDD-ExtIEs } } ProtocolExtensionContainer { { RL-
        ...
        OPTIONAL,
    }

RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DiversityIndication-RL-SetupRspFDD ::= CHOICE {
    combining                               Combining-RL-SetupRspFDD,
    nonCombiningOrFirstRL                  NonCombiningOrFirstRL-RL-SetupRspFDD,
    ...
}

Combining-RL-SetupRspFDD ::= ProtocolIE-Single-Container {{ CombiningIE-RL-SetupRspFDD }}

CombiningIE-RL-SetupRspFDD NBAP-PROTOCOL-IES ::= {
    { ID id-CombiningOrFirstRLItem-RL-SetupRspFDD CRITICALITY ignore TYPE CombiningItem-RL-SetupRspFDD
    PRESENCE mandatory }τ
    ...
}

CombiningItem-RL-SetupRspFDD ::= SEQUENCE {
    rL-ID                                   RL-ID,
    iE-Extensions                           ProtocolExtensionContainer { { Combining-RL-
    SetupRspFDD-ExtIEs } } OPTIONAL,
    ...
}

Combining-RL-SetupRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

NonCombiningOrFirstRL-RL-SetupRspFDD ::= ProtocolIE-Single-Container {{ NonCombiningOrFirstRLIE-RL-
    SetupRspFDD }}

NonCombiningOrFirstRLIE-RL-SetupRspFDD NBAP-PROTOCOL-IES ::= {
    { ID id-NonCombiningOrFirstRLItem-RL-SetupRspFDD CRITICALITY ignore TYPE
    NonCombiningOrFirstRLItem-RL-SetupRspFDD PRESENCE mandatory }τ
    ...
}

NonCombiningOrFirstRLItem-RL-SetupRspFDD ::= SEQUENCE {
    dCH-InformationResponseList             DCH-InformationResponseList-RL-SetupRspFDD
    OPTIONAL ,
    iE-Extensions                           ProtocolExtensionContainer { {
    NonCombiningOrFirstRLItem-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
    ...
}

NonCombiningOrFirstRLItem-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-Single-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 }τ
    ...
}

```



```

}

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          CRITICALITY  ignore      TYPE
CRNC-CommunicationContextID          PRESENCE      mandatory  } |
    { ID    id-NodeB-CommunicationContextID        CRITICALITY  ignore      TYPE
NodeB-CommunicationContextID        PRESENCE      mandatory  } |
    { ID    id-CommunicationControlPortID         CRITICALITY  ignore      TYPE
CommunicationControlPortID         PRESENCE      mandatory  } |
    { ID    id-RL-InformationResponse-RL-SetupRspTDD CRITICALITY  ignore      TYPE
RL-InformationResponse-RL-SetupRspTDD PRESENCE      mandatory  } |
    { ID    id-CriticalityDiagnostics             CRITICALITY  ignore      TYPE
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-Single-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 }τ
  ...
}

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-Single-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    PRESENCE    mandatory }τ
  ...
}

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-Single-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    PRESENCE    mandatory }τ
  ...
}

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          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
      optional }|
    { ID    id-CauseLevel-RL-SetupFailureFDD        CRITICALITY    ignore
      TYPE  CauseLevel-RL-SetupFailureFDD          PRESENCE    mandatory }|
    { ID    id-CriticalityDiagnostics              CRITICALITY    ignore
      TYPE  CriticalityDiagnostics                 PRESENCE
      optional }
    },
    ...
}

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

CauseLevel-RL-SetupFailureFDD ::= CHOICE {
    generalCause          GeneralCauseList-RL-SetupFailureFDD,
    rLSpecificCause       RLSpecificCauseList-RL-SetupFailureFDD,
    ...
}

GeneralCauseList-RL-SetupFailureFDD ::= ProtocolIE-Single-Container {{ GeneralCauseIE-RL-
SetupFailureFDD }}

GeneralCauseIE-RL-SetupFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID id-GeneralCauseItem-RL-SetupFailureFDD          CRITICALITY ignore
      TYPE GeneralCauseItem-RL-SetupFailureFDD          PRESENCE mandatory }7
    ...
}

GeneralCauseItem-RL-SetupFailureFDD ::= SEQUENCE {
    cause                Cause,
    iE-Extensions        ProtocolExtensionContainer { { GeneralCauseItem-RL-
SetupFailureFDD-ExtIEs} }    OPTIONAL,
    ...
}

GeneralCauseItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RLSpecificCauseList-RL-SetupFailureFDD ::= ProtocolIE-Single-Container {{ RLSpecificCauseIE-RL-
SetupFailureFDD }}

RLSpecificCauseIE-RL-SetupFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID    id-RLSpecificCauseItem-RL-SetupFailureFDD    CRITICALITY    ignore    TYPE
      TYPE  RLSpecificCauseItem-RL-SetupFailureFDD      PRESENCE    mandatory }7
    ...
}

RLSpecificCauseItem-RL-SetupFailureFDD ::= SEQUENCE {
    unsuccessful-RL-InformationRespList-RL-SetupFailureFDD    Unsuccessful-RL-InformationRespList-
RL-SetupFailureFDD,
    successful-RL-InformationRespList-RL-SetupFailureFDD      Successful-RL-InformationRespList-
RL-SetupFailureFDD    OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { { RLSpecificCauseItem-
RL-SetupFailureFDD-ExtIEs} }    OPTIONAL,
    ...
}

```

```

}

RLSpecificCauseItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unsuccessful-RL-InformationRespList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF
ProtocolIE-Single-Container {{ Unsuccessful-RL-InformationRespItemIE-RL-SetupFailureFDD }}

Unsuccessful-RL-InformationRespItemIE-RL-SetupFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD      CRITICALITY  ignore
      TYPE    Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD        PRESENCE     mandatory} }
    ...
}

Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID          RL-ID,
    cause          Cause,
    iE-Extensions ProtocolExtensionContainer { { Unsuccessful-RL-
InformationRespItem-RL-SetupFailureFDD-ExtIEs } } OPTIONAL,
    ...
}

Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Successful-RL-InformationRespList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1.. maxNrOfRLs)) OF
ProtocolIE-Single-Container {{ Successful-RL-InformationRespItemIE-RL-SetupFailureFDD }}

Successful-RL-InformationRespItemIE-RL-SetupFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-Successful-RL-InformationRespItem-RL-SetupFailureFDD      CRITICALITY  ignore
      TYPE    Successful-RL-InformationRespItem-RL-SetupFailureFDD        PRESENCE     mandatory} }
    ...
}

Successful-RL-InformationRespItem-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID          RL-ID,
    rL-Set-ID      RL-Set-ID,
    ul-InterferenceLevel  UL-InterferenceLevel,
    diversityIndication  DiversityIndication-RL-SetupFailureFDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity
    indication as described in
    -- the tabular message format in subclause 9.1.
    dSCH-InformationResponseList  DSCH-InformationRespList-RL-SetupFailureFDD
OPTIONAL,
    sSDT-SupportIndicator  SSdT-SupportIndicator,
    iE-Extensions          ProtocolExtensionContainer { { Successful-RL-
InformationRespItem-RL-SetupFailureFDD-ExtIEs } } OPTIONAL,
    ...
}

Successful-RL-InformationRespItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DiversityIndication-RL-SetupFailureFDD ::= CHOICE {
    combining          Combining-RL-SetupFailureFDD,
    nonCombiningOrFirstRL  NonCombiningOrFirstRL-RL-SetupFailureFDD,
    ...
}

Combining-RL-SetupFailureFDD ::= ProtocolIE-Single-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 ::= {

```

```

}
...
}
NonCombiningOrFirstRL-RL-SetupFailureFDD ::= ProtocolIE-Single-Container {{ NonCombiningOrFirstRLIE-
RL-SetupFailureFDD }}

NonCombiningOrFirstRLIE-RL-SetupFailureFDD NBAP-PROTOCOL-IES ::= {
  { ID id-NonCombiningOrFirstRLItem-RL-SetupFailureFDD  CRITICALITY ignore  TYPE
  NonCombiningOrFirstRLItem-RL-SetupFailureFDD          PRESENCE mandatory }τ
  ...
}

NonCombiningOrFirstRLItem-RL-SetupFailureFDD ::= SEQUENCE {
  dCH-InformationResponseList          DCH-InformationRespList-RL-SetupFailureFDD
  OPTIONAL,
  iE-Extensions                        ProtocolExtensionContainer { {
  NonCombiningOrFirstRLItem-RL-SetupFailureFDD-ExtIEs} }  OPTIONAL,
  ...
}

NonCombiningOrFirstRLItem-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-Single-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              PRESENCE mandatory }τ
  ...
}

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
    CRNC-CommunicationContextID
    PRESENCE mandatory } |
  { ID id-CauseLevel-RL-SetupFailureTDD
    TYPE CauseLevel-RL-SetupFailureTDD
    PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics
    CriticalityDiagnostics
    PRESENCE optional },
  ...
}

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

CauseLevel-RL-SetupFailureTDD ::= CHOICE {
  generalCause GeneralCauseList-RL-SetupFailureTDD,
  rLSpecificCause RLSpecificCauseList-RL-SetupFailureTDD,
  ...
}

GeneralCauseList-RL-SetupFailureTDD ::= ProtocolIE-Single-Container {{ GeneralCauseIE-RL-
SetupFailureTDD }}

GeneralCauseIE-RL-SetupFailureTDD NBAP-PROTOCOL-IES ::= {
  { ID id-GeneralCauseItem-RL-SetupFailureTDD
    SetupFailureTDD
    PRESENCE mandatory }T
  ...
}

GeneralCauseItem-RL-SetupFailureTDD ::= SEQUENCE {
  cause Cause,
  iE-Extensions ProtocolExtensionContainer { { GeneralCauseItem-RL-SetupFailureTDD-
ExtIEs} } OPTIONAL,
  ...
}

GeneralCauseItem-RL-SetupFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RLSpecificCauseList-RL-SetupFailureTDD ::= ProtocolIE-Single-Container {{ RLSpecificCauseIE-RL-
SetupFailureTDD }}

RLSpecificCauseIE-RL-SetupFailureTDD NBAP-PROTOCOL-IES ::= {
  { ID id-RLSpecificCauseItem-RL-SetupFailureTDD
    RLSpecificCauseItem-RL-SetupFailureTDD
    PRESENCE mandatory }T
  ...
}

RLSpecificCauseItem-RL-SetupFailureTDD ::= SEQUENCE {
  unsuccessful-RL-InformationRespItem-RL-SetupFailureTDD
  SetupFailureTDD,
  iE-Extensions ProtocolExtensionContainer { {
  RLSpecificCauseItem-RL-SetupFailureTDD-ExtIEs} } OPTIONAL,
  ...
}

RLSpecificCauseItem-RL-SetupFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

Unsuccessful-RL-InformationRespItem-RL-SetupFailureTDD ::= ProtocolIE-Single-Container {
{Unsuccessful-RL-InformationRespItemIE-RL-SetupFailureTDD} }

Unsuccessful-RL-InformationRespItemIE-RL-SetupFailureTDD NBAP-PROTOCOL-IES ::= {
  { ID id-Unsuccessful-RL-InformationResp-RL-SetupFailureTDD
    Unsuccessful-RL-InformationResp-RL-SetupFailureTDD
    PRESENCE mandatory }T
  ...
}

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-Single-
Container {{ RL-InformationItemIE-RL-AdditionRqstFDD}}

RL-InformationItemIE-RL-AdditionRqstFDD NBAP-PROTOCOL-IES ::= {
  { ID      id-RL-InformationItem-RL-AdditionRqstFDD CRITICALITY notify          TYPE
  RL-InformationItem-RL-AdditionRqstFDD PRESENCE  mandatory} |
  { ID      id-Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD CRITICALITY reject
  TYPE Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD PRESENCE optional } }
  ...
}

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,
  transmissionGapPatternSequenceCodeInformation OPTIONAL,
  TransmissionGapPatternSequenceCodeInformation
  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-
Single-Container {{ UL-DPCH-InformationItemIE-RL-AdditionRqstTDD }}

UL-DPCH-InformationItemIE-RL-AdditionRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID      id-UL-DPCH-InformationItem-RL-AdditionRqstTDD    CRITICALITY    notify
    TYPE      UL-DPCH-InformationItem-RL-AdditionRqstTDD    PRESENCE        mandatory }7
    ...
}

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 {
    cCTrCH-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-
Single-Container { { DL-DPCH-InformationItemIE-RL-AdditionRqstTDD } }

DL-DPCH-InformationItemIE-RL-AdditionRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID      id-DL-DPCH-InformationItem-RL-AdditionRqstTDD          CRITICALITY    notify
TYPE      DL-DPCH-InformationItem-RL-AdditionRqstTDD              PRESENCE      mandatory } }
    ...
}

DL-DPCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
    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 } }      OPTIONAL,
    ...
}

RL-information-RL-AdditionRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK ADDITION RESPONSE FDD
--
-- *****

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

RadioLinkAdditionResponseFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CRNC-CommunicationContextID          CRITICALITY    ignore
TYPE      CRNC-CommunicationContextID              PRESENCE      mandatory } } |
    { ID      id-RL-InformationResponseList-RL-AdditionRspFDD CRITICALITY    ignore
TYPE      RL-InformationResponseList-RL-AdditionRspFDD PRESENCE      mandatory } } |
    { ID      id-CriticalityDiagnostics              CRITICALITY    ignore
TYPE      CriticalityDiagnostics                   PRESENCE      optional } },
    ...
}

```

```

}

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

RL-InformationResponseList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-
Single-Container {{ RL-InformationResponseItemIE-RL-AdditionRspFDD }}

RL-InformationResponseItemIE-RL-AdditionRspFDD NBAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-AdditionRspFDD CRITICALITY ignore
    TYPE RL-InformationResponseItem-RL-AdditionRspFDD PRESENCE mandatory }T
    ...
}

RL-InformationResponseItem-RL-AdditionRspFDD ::= SEQUENCE {
    rL-ID RL-ID,
    rL-Set-ID RL-Set-ID,
    ul-InterferenceLevel UL-InterferenceLevel,
    diversityIndication DiversityIndication-RL-AdditionRspFDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity
    indication as described in
    -- the tabular message format in subclause 9.1.
    sSDT-SupportIndicator SSDT-SupportIndicator,
    iE-Extensions ProtocolExtensionContainer { { RL-
    InformationResponseItem-RL-AdditionRspFDD-ExtIEs } } OPTIONAL,
    ...
}

RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DiversityIndication-RL-AdditionRspFDD ::= CHOICE {
    combining Combining-RL-AdditionRspFDD,
    non-combining Non-Combining-RL-AdditionRspFDD,
    ...
}

Combining-RL-AdditionRspFDD ::= ProtocolIE-Single-Container {{ CombiningIE-RL-AdditionRspFDD }}

CombiningIE-RL-AdditionRspFDD NBAP-PROTOCOL-IES ::= {
    { ID id-CombiningItem-RL-AdditionRspFDD CRITICALITY ignore TYPE CombiningItem-RL-
    AdditionRspFDD PRESENCE mandatory }T
    ...
}

CombiningItem-RL-AdditionRspFDD ::= SEQUENCE {
    rL-ID RL-ID,
    iE-Extensions ProtocolExtensionContainer { { CombiningItem-RL-
    AdditionRspFDD-ExtIEs } } OPTIONAL,
    ...
}

CombiningItem-RL-AdditionRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Non-Combining-RL-AdditionRspFDD ::= ProtocolIE-Single-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 }T
    ...
}

Non-CombiningItem-RL-AdditionRspFDD ::= SEQUENCE {
    dCH-InformationResponseList DCH-InformationResponseList-RL-AdditionRspFDD,
    iE-Extensions ProtocolExtensionContainer { { Non-
    CombiningItem-RL-AdditionRspFDD-ExtIEs } } OPTIONAL,
    ...
}

Non-CombiningItem-RL-AdditionRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

DCH-InformationResponseList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-AdditionRspFDD

DCH-InformationResponseItem-RL-AdditionRspFDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    bindingID              BindingID,
    transportLayerAddress  TransportLayerAddress,
    iE-Extensions          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,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity
indication as described in
-- the tabular message format in subclause 9.1.
    dSCH-InformationResponseList  DSCH-InformationResponseList-RL-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
    non-Combining
    ...
}

Combining-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{ CombiningIE-RL-AdditionRspTDD }}

CombiningIE-RL-AdditionRspTDD NBAP-PROTOCOL-IES ::= {
    { ID id-CombiningItem-RL-AdditionRspTDD CRITICALITY ignore TYPE CombiningItem-RL-
    AdditionRspTDD PRESENCE mandatory }τ
    ...
}

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-Single-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 }τ
    ...
}

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-Single-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 }τ
    ...
}

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
        RL-AdditionRspTDD-ExtIEs} }          ProtocolExtensionContainer { { DSCH-InformationResponseItem-
        ...                                OPTIONAL,
    }

DSCH-InformationResponseItem-RL-AdditionRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCH-InformationResponseList-RL-AdditionRspTDD ::= ProtocolIE-Single-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 }τ
    ...
}

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 CRITICALITY ignore TYPE CRNC-
CommunicationContextID PRESENCE mandatory }}|
    { ID id-CauseLevel-RL-AdditionFailureFDD CRITICALITY ignore TYPE CauseLevel-
RL-AdditionFailureFDD PRESENCE mandatory }}|
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE
CriticalityDiagnostics PRESENCE optional },
    ...
}

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

CauseLevel-RL-AdditionFailureFDD ::= CHOICE {
    generalCause          GeneralCauseList-RL-AdditionFailureFDD,
    rLspecificCause      RLspecificCauseList-RL-AdditionFailureFDD,
    ...
}

GeneralCauseList-RL-AdditionFailureFDD ::= ProtocolIE-Single-Container {{ GeneralCauseIE-RL-
AdditionFailureFDD }}

GeneralCauseIE-RL-AdditionFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID id-GeneralCauseItem-RL-AdditionFailureFDD CRITICALITY ignore
TYPE GeneralCauseItem-RL-AdditionFailureFDD PRESENCE mandatory
} τ
    ...
}

GeneralCauseItem-RL-AdditionFailureFDD ::= SEQUENCE {

```

```

        cause
        iE-Extensions
AdditionFailureFDD-ExtIEs} }
    ...
}

GeneralCauseItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

| RLSpecificCauseList-RL-AdditionFailureFDD ::= ProtocolIE-Single-Container {{ RLSpecificCauseIE-RL-
AdditionFailureFDD }}

RLSpecificCauseIE-RL-AdditionFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-RLSpecificCauseItem-RL-AdditionFailureFDD          CRITICALITY
      ignore
        TYPE      RLSpecificCauseItem-RL-AdditionFailureFDD      PRESENCE
mandatory} }
    ...
}

RLSpecificCauseItem-RL-AdditionFailureFDD ::= SEQUENCE {
    unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD      Unsuccessful-RL-
InformationRespList-RL-AdditionFailureFDD,
    successful-RL-InformationRespList-RL-AdditionFailureFDD      Successful-RL-
InformationRespList-RL-AdditionFailureFDD OPTIONAL,
    iE-Extensions
RL-AdditionFailureFDD-ExtIEs} }
    ...
}

RLSpecificCauseItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF
| ProtocolIE-Single-Container {{ Unsuccessful-RL-InformationRespItemIE-RL-AdditionFailureFDD }}

Unsuccessful-RL-InformationRespItemIE-RL-AdditionFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD      CRITICALITY
      ignore   TYPE      Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD      PRESENCE
mandatory} }
    ...
}

Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID      RL-ID,
    cause      Cause,
    iE-Extensions
InformationRespItem-RL-AdditionFailureFDD-ExtIEs} }
    ...
}

Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Successful-RL-InformationRespList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF
| ProtocolIE-Single-Container {{ Successful-RL-InformationRespItemIE-RL-AdditionFailureFDD }}

Successful-RL-InformationRespItemIE-RL-AdditionFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-Successful-RL-InformationRespItem-RL-AdditionFailureFDD      CRITICALITY      ignore
      TYPE      Successful-RL-InformationRespItem-RL-AdditionFailureFDD      PRESENCE      mandatory} }
    ...
}

Successful-RL-InformationRespItem-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID      RL-ID,
    rL-Set-ID  RL-Set-ID,
    ul-InterferenceLevel
    diversityIndication
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity
indication as described in
    -- the tabular message format in subclause 9.1.
    sSDT-SupportIndicator
    iE-Extensions
InformationRespItem-RL-AdditionFailureFDD-ExtIEs} }
    ...
}

```

```

}

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-Single-Container {{ CombiningIE-RL-AdditionFailureFDD
}}

CombiningIE-RL-AdditionFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID id-CombiningItem-RL-AdditionFailureFDD CRITICALITY ignore TYPE CombiningItem-RL-
    AdditionFailureFDD PRESENCE mandatory }T
    ...
}

CombiningItem-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID                    RL-ID,
    iE-Extensions            ProtocolExtensionContainer { { CombiningItem-RL-
    AdditionFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

CombiningItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Non-Combining-RL-AdditionFailureFDD ::= ProtocolIE-Single-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 }T
    ...
}

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-CauseLevel-RL-AdditionFailureTDD     CRITICALITY ignore      TYPE
CauseLevel-RL-AdditionFailureTDD PRESENCE mandatory  }|
    { ID id-CriticalityDiagnostics              CRITICALITY ignore      TYPE
CriticalityDiagnostics          PRESENCE optional   },
    ...
}

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

CauseLevel-RL-AdditionFailureTDD ::= CHOICE {
    generalCause          GeneralCauseList-RL-AdditionFailureTDD,
    rLSpecificCause      RLSpecificCauseList-RL-AdditionFailureTDD,
    ...
}

GeneralCauseList-RL-AdditionFailureTDD ::= ProtocolIE-Single-Container {{ GeneralCauseIE-RL-
AdditionFailureTDD }}

GeneralCauseIE-RL-AdditionFailureTDD NBAP-PROTOCOL-IES ::= {
    { ID id-GeneralCauseItem-RL-AdditionFailureTDD CRITICALITY ignore  TYPE GeneralCauseItem-
RL-AdditionFailureTDD PRESENCE mandatory }T
    ...
}

GeneralCauseItem-RL-AdditionFailureTDD ::= SEQUENCE {
    cause                Cause,
    iE-Extensions        ProtocolExtensionContainer { { GeneralCauseItem-RL-
AdditionFailureTDD-ExtIEs } } OPTIONAL,
    ...
}

GeneralCauseItem-RL-AdditionFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RLSpecificCauseList-RL-AdditionFailureTDD ::= ProtocolIE-Single-Container {{ RLSpecificCauseIE-RL-
AdditionFailureTDD }}

RLSpecificCauseIE-RL-AdditionFailureTDD NBAP-PROTOCOL-IES ::= {
    { ID id-RLSpecificCauseItem-RL-AdditionFailureTDD CRITICALITY ignore  TYPE
RLSpecificCauseItem-RL-AdditionFailureTDD PRESENCE mandatory }T
    ...
}

RLSpecificCauseItem-RL-AdditionFailureTDD ::= SEQUENCE {
    unsuccessful-RL-InformationRespItem-RL-AdditionFailureTDD Unsuccessful-RL-InformationRespItem-
RL-AdditionFailureTDD,
    iE-Extensions        ProtocolExtensionContainer { {
RLSpecificCauseItem-RL-AdditionFailureTDD-ExtIEs } } OPTIONAL,
    ...
}

RLSpecificCauseItem-RL-AdditionFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unsuccessful-RL-InformationRespItem-RL-AdditionFailureTDD ::= ProtocolIE-Single-Container {
{Unsuccessful-RL-InformationRespItemIE-RL-AdditionFailureTDD} }

Unsuccessful-RL-InformationRespItemIE-RL-AdditionFailureTDD NBAP-PROTOCOL-IES ::= {
    { ID id-Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD CRITICALITY ignore  TYPE
Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD PRESENCE mandatory }T
    ...
}

Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    cause                Cause,

```



```

    iE-Extensions
    InformationResp-RL-AdditionFailureTDD-ExtIEs} } ProtocolExtensionContainer { { Unsuccessful-RL-
    ...
    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 } |
    { ID id-Transmission-Gap-Pattern-Sequence-Information CRITICALITY reject TYPE
    Transmission-Gap-Pattern-Sequence-Information PRESENCE optional },
    ...
}

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

UL-DPCH-Information-RL-ReconfPrepFDD ::= SEQUENCE {
    ul-ScramblingCode UL-ScramblingCode OPTIONAL,
    ul-SIR-Target UL-SIR OPTIONAL,
    minUL-ChannelisationCodeLength MinUL-ChannelisationCodeLength OPTIONAL,
    maxNrOfUL-DPDCHs MaxNrOfUL-DPDCHs OPTIONAL,
    -- This IE is present only if minUL-ChannelisationCodeLength equals to 4
    ul-PunctureLimit PunctureLimit OPTIONAL,
    tFCS TFCS OPTIONAL,
    ul-DPCCH-SlotFormat UL-DPCCH-SlotFormat OPTIONAL,
    sSDT-CellIDLength SSdT-CellID-Length OPTIONAL,
    s-FieldLength S-FieldLength OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { { UL-DPCH-
    Information-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-ReconfPrepFDD ::= SEQUENCE {
    tFCS TFCS OPTIONAL,
    dl-DPCH-SlotFormat DL-DPCH-SlotFormat OPTIONAL,
    tFCI-SignallingMode TFCI-SignallingMode OPTIONAL,
    tFCI-Presence TFCI-Presence OPTIONAL,
    -- This IE is only present if the DL DPCH Slot Format is equal to any of the value from 12 to 16

```

```

multiplexingPosition           MultiplexingPosition           OPTIONAL,
pDSCH-CodeMapping             PDSCH-CodeMapping             OPTIONAL,
pDSCH-RL-ID                   RL-ID                         OPTIONAL,
limitedPowerIncrease           LimitedPowerIncrease           OPTIONAL,
iE-Extensions                  ProtocolExtensionContainer { { DL-DPCH-
Information-RL-ReconfPrepFDD-ExtIEs} }  OPTIONAL,
...
}

DL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-ModifyList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifyItem-RL-
ReconfPrepFDD

DCH-ModifyItem-RL-ReconfPrepFDD ::= SEQUENCE {
    ul-FP-Mode           UL-FP-Mode           OPTIONAL,
    toAWS                ToAWS                OPTIONAL,
    toAWE                ToAWE                OPTIONAL,
    dCH-SpecificInformationList  DCH-ModifySpecificInformationList-RL-ReconfPrepFDD,
    iE-Extensions        ProtocolExtensionContainer { { DCH-ModifyItem-RL-
ReconfPrepFDD-ExtIEs} }  OPTIONAL,
    ...
}

DCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-ModifySpecificInformationList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
ModifySpecificItem-RL-ReconfPrepFDD

DCH-ModifySpecificItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dCH-ID              DCH-ID,
    ul-TransportFormatSet  TransportFormatSet  OPTIONAL,
    dl-TransportFormatSet  TransportFormatSet  OPTIONAL,
    frameHandlingPriority  FrameHandlingPriority  OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { { DCH-
ModifySpecificItem-RL-ReconfPrepFDD-ExtIEs} }  OPTIONAL,
    ...
}

DCH-ModifySpecificItem-RL-ReconfPrepFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-AddList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-AddItem-RL-ReconfPrepFDD

DCH-AddItem-RL-ReconfPrepFDD ::= SEQUENCE {
    payloadCRC-PresenceIndicator  PayloadCRC-PresenceIndicator,
    ul-FP-Mode                   UL-FP-Mode,
    toAWS                        ToAWS,
    toAWE                        ToAWE,
    dCH-SpecificInformationList  DCH-AddSpecificInformationList-RL-ReconfPrepFDD,
    iE-Extensions                ProtocolExtensionContainer { { DCH-AddItem-RL-ReconfPrepFDD-
ExtIEs} }  OPTIONAL,
    ...
}

DCH-AddItem-RL-ReconfPrepFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-AddSpecificInformationList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
AddSpecificItem-RL-ReconfPrepFDD

DCH-AddSpecificItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dCH-ID              DCH-ID,
    ul-TransportFormatSet  TransportFormatSet,
    dl-TransportFormatSet  TransportFormatSet,
    frameHandlingPriority  FrameHandlingPriority,
    qE-Selector           QE-Selector,
    iE-Extensions        ProtocolExtensionContainer { { DCH-
AddSpecificItem-RL-ReconfPrepFDD-ExtIEs} }  OPTIONAL,
    ...
}

```

```

DCH-AddSpecificItem-RL-ReconfPrepFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-
ReconfPrepFDD

DCH-DeleteItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dCH-ID                                DCH-ID,
    iE-Extensions                          ProtocolExtensionContainer { { DCH-DeleteItem-
RL-ReconfPrepFDD-ExtIEs} }              OPTIONAL,
    ...
}

DCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-ModifyList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF ProtocolIE-Single-
Container {{DSCH-ModifyItemIE-RL-ReconfPrepFDD }}

DSCH-ModifyItemIE-RL-ReconfPrepFDD NBAP-PROTOCOL-IES ::= {
    { ID id-DSCH-ModifyItem-RL-ReconfPrepFDD CRITICALITY reject TYPE DSCH-ModifyItem-
RL-ReconfPrepFDD PRESENCE mandatory}τ
    ...
}

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-Single-
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}τ
    ...
}

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-Single-
Container {{DSCH-DeleteItemIE-RL-ReconfPrepFDD }}

DSCH-DeleteItemIE-RL-ReconfPrepFDD NBAP-PROTOCOL-IES ::= {
    { ID id-DSCH-DeleteItem-RL-ReconfPrepFDD CRITICALITY reject TYPE DSCH-DeleteItem-
RL-ReconfPrepFDD PRESENCE mandatory}τ
    ...
}

DSCH-DeleteItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dSCH-ID                                DSCH-ID,

```

```

        iE-Extensions
        RL-ReconfPrepFDD-ExtIEs} }      OPTIONAL,
    ...
}

DSCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-
Container {{ RL-InformationItemIE-RL-ReconfPrepFDD }}

RL-InformationItemIE-RL-ReconfPrepFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-RL-InformationItem-RL-ReconfPrepFDD      CRITICALITY      reject      TYPE
    RL-InformationItem-RL-ReconfPrepFDD      PRESENCE      mandatory} }
}

RL-InformationItem-RL-ReconfPrepFDD ::= SEQUENCE {
    rL-ID                                RL-ID,
    dl-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,
    transmissionGapPatternSequenceCodeInformation
    TransmissionGapPatternSequenceCodeInformation  OPTIONAL,
    -- This IE is present only if Downlink compressed mode method is set to "SF/2" in the
    Transmission Gap Pattern Sequence Information IE.
    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
    NodeB-CommunicationContextID      PRESENCE      CRITICALITY      reject      TYPE
    PRESENCE      mandatory      } }
}

```

```

{ ID      id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD          CRITICALITY  reject
TYPE     UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD          PRESENCE     optional   } |
{ ID      id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD      CRITICALITY  reject
TYPE     UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD      PRESENCE     optional   }

|
{ ID      id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD      CRITICALITY  reject
TYPE     UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD      PRESENCE     optional   }

|
{ ID      id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD          CRITICALITY  reject
TYPE     DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD          PRESENCE     optional   } |
{ ID      id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD      CRITICALITY  reject
TYPE     DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD      PRESENCE     optional   }

|
{ ID      id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD      CRITICALITY  reject
TYPE     DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD      PRESENCE     optional   }

|
{ ID      id-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-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-
InformationAddItem-RL-ReconfPrepTDD

UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCtRch-ID                CCTrCH-ID,
    tFCS                     TFCS,
    tFCI-Coding              TFCI-Coding,
    punctureLimit            PunctureLimit,
    ul-DPCH-InformationList  UL-DPCH-InformationAddList-RL-ReconfPrepTDD
    OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { { UL-CCTrCH-
InformationAddItem-RL-ReconfPrepTDD-ExtIEs } }
    OPTIONAL,
    ...
}

UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

|
UL-DPCH-InformationAddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-
InformationAddListIEs-RL-ReconfPrepTDD }}

UL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
{ ID id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD CRITICALITY reject      TYPE UL-DPCH-
InformationAddListIE-RL-ReconfPrepTDD PRESENCE mandatory }+
...
}

UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-
InformationAddItem-RL-ReconfPrepTDD

UL-DPCH-InformationAddItem-RL-ReconfPrepTDD ::= 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-
InformationAddItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
...
}

UL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-
CCTrCH-InformationModifyItem-RL-ReconfPrepTDD

UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
cCtRch-ID               CCTrCH-ID,
tFCS                    TFCS
    OPTIONAL,
tFCI-Coding             TFCI-Coding
    OPTIONAL,
punctureLimit          PunctureLimit
    OPTIONAL,
ul-DPCH-InformationAddList UL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD
    OPTIONAL,
ul-DPCH-InformationModifyList UL-DPCH-InformationModify-ModifyList-RL-
ReconfPrepTDD OPTIONAL,
ul-DPCH-InformationDeleteList UL-DPCH-InformationModify-DeleteList-RL-
ReconfPrepTDD OPTIONAL,
iE-Extensions          ProtocolExtensionContainer { { UL-CCTrCH-
InformationModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
...
}

UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

UL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-
InformationModify-AddListIEs-RL-ReconfPrepTDD }}

UL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
{ ID id-UL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD CRITICALITY reject TYPE UL-
DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD PRESENCE mandatory }7
...
}

UL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-
DPCH-InformationModify-AddItem-RL-ReconfPrepTDD

UL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD ::= 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-
InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
...
}

UL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

UL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-
InformationModify-ModifyListIEs-RL-ReconfPrepTDD }}

UL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
{ ID id-UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD CRITICALITY reject TYPE
UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD PRESENCE mandatory }7

```

```

}
}

UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-
DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD

UL-DPCH-InformationModify-ModifyItem-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-
InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container { { UL-DPCH-
InformationModify-DeleteListIEs-RL-ReconfPrepTDD } }

UL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD CRITICALITY reject          TYPE
UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD PRESENCE mandatory } }
}

UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-
DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD

UL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    iE-Extensions          ProtocolExtensionContainer { { UL-DPCH-
InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-
CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD

UL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID              CCTrCH-ID,
    iE-Extensions          ProtocolExtensionContainer { { UL-CCTrCH-
InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-
InformationAddItem-RL-ReconfPrepTDD

DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID              CCTrCH-ID,
    tFCS                   TFCS,
    tFCI-Coding            TFCI-Coding,
    punctureLimit          PunctureLimit,
    dl-DPCH-InformationList DL-DPCH-InformationAddList-RL-ReconfPrepTDD
OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { { DL-CCTrCH-
InformationAddItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

}

DL-DPCH-InformationAddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-
InformationAddListIEs-RL-ReconfPrepTDD }}

DL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
  { ID id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD  CRITICALITY reject          TYPE DL-DPCH-
InformationAddListIE-RL-ReconfPrepTDD          PRESENCE mandatory }T
  ...
}

DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-
InformationAddItem-RL-ReconfPrepTDD

DL-DPCH-InformationAddItem-RL-ReconfPrepTDD ::= 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-
InformationAddItem-RL-ReconfPrepTDD-ExtIEs } }  OPTIONAL,
  ...
}

DL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-
CCTrCH-InformationModifyItem-RL-ReconfPrepTDD

DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID              CCTrCH-ID,
  tFCS                   TFCS
  OPTIONAL,
  tFCI-Coding            TFCI-Coding
  OPTIONAL,
  punctureLimit          PunctureLimit
  OPTIONAL,
  dl-DPCH-InformationAddList  DL-DPCH-InformationModify-AddList-RL-
ReconfPrepTDD  OPTIONAL,
  dl-DPCH-InformationModifyList  DL-DPCH-InformationModify-ModifyList-RL-
ReconfPrepTDD  OPTIONAL,
  dl-DPCH-InformationDeleteList  DL-DPCH-InformationModify-DeleteList-RL-
ReconfPrepTDD  OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { { DL-CCTrCH-
InformationModifyItem-RL-ReconfPrepTDD-ExtIEs } }  OPTIONAL,
  ...
}

DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-
InformationModify-AddListIEs-RL-ReconfPrepTDD }}

DL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
  { ID id-DL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD  CRITICALITY reject          TYPE DL-
DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD          PRESENCE mandatory }T
  ...
}

DL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-
DPCH-InformationModify-AddItem-RL-ReconfPrepTDD

DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
  dPCH-ID                DPCH-ID,
  tdd-ChannelisationCode  TDD-ChannelisationCode,
  burstType              BurstType,
  midambleShift          MidambleShift,
  timeSlot               TimeSlot,
  tdd-PhysicalChannelOffset  TDD-PhysicalChannelOffset,

```



```

    repetitionPeriod          RepetitionPeriod,
    rpetitionLength          RepetitionLength,
    tFCI-Presence            TFCI-Presence,
    iE-Extensions            ProtocolExtensionContainer { { DL-DPCH-
InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}

DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-
InformationModify-ModifyListIEs-RL-ReconfPrepTDD }}

DL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD  CRITICALITY reject          TYPE
DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD  PRESENCE mandatory }7
    ...
}

DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-
DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD

DL-DPCH-InformationModify-ModifyItem-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-
InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}

DL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-
InformationModify-DeleteListIEs-RL-ReconfPrepTDD }}

DL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD  CRITICALITY reject          TYPE
DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD  PRESENCE mandatory }7
    ...
}

DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-
DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD

DL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    iE-Extensions           ProtocolExtensionContainer { { DL-DPCH-
InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}

DL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-
CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD

DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID              CCTrCH-ID,
    iE-Extensions           ProtocolExtensionContainer { { DL-CCTrCH-
InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

}

DCH-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifyItem-RL-
ReconfPrepTDD

DCH-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    ul-FP-Mode          UL-FP-Mode          OPTIONAL,
    toAWS               ToAWS               OPTIONAL,
    toAWE               ToAWE               OPTIONAL,
    dCH-SpecificInformationList  DCH-ModifySpecificInformationList-RL-ReconfPrepTDD,
    iE-Extensions      ProtocolExtensionContainer { { DCH-ModifyItem-RL-
ReconfPrepTDD-ExtIEs} }      OPTIONAL,
    ...
}

DCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifySpecificInformationList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
ModifySpecificItem-RL-ReconfPrepTDD

DCH-ModifySpecificItem-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,
    iE-Extensions      ProtocolExtensionContainer { { DCH-
ModifySpecificItem-RL-ReconfPrepTDD-ExtIEs} }      OPTIONAL,
    ...
}

DCH-ModifySpecificItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-AddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-AddItem-RL-ReconfPrepTDD

DCH-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    payloadCRC-PresenceIndicator  PayloadCRC-PresenceIndicator,
    ul-FP-Mode                    UL-FP-Mode,
    toAWS                          ToAWS,
    toAWE                          ToAWE,
    dCH-SpecificInformationList    DCH-AddSpecificInformationList-RL-ReconfPrepTDD,
    iE-Extensions                  ProtocolExtensionContainer { { DCH-AddItem-RL-ReconfPrepTDD-
ExtIEs} }      OPTIONAL,
    ...
}

DCH-AddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-AddSpecificInformationList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
AddSpecificItem-RL-ReconfPrepTDD

DCH-AddSpecificItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dCH-ID              DCH-ID,
    ul-CCTrCH-ID       CCTrCH-ID,
    dl-CCTrCH-ID       CCTrCH-ID,
    ul-TransportFormatSet  TransportFormatSet,
    dl-TransportFormatSet  TransportFormatSet,
    frameHandlingPriority  FrameHandlingPriority,
    qE-Selector          QE-Selector,
    iE-Extensions      ProtocolExtensionContainer { { DCH-AddSpecificItem-
RL-ReconfPrepTDD-ExtIEs} }      OPTIONAL,
    ...
}

DCH-AddSpecificItem-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
    iE-Extensions
    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
    cCTrCH-ID
    transportFormatSet
    frameHandlingPriority
    toAWS
    toAWE
    iE-Extensions
    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
    cCTrCH-ID
    transportFormatSet
    frameHandlingPriority
    toAWS
    toAWE
    iE-Extensions
    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
    iE-Extensions
    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
    transportFormatSet
    cCTrCH-ID
    iE-Extensions
    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,
    qE-Selector            QE-Selector,
    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-
Single-Container {{ RL-InformationResponseItemIE-RL-ReconfReady}}

RL-InformationResponseItemIE-RL-ReconfReady NBAP-PROTOCOL-IES ::= {

```

```

    { ID id-RL-InformationResponseItem-RL-ReconfReady CRITICALITY ignore
      TYPE RL-InformationResponseItem-RL-ReconfReady PRESENCE mandatory }7
    ...
  }

RL-InformationResponseItem-RL-ReconfReady ::= SEQUENCE {
  rL-ID RL-ID,
  dCH-InformationResponseList-RL-ReconfReady DCH-InformationResponseList-RL-ReconfReady
  OPTIONAL,
  dSCH-InformationResponseList-RL-ReconfReady DSCH-InformationResponseList-RL-ReconfReady
  OPTIONAL,
  uSCH-InformationResponseList-RL-ReconfReady USCH-InformationResponseList-RL-ReconfReady
  OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { RL-
  InformationResponseItem-RL-ReconfReady-ExtIEs } } OPTIONAL,
  ...
}

RL-InformationResponseItem-RL-ReconfReady-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-InformationResponseList-RL-ReconfReady ::= ProtocolIE-Single-Container {{ DCH-
InformationResponseListIEs-RL-ReconfReady }}

DCH-InformationResponseListIEs-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
  { ID id-DCH-InformationResponseListIE-RL-ReconfReady CRITICALITY ignore TYPE DCH-
  InformationResponseListIE-RL-ReconfReady PRESENCE mandatory }7
  ...
}

DCH-InformationResponseListIE-RL-ReconfReady ::= SEQUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-ReconfReady

DCH-InformationResponseItem-RL-ReconfReady ::= SEQUENCE {
  dCH-ID DCH-ID,
  bindingID BindingID,
  transportLayerAddress TransportLayerAddress,
  iE-Extensions ProtocolExtensionContainer { { DCH-
  InformationResponseItem-RL-ReconfReady-ExtIEs } } OPTIONAL,
  ...
}

DCH-InformationResponseItem-RL-ReconfReady-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DSCH-InformationResponseList-RL-ReconfReady ::= ProtocolIE-Single-Container {{ DSCH-
InformationResponseListIEs-RL-ReconfReady }}

DSCH-InformationResponseListIEs-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
  { ID id-DSCH-InformationResponseListIE-RL-ReconfReady CRITICALITY ignore TYPE DSCH-
  InformationResponseListIE-RL-ReconfReady PRESENCE mandatory }7
  ...
}

DSCH-InformationResponseListIE-RL-ReconfReady ::= SEQUENCE (SIZE (0..maxNrOfDSCHs)) OF DSCH-
InformationResponseItem-RL-ReconfReady

DSCH-InformationResponseItem-RL-ReconfReady ::= SEQUENCE {
  dSCH-ID DSCH-ID,
  bindingID BindingID,
  transportLayerAddress TransportLayerAddress,
  iE-Extensions ProtocolExtensionContainer { { DSCH-
  InformationResponseItem-RL-ReconfReady-ExtIEs } } OPTIONAL,
  ...
}

DSCH-InformationResponseItem-RL-ReconfReady-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

USCH-InformationResponseList-RL-ReconfReady ::= ProtocolIE-Single-Container {{ USCH-
InformationResponseListIEs-RL-ReconfReady }}

USCH-InformationResponseListIEs-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
  { ID id-USCH-InformationResponseListIE-RL-ReconfReady CRITICALITY ignore TYPE USCH-
  InformationResponseListIE-RL-ReconfReady PRESENCE mandatory }7

```

```

}
}

USCH-InformationResponseListIE-RL-ReconfReady ::= SEQUENCE (SIZE (0..maxNrOfUSCHs)) OF USCH-
InformationResponseItem-RL-ReconfReady

USCH-InformationResponseItem-RL-ReconfReady ::= SEQUENCE {
    uSCH-ID                USCH-ID,
    bindingID              BindingID,
    transportLayerAddress  TransportLayerAddress,
    iE-Extensions          ProtocolExtensionContainer { { USCH-
InformationResponseItem-RL-ReconfReady-ExtIEs } } OPTIONAL,
    ...
}

USCH-InformationResponseItem-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 } |
ReconfFailure { ID id-CauseLevel-RL-ReconfFailure CRITICALITY ignore TYPE CauseLevel-RL-
PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics                    CRITICALITY ignore TYPE
CriticalityDiagnostics PRESENCE optional },
    ...
}

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

CauseLevel-RL-ReconfFailure ::= CHOICE {
    generalCause          GeneralCauseList-RL-ReconfFailure,
    rLSpecificCause       RLSpecificCauseList-RL-ReconfFailure,
    ...
}

GeneralCauseList-RL-ReconfFailure ::= ProtocolIE-Single-Container {{ GeneralCauseIE-RL-ReconfFailure
}}

GeneralCauseIE-RL-ReconfFailure NBAP-PROTOCOL-IES ::= {
    { ID id-GeneralCauseItem-RL-ReconfFailure                CRITICALITY ignore
TYPE GeneralCauseItem-RL-ReconfFailure PRESENCE mandatory } }
}

GeneralCauseItem-RL-ReconfFailure ::= SEQUENCE {
    cause                Cause,
    iE-Extensions        ProtocolExtensionContainer { { GeneralCauseItem-RL-
ReconfFailure-ExtIEs } } OPTIONAL,
    ...
}

GeneralCauseItem-RL-ReconfFailure-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RLSpecificCauseList-RL-ReconfFailure ::= ProtocolIE-Single-Container {{ RLSpecificCauseIE-RL-
ReconfFailure }}

RLSpecificCauseIE-RL-ReconfFailure NBAP-PROTOCOL-IES ::= {
    { ID id-RLSpecificCauseItem-RL-ReconfFailure                CRITICALITY ignore
TYPE RLSpecificCauseItem-RL-ReconfFailure PRESENCE mandatory
} }
}

```

```

| .....
| }

RLSpecificCauseItem-RL-ReconfFailure ::= SEQUENCE {
    rL-ReconfigurationFailureList-RL-ReconfFailure    RL-ReconfigurationFailureList-RL-
ReconfFailure    OPTIONAL,
    iE-Extensions                                     ProtocolExtensionContainer { {
RLSpecificCauseItem-RL-ReconfFailure-ExtIEs} }    OPTIONAL,
    ...
}

RLSpecificCauseItem-RL-ReconfFailure-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-ReconfigurationFailureList-RL-ReconfFailure ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-
| Single-Container {{ RL-ReconfigurationFailureItemIE-RL-ReconfFailure}}

RL-ReconfigurationFailureItemIE-RL-ReconfFailure NBAP-PROTOCOL-IES ::= {
    { ID      id-RL-ReconfigurationFailureItem-RL-ReconfFailure    CRITICALITY    ignore
    TYPE     RL-ReconfigurationFailureItem-RL-ReconfFailure    PRESENCE     mandatory}7
| .....
| }

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    PRESENCE    mandatory    } |
    { ID      id-Active-Pattern-Sequence-Information    CRITICALITY    ignore    TYPE    Active-
Pattern-Sequence-Information    PRESENCE    optional    },
    ...
}

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

-- *****
--
-- RADIO LINK RECONFIGURATION CANCEL
--
-- *****

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

RadioLinkReconfigurationCancel-IEs NBAP-PROTOCOL-IES ::= {

```

```

    { ID id-NodeB-CommunicationContextID CRITICALITY ignore TYPE NodeB-
CommunicationContextID PRESENCE mandatory },
    ...
}

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

-- *****
--
-- RADIO LINK RECONFIGURATION REQUEST FDD
--
-- *****

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

RadioLinkReconfigurationRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-NodeB-CommunicationContextID CRITICALITY reject TYPE
NodeB-CommunicationContextID PRESENCE mandatory } |
    { ID id-UL-DPCH-Information-RL-ReconfRqstFDD CRITICALITY reject TYPE UL-
DPCH-Information-RL-ReconfRqstFDD PRESENCE optional } |
    { ID id-DL-DPCH-Information-RL-ReconfRqstFDD CRITICALITY reject TYPE DL-
DPCH-Information-RL-ReconfRqstFDD PRESENCE optional } |
    { ID id-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 } |
    { ID id-Transmission-Gap-Pattern-Sequence-Information CRITICALITY reject TYPE
Transmission-Gap-Pattern-Sequence-Information PRESENCE optional },
    ...
}

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

UL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
    ul-TFCS TFCS OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { { UL-DPCH-
Information-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
    dl-TFCS TFCS OPTIONAL,
    tFCI-SignallingMode TFCI-SignallingMode
OPTIONAL,
    pDSCH-CodeMapping PDSCH-CodeMapping
OPTIONAL,
    pDSCH-RL-ID RL-ID
OPTIONAL,
    limitedPowerIncrease LimitedPowerIncrease
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 {
    ul-FP-Mode                UL-FP-Mode                OPTIONAL,
    toAWS                     ToAWS                     OPTIONAL,
    toAWE                     ToAWE                     OPTIONAL,
    dCH-SpecificInformationList DCH-ModifySpecificInformationList-RL-ReconfRqstFDD,
    iE-Extensions             ProtocolExtensionContainer { { DCH-ModifyItem-
RL-ReconfRqstFDD-ExtIEs} }          OPTIONAL,
    ...
}

DCH-ModifyItem-RL-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifySpecificInformationList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
ModifySpecificItem-RL-ReconfRqstFDD

DCH-ModifySpecificItem-RL-ReconfRqstFDD ::= SEQUENCE {
    dCH-ID                    DCH-ID,
    ul-TransportFormatSet     TransportFormatSet          OPTIONAL,
    dl-TransportFormatSet     TransportFormatSet          OPTIONAL,
    frameHandlingPriority      FrameHandlingPriority        OPTIONAL,
    iE-Extensions             ProtocolExtensionContainer { { DCH-
ModifySpecificItem-RL-ReconfRqstFDD-ExtIEs} }          OPTIONAL,
    ...
}

DCH-ModifySpecificItem-RL-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-AddList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-AddItem-RL-ReconfRqstFDD

DCH-AddItem-RL-ReconfRqstFDD ::= SEQUENCE {
    payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
    ul-FP-Mode                UL-FP-Mode,
    toAWS                     ToAWS,
    toAWE                     ToAWE,
    dCH-SpecificInformationList DCH-AddSpecificInformationList-RL-ReconfRqstFDD,
    iE-Extensions             ProtocolExtensionContainer { { DCH-Add-RL-ReconfRqstFDDItem-
ExtIEs} }          OPTIONAL,
    ...
}

DCH-Add-RL-ReconfRqstFDDItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-AddSpecificInformationList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
AddSpecificItem-RL-ReconfRqstFDD

DCH-AddSpecificItem-RL-ReconfRqstFDD ::= SEQUENCE {
    dCH-ID                    DCH-ID,
    ul-TransportFormatSet     TransportFormatSet,
    dl-TransportFormatSet     TransportFormatSet,
    frameHandlingPriority      FrameHandlingPriority,
    qE-Selector               QE-Selector,
    iE-Extensions             ProtocolExtensionContainer { { DCH-
AddSpecificItem-ExtIEs} }          OPTIONAL,
    ...
}

DCH-AddSpecificItem-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-Single-
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}τ
    ...
}

DSCH-ModifyItem-RL-ReconfRqstFDD ::= SEQUENCE {
    dSCH-ID                                DSCH-ID,
    dl-TransportFormatSet                  TransportFormatSet OPTIONAL,
    frameHandlingPriority                  FrameHandlingPriority OPTIONAL,
    toAWS                                  ToAWS OPTIONAL,
    toAWE                                  ToAWE OPTIONAL,
    iE-Extensions                          ProtocolExtensionContainer { { DSCH-ModifyItem-RL-
ReconfRqstFDD-ExtIEs} }              OPTIONAL,
    ...
}

DSCH-ModifyItem-RL-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-AddList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF ProtocolIE-Single-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}τ
    ...
}

DSCH-AddItem-RL-ReconfRqstFDD ::= SEQUENCE {
    dSCH-ID                                DSCH-ID,
    dl-TransportFormatSet                  TransportFormatSet,
    frameHandlingPriority                  FrameHandlingPriority,
    toAWS                                  ToAWS,
    toAWE                                  ToAWE,
    iE-Extensions                          ProtocolExtensionContainer { { DSCH-AddItem-RL-
ReconfRqstFDD-ExtIEs} }              OPTIONAL,
    ...
}

DSCH-AddItem-RL-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-DeleteList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF ProtocolIE-Single-
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}τ
    ...
}

DSCH-DeleteItem-RL-ReconfRqstFDD ::= SEQUENCE {
    dSCH-ID                                DSCH-ID,
    iE-Extensions                          ProtocolExtensionContainer { { DSCH-DeleteItem-RL-
ReconfRqstFDD-ExtIEs} }              OPTIONAL,
    ...
}

```

```

DSCH-DeleteItem-RL-ReconfRqstFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-RL-ReconfRqstFDD}}

RL-InformationItemIE-RL-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-RL-InformationItem-RL-ReconfRqstFDD      CRITICALITY    reject      TYPE
    { ID      RL-InformationItem-RL-ReconfRqstFDD        PRESENCE        mandatory} }
    ...
}

RL-InformationItem-RL-ReconfRqstFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    maxDL-Power          DL-Power          OPTIONAL,
    minDL-Power          DL-Power          OPTIONAL,
    dl-CodeInformationList DL-CodeInformationList-RL-ReconfRqstFDD
    OPTIONAL,
    -- This IE is group present only if Downlink compressed mode method is set to "SF/2" in the
    Transmission Gap Pattern Sequence Information IE.
    iE-Extensions        ProtocolExtensionContainer { { RL-InformationItem-
    RL-ReconfRqstFDD-ExtIEs} }          OPTIONAL,
    ...
}

DL-CodeInformationList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfDLCodes)) OF DL-CodeInformationItem-RL-ReconfRqstFDD

DL-CodeInformationItem-RL-ReconfRqstFDD ::= SEQUENCE {
    dl-scramblingCode          DL-ScramblingCode
    OPTIONAL,
    fdd-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber
    OPTIONAL,
    transmissionGapPatternSequenceCodeInformation
    TransmissionGapPatternSequenceCodeInformation OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { DL-
    CodeInformationList-RL-ReconfRqstFDD-ExtIEs} }          OPTIONAL,
    ...
}

DL-CodeInformationList-RL-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationItem-RL-ReconfRqstFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION REQUEST TDD
--
-- *****

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

RadioLinkReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-NodeB-CommunicationContextID          CRITICALITY    reject
    TYPE      NodeB-CommunicationContextID            PRESENCE        mandatory } |
    { ID      id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD CRITICALITY    notify
    TYPE      UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD PRESENCE        optional } |
    { ID      id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD CRITICALITY    notify
    TYPE      UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD PRESENCE        optional } |
    { ID      id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD CRITICALITY    notify
    TYPE      DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD PRESENCE        optional } |
    { ID      id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD CRITICALITY    notify
    TYPE      DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD PRESENCE        optional } |
}

```

```

{ ID      id-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-InformationModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF
ProtocolIE-Single-Container {{ UL-CCTrCH-InformationModifyItemIE-RL-ReconfRqstTDD}}

UL-CCTrCH-InformationModifyItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
{ ID      id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD    CRITICALITY    notify
TYPE     UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD      PRESENCE        mandatory}7
...
}

UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
cCTrCH-ID          CCTrCH-ID,
tFCS               OPTIONAL,
punctureLimit     PunctureLimit OPTIONAL,
iE-Extensions     ProtocolExtensionContainer { { UL-CCTrCH-
InformationModifyItem-RL-ReconfRqstTDD-ExtIEs } }
OPTIONAL,
...
}

UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF
ProtocolIE-Single-Container {{ UL-CCTrCH-InformationDeleteItemIE-RL-ReconfRqstTDD}}

UL-CCTrCH-InformationDeleteItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
{ ID      id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD    CRITICALITY    notify
TYPE     UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD      PRESENCE        mandatory}7
...
}

UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
cCTrCH-ID          CCTrCH-ID,
iE-Extensions     ProtocolExtensionContainer { { UL-CCTrCH-
InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs } }
OPTIONAL,
...
}

UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF
ProtocolIE-Single-Container {{ DL-CCTrCH-InformationModifyItemIE-RL-ReconfRqstTDD}}

DL-CCTrCH-InformationModifyItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
{ ID      id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD    CRITICALITY    notify
TYPE     DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD      PRESENCE        mandatory}7
...
}

```

```

DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    tFCS                      TFCS                OPTIONAL,
    punctureLimit             PunctureLimit     OPTIONAL,
    iE-Extensions             ProtocolExtensionContainer { { DL-CCTrCH-
InformationModifyItem-RL-ReconfRqstTDD-ExtIEs } }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF
ProtocolIE-Single-Container {{ DL-CCTrCH-InformationDeleteItemIE-RL-ReconfRqstTDD}}

DL-CCTrCH-InformationDeleteItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID      id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD          CRITICALITY    notify
    TYPE     DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD          PRESENCE      mandatory}7
    ...
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    iE-Extensions             ProtocolExtensionContainer { { DL-CCTrCH-
InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs } }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifyItem-RL-
ReconfRqstTDD

DCH-ModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
    ul-FP-Mode                UL-FP-Mode        OPTIONAL,
    toAWS                     ToAWS            OPTIONAL,
    toAWE                     ToAWE            OPTIONAL,
    dCH-SpecificInformationList DCH-ModifySpecificInformationList-RL-ReconfRqstTDD,
    iE-Extensions             ProtocolExtensionContainer { { DCH-ModifyItem-RL-
ReconfRqstTDD-ExtIEs } }
    OPTIONAL,
    ...
}

DCH-ModifyItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifySpecificInformationList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
ModifySpecificItem-RL-ReconfRqstTDD

DCH-ModifySpecificItem-RL-ReconfRqstTDD ::= 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,
    iE-Extensions             ProtocolExtensionContainer { { DCH-
ModifySpecificItem-RL-ReconfRqstTDD-ExtIEs } }
    OPTIONAL,
    ...
}

DCH-ModifySpecificItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-AddList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-AddItem-RL-ReconfRqstTDD

DCH-AddItem-RL-ReconfRqstTDD ::= SEQUENCE {
    payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
    ul-FP-Mode                UL-FP-Mode,
    toAWS                     ToAWS,
    toAWE                     ToAWE,
    dCH-SpecificInformationList DCH-AddSpecificInformationList-RL-ReconfRqstTDD,

```

```

        iE-Extensions
ExtIEs} }          OPTIONAL,
        ...
    }

DCH-AddItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-AddSpecificInformationList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
AddSpecificItem-RL-ReconfRqstTDD

DCH-AddSpecificItem-RL-ReconfRqstTDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    ul-CCTrCH-ID          CCTrCH-ID,
    dl-CCTrCH-ID          CCTrCH-ID,
    ul-TransportFormatSet TransportFormatSet,
    dl-TransportFormatSet TransportFormatSet,
    frameHandlingPriority FrameHandlingPriority,
    qE-Selector           QE-Selector,
    iE-Extensions         ProtocolExtensionContainer { { DCH-
AddSpecificItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-AddSpecificItem-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                OPTIONAL,
    transportFormatSet     TransportFormatSet        OPTIONAL,
    frameHandlingPriority   FrameHandlingPriority     OPTIONAL,
    toAWS                   ToAWS                    OPTIONAL,
    toAWE                   ToAWE                    OPTIONAL,
    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,
    cCTrCH-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,
    cCTrCH-ID              CCTrCH-ID,
    transportFormatSet     TransportFormatSet,
    qE-Selector            QE-Selector,
    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,
    timeslotISCPInfoList TimeslotISCPInfoList-RL-ReconfRqstTDD OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { { RL-InformationItem-
RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

TimeslotISCPInfoList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSs)) OF TimeslotISCPInfoItem-
RL-ReconfRqstTDD

TimeslotISCPInfoItem-RL-ReconfRqstTDD ::= SEQUENCE {
    timeSlot                TimeSlot,
    dL-TimeslotISCP         DL-TimeslotISCP,
    iE-Extensions           ProtocolExtensionContainer { {TimeslotISCPInfoItem-RL-ReconfRqstTDD-
ExtIEs} } OPTIONAL,
    ...
}

TimeslotISCPInfoItem-RL-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION RESPONSE
--
-- *****

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

RadioLinkReconfigurationResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-CRNC-CommunicationContextID          CRITICALITY ignore      TYPE CRNC-
CommunicationContextID          PRESENCE mandatory } |
    { ID id-RL-InformationResponseList-RL-ReconfRsp  CRITICALITY ignore      TYPE RL-
InformationResponseList-RL-ReconfRsp          PRESENCE optional } |
    { ID id-CriticalityDiagnostics                CRITICALITY ignore      TYPE
CriticalityDiagnostics          PRESENCE optional },
    ...
}

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

RL-InformationResponseList-RL-ReconfRsp ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-
Container {{RL-InformationResponseItemIE-RL-ReconfRsp}}

RL-InformationResponseItemIE-RL-ReconfRsp NBAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-ReconfRsp  CRITICALITY ignore      TYPE
RL-InformationResponseItem-RL-ReconfRsp          PRESENCE mandatory }T
    ...
}

RL-InformationResponseItem-RL-ReconfRsp ::= SEQUENCE {
    rL-ID                RL-ID,
    dCH-InformationResponseList-RL-ReconfRsp        DCH-InformationResponseList-RL-ReconfRsp
OPTIONAL,
    dSCH-InformationResponseList-RL-ReconfRsp        DSCH-InformationResponseList-RL-ReconfRsp
OPTIONAL,
    uSCH-InformationResponseList-RL-ReconfRsp        USCH-InformationResponseList-RL-ReconfRsp
OPTIONAL,
    iE-Extensions           ProtocolExtensionContainer { { RL-
InformationResponseItem-RL-ReconfRsp-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponseItem-RL-ReconfRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationResponseList-RL-ReconfRsp ::= ProtocolIE-Single-Container {{ DCH-
InformationResponseListIEs-RL-ReconfRsp }}

DCH-InformationResponseListIEs-RL-ReconfRsp NBAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationResponseListIE-RL-ReconfRsp  CRITICALITY ignore TYPE DCH-
InformationResponseListIE-RL-ReconfRsp          PRESENCE mandatory }T
    ...
}

```



```
}

```

```
DCH-InformationResponseListIE-RL-ReconfRsp ::= SEQUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-ReconfRsp

```

```
DCH-InformationResponseItem-RL-ReconfRsp ::= SEQUENCE {
    dCH-ID                                DCH-ID,
    bindingID                             BindingID,
    transportLayerAddress                 TransportLayerAddress,
    iE-Extensions                         ProtocolExtensionContainer { { DCH-
InformationResponseItem-RL-ReconfRsp-ExtIEs } } OPTIONAL,
    ...
}

```

```
DCH-InformationResponseItem-RL-ReconfRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```
DSCH-InformationResponseList-RL-ReconfRsp ::= ProtocolIE-Single-Container {{ DSCH-
InformationResponseListIEs-RL-ReconfRsp }}
```

```
DSCH-InformationResponseListIEs-RL-ReconfRsp NBAP-PROTOCOL-IES ::= {
    { ID id-DSCH-InformationResponseListIE-RL-ReconfRsp CRITICALITY ignore TYPE DSCH-
InformationResponseListIE-RL-ReconfRsp PRESENCE mandatory }7
    ...
}

```

```
DSCH-InformationResponseListIE-RL-ReconfRsp ::= SEQUENCE (SIZE (0..maxNrOfDSCHs)) OF DSCH-
InformationResponseItem-RL-ReconfRsp

```

```
DSCH-InformationResponseItem-RL-ReconfRsp ::= SEQUENCE {
    dSCH-ID                                DSCH-ID,
    bindingID                             BindingID,
    transportLayerAddress                 TransportLayerAddress,
    iE-Extensions                         ProtocolExtensionContainer { { DSCH-
InformationResponseItem-RL-ReconfRsp-ExtIEs } } OPTIONAL,
    ...
}

```

```
DSCH-InformationResponseItem-RL-ReconfRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```
USCH-InformationResponseList-RL-ReconfRsp ::= ProtocolIE-Single-Container {{ USCH-
InformationResponseListIEs-RL-ReconfRsp }}
```

```
USCH-InformationResponseListIEs-RL-ReconfRsp NBAP-PROTOCOL-IES ::= {
    { ID id-USCH-InformationResponseListIE-RL-ReconfRsp CRITICALITY ignore TYPE USCH-
InformationResponseListIE-RL-ReconfRsp PRESENCE mandatory }7
    ...
}

```

```
USCH-InformationResponseListIE-RL-ReconfRsp ::= SEQUENCE (SIZE (0..maxNrOfUSCHs)) OF USCH-
InformationResponseItem-RL-ReconfRsp

```

```
USCH-InformationResponseItem-RL-ReconfRsp ::= SEQUENCE {
    uSCH-ID                                USCH-ID,
    bindingID                             BindingID,
    transportLayerAddress                 TransportLayerAddress,

```

```

        iE-Extensions                                ProtocolExtensionContainer { { USCH-
InformationResponseItem-RL-ReconfRsp-ExtIEs } }      OPTIONAL,
    ...
}

USCH-InformationResponseItem-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-Single-
Container {{RL-informationItemIE-RL-DeletionRqst}}

RL-informationItemIE-RL-DeletionRqst NBAP-PROTOCOL-IES ::= {
    { ID      id-RL-informationItem-RL-DeletionRqst    CRITICALITY    notify          TYPE
      RL-informationItem-RL-DeletionRqst    PRESENCE          mandatory      } ,
    ...
}

RL-informationItem-RL-DeletionRqst ::= SEQUENCE {
    rL-ID                                RL-ID,
    iE-Extensions                        ProtocolExtensionContainer { { RL-informationItem-
RL-DeletionRqst-ExtIEs} }              OPTIONAL,
    ...
}

RL-informationItem-RL-DeletionRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK DELETION RESPONSE
--
-- *****

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

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

RadioLinkDeletionResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}

-- *****
--
-- DL POWER CONTROL REQUEST FDD
--
-- *****

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

DL-PowerControlRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-NodeB-CommunicationContextID          CRITICALITY ignore          TYPE      NodeB-
CommunicationContextID          PRESENCE      mandatory      } |
    { ID id-PowerAdjustmentType                  CRITICALITY ignore          TYPE      PowerAdjustmentType
    PRESENCE      mandatory      } |
    { ID id-DLReferencePower                    CRITICALITY ignore          TYPE      DL-Power
    PRESENCE      conditional      } |
    -- This IE is present only 'Adjustment Type' equals to 'Common'
    { ID id-DLReferencePowerList-DL-PC-Rqst      CRITICALITY ignore          TYPE      DL-
ReferencePowerInformationList-DL-PC-Rqst      PRESENCE      conditional      } |
    -- This IE is present only 'Adjustment Type' equals to 'Individual'
    { ID id-MaxAdjustmentStep                    CRITICALITY ignore          TYPE      MaxAdjustmentStep
    PRESENCE      conditional      } |
    -- This IE is present only 'Adjustment Type' equals to 'Common' or 'Individual'
    { ID id-AdjustmentPeriod                    CRITICALITY ignore          TYPE      AdjustmentPeriod
    PRESENCE      conditional      } |
    -- This IE is present only 'Adjustment Type' equals to 'Common' or 'Individual'
    { ID id-AdjustmentRatio                    CRITICALITY ignore          TYPE      ScaledAdjustmentRatio          PRESENCE
conditional      },
    -- This IE is present only 'Adjustment Type' equals to 'Common' or 'Individual'
    ...
}

DL-PowerControlRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-ReferencePowerInformationList-DL-PC-Rqst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-
Single-Container  {{DL-ReferencePowerInformationItemIE-DL-PC-Rqst }}

DL-ReferencePowerInformationItemIE-DL-PC-Rqst NBAP-PROTOCOL-IES ::= {
    { ID id-DL-ReferencePowerInformationItem-DL-PC-Rqst          CRITICALITY          ignore          TYPE      DL-
ReferencePowerInformationItem-DL-PC-Rqst          PRESENCE          mandatory
} }
...
}

DL-ReferencePowerInformationItem-DL-PC-Rqst ::= SEQUENCE {
    rL-ID          RL-ID,
    dl-ReferencePower          DL-Power,
    iE-Extensions          ProtocolExtensionContainer  { { DL-
ReferencePowerInformationItem-DL-PC-Rqst-ExtIEs } }          OPTIONAL,
    ...
}

DL-ReferencePowerInformationItem-DL-PC-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- 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
  NodeB-CommunicationContextID PRESENCE mandatory } |
  { ID id-MeasurementID
  MeasurementID PRESENCE mandatory } |
  { ID id-DedicatedMeasurementObjectType-DM-Rqst
  DedicatedMeasurementObjectType-DM-Rqst PRESENCE mandatory } |
  { ID id-DedicatedMeasurementType
  DedicatedMeasurementType PRESENCE mandatory } |
  { ID id-MeasurementFilterCoefficient
  MeasurementFilterCoefficient PRESENCE optional } |
  { ID id-ReportCharacteristics
  ReportCharacteristics PRESENCE mandatory } ,
  ...
}

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

DedicatedMeasurementObjectType-DM-Rqst ::= CHOICE {
  rL RL-DM-Rqst,
  rLS RL-Set-DM-Rqst,
  all-RL AllRL-DM-Rqst,
  all-RLS AllRL-Set-DM-Rqst,
  ...
}

| RL-DM-Rqst ::= ProtocolIE-Single-Container {{ RLIE-DM-Rqst }}

RLIE-DM-Rqst NBAP-PROTOCOL-IES ::= {
  { ID id-RLItem-DM-Rqst CRITICALITY reject TYPE RLItem-DM-Rqst PRESENCE mandatory }T
  ...
}

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-Single-Container {{ RL-
  InformationItemIE-DM-Rqst }}

RL-InformationItemIE-DM-Rqst NBAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationItem-DM-Rqst CRITICALITY reject TYPE RL-InformationItem-DM-Rqst
  PRESENCE mandatory }T
  ...
}

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-Single-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
  }T
  ...
}

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 ::= {
  ...
}

AllRL-DM-Rqst ::= ProtocolIE-Single-Container {{ AllRLIE-DM-Rqst }}

AllRLIE-DM-Rqst NBAP-PROTOCOL-IES ::= {
  { ID id-AllRLItem-DM-Rqst    CRITICALITY ignore    TYPE AllRLItem-DM-Rqst    PRESENCE mandatory
} }τ
  ...
}

AllRLItem-DM-Rqst ::= NULL

AllRL-Set-DM-Rqst ::= ProtocolIE-Single-Container {{ AllRLIE-Set-DM-Rqst }}

AllRLIE-Set-DM-Rqst NBAP-PROTOCOL-IES ::= {
  { ID id-AllRLItem-Set-DM-Rqst  CRITICALITY ignore    TYPE AllRLItem-Set-DM-Rqst    PRESENCE
mandatory } }τ
  ...
}

AllRLItem-Set-DM-Rqst ::= NULL

-- *****
--
-- DEDICATED MEASUREMENT INITIATION RESPONSE
--
-- *****

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

DedicatedMeasurementInitiationResponse-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-CRNC-CommunicationContextID          PRESENCE    CRITICALITY    ignore    TYPE
CRNC-CommunicationContextID                    mandatory } |
  { ID id-MeasurementID                        PRESENCE    CRITICALITY    ignore    TYPE
MeasurementID                                mandatory } |
  { ID id-DedicatedMeasurementObjectType-DM-Rsp  PRESENCE    CRITICALITY    ignore    TYPE
DedicatedMeasurementObjectType-DM-Rsp        mandatory } |
  { ID id-CFN                                  PRESENCE    CRITICALITY    ignore    TYPE    CFN
CFN                                           optional } |
  { ID id-CriticalityDiagnostics                PRESENCE    CRITICALITY    ignore    TYPE
CriticalityDiagnostics                        optional },
  ...
}

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

DedicatedMeasurementObjectType-DM-Rsp ::= CHOICE {
  rL                RL-DM-Rsp,
  rLS               RL-Set-DM-Rsp,
}

```

```

    all-RL                RL-DM-Rsp,
    all-RLS                RL-Set-DM-Rsp,
    ...
}

| RL-DM-Rsp ::= ProtocolIE-Single-Container {{ RLIE-DM-Rsp }}

RLIE-DM-Rsp NBAP-PROTOCOL-IES ::= {
  { ID id-RLItem-DM-Rsp    CRITICALITY ignore  TYPE RLItem-DM-Rsp      PRESENCE mandatory }τ
  ...
}

RLItem-DM-Rsp ::= SEQUENCE {
  rL-InformationList-DM-Rsp          RL-InformationList-DM-Rsp,
  iE-Extensions                      ProtocolExtensionContainer { { RLItem-DM-Rsp-ExtIEs } }
  OPTIONAL,
  ...
}

RLItem-DM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

| RL-InformationList-DM-Rsp ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-
InformationItemIE-DM-Rsp }}

RL-InformationItemIE-DM-Rsp NBAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationItem-DM-Rsp  CRITICALITY ignore  TYPE RL-InformationItem-DM-Rsp
  PRESENCE mandatory }τ
  ...
}

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-Single-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
  }τ
  ...
}

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 ::= {
  ...
}

| RL-Set-InformationList-DM-Rsp ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container
{{ RL-Set-InformationItemIE-DM-Rsp }}

RL-Set-InformationItemIE-DM-Rsp NBAP-PROTOCOL-IES ::= {
  { ID id-RL-Set-InformationItem-DM-Rsp  CRITICALITY ignore  TYPE RL-Set-
InformationItem-DM-Rsp  PRESENCE mandatory }τ
  ...
}

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}}          OPTIONAL,
    ...
}

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

DedicatedMeasurementInitiationFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
}
...
-- *****
--
-- DEDICATED MEASUREMENT REPORT
--
-- *****

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

DedicatedMeasurementReport-IEs NBAP-PROTOCOL-IES ::= {
{ ID   id-CRNC-CommunicationContextID   CRITICALITY   ignore   TYPE
CRNC-CommunicationContextID   PRESENCE   mandatory   } |
{ ID   id-MeasurementID   CRITICALITY   ignore   TYPE
MeasurementID           PRESENCE   mandatory   } |
{ ID   id-DedicatedMeasurementObjectType-DM-Rprt   CRITICALITY   ignore   TYPE
DedicatedMeasurementObjectType-DM-Rprt   PRESENCE   mandatory   } |
{ 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-Single-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 ::= {
    ...
}

RL-InformationList-DM-Rprt ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-
InformationItemIE-DM-Rprt }}

RL-InformationItemIE-DM-Rprt NBAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rprt  CRITICALITY ignore TYPE RL-InformationItem-DM-Rprt
    PRESENCE mandatory }T
    ...
}

RL-InformationItem-DM-Rprt ::= SEQUENCE {
    rL-ID                               RL-ID,
    dPCH-ID                             DPCH-ID     OPTIONAL,
    measurementAvailabilityIndicator     MeasurementAvailabilityIndicator-DedicatedMeasurementReport,
    iE-Extensions                       ProtocolExtensionContainer { { RL-InformationItem-DM-Rprt-ExtIEs
    } } OPTIONAL,
    ...
}

RL-InformationItem-DM-Rprt-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-DM-Rprt ::= ProtocolIE-Single-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 }T
    ...
}

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 ::= {
    ...
}

RL-Set-InformationList-DM-Rprt ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container
{{ RL-Set-InformationItemIE-DM-Rprt }}

RL-Set-InformationItemIE-DM-Rprt NBAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-InformationItem-DM-Rprt  CRITICALITY ignore TYPE RL-Set-InformationItem-DM-Rprt
    PRESENCE mandatory }T
    ...
}

RL-Set-InformationItem-DM-Rprt ::= SEQUENCE {
    rL-Set-ID                           RL-Set-ID,
    measurementAvailabilityIndicator     MeasurementAvailabilityIndicator-DedicatedMeasurementReport,
    iE-Extensions                       ProtocolExtensionContainer { { RL-Set-InformationItem-DM-Rprt-
    ExtIEs } } OPTIONAL,
    ...
}

RL-Set-InformationItem-DM-Rprt-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

MeasurementAvailabilityIndicator-DedicatedMeasurementReport ::= CHOICE {
    measurementAvailable                 MeasurementAvailable-DedicatedMeasurementReport,
    measurementnotAvailable             MeasurementnotAvailable-DedicatedMeasurementReport,
    ...
}

```



```

}

MeasurementAvailable-DedicatedMeasurementReport ::= ProtocolIE-Single-Container {{
MeasurementAvailableIE-DedicatedMeasurementReport }}

MeasurementAvailableIE-DedicatedMeasurementReport NBAP-PROTOCOL-IES ::= {
  { ID id-MeasurementAvailableItem-DedicatedMeasurementReport CRITICALITY ignore TYPE
MeasurementAvailableItem-DedicatedMeasurementReport PRESENCE mandatory} }
...
}

MeasurementAvailableItem-DedicatedMeasurementReport ::= SEQUENCE {
  dedicatedmeasurementValue DedicatedMeasurementValue,
  ie-Extensions ProtocolExtensionContainer { { MeasurementAvailableItem-
DedicatedMeasurementReport-ExtTIEs } } OPTIONAL,
  ...
}

MeasurementAvailableItem-DedicatedMeasurementReport-ExtTIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

MeasurementnotAvailable-DedicatedMeasurementReport ::= ProtocolIE-Single-Container {{
MeasurementnotAvailableIE-DedicatedMeasurementReport }}

MeasurementnotAvailableIE-DedicatedMeasurementReport NBAP-PROTOCOL-IES ::= {
  { ID id-MeasurementnotAvailableItem-DedicatedMeasurementReport CRITICALITY ignore TYPE
MeasurementnotAvailableItem-DedicatedMeasurementReport PRESENCE mandatory} }
...
}

MeasurementnotAvailableItem-DedicatedMeasurementReport ::= NULL

-- *****
--
-- 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 PRESENCE mandatory } |
  { ID id-Cause CRITICALITY ignore TYPE Cause
PRESENCE mandatory },

```

```

}
...
DedicatedMeasurementFailureIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
}
...
-- *****
--
-- RADIO LINK FAILURE INDICATION
--
-- *****

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

RadioLinkFailureIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-CRNC-CommunicationContextID          CRITICALITY ignore          TYPE
      CRNC-CommunicationContextID                PRESENCE mandatory } |
    { ID id-Reporting-Object-RL-FailureInd       CRITICALITY ignore          TYPE
      Reporting-Object-RL-FailureInd             PRESENCE mandatory } ,
    ...
}

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

Reporting-Object-RL-FailureInd ::= CHOICE {
    rL                      RL-RL-FailureInd,
    rL-Set                  RL-Set-RL-FailureInd,
    ...
}

RL-RL-FailureInd ::= ProtocolIE-Single-Container {{ RLIE-RL-FailureInd }}

RLIE-RL-FailureInd NBAP-PROTOCOL-IES ::= {
    { ID id-RLItem-RL-FailureInd    CRITICALITY ignore    TYPE RLItem-RL-FailureInd    PRESENCE
      mandatory }7
    ...
}

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-Single-Container
{{ RL-InformationItemIE-RL-FailureInd}}

RL-InformationItemIE-RL-FailureInd NBAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-RL-FailureInd          CRITICALITY ignore          TYPE RL-
InformationItem-RL-FailureInd          PRESENCE mandatory }7
    ...
}

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-Single-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-Single-
Container {{ RL-Set-InformationItemIE-RL-FailureInd }}

RL-Set-InformationItemIE-RL-FailureInd NBAP-PROTOCOL-IES ::= {
  { ID id-RL-Set-InformationItem-RL-FailureInd   CRITICALITY ignore   TYPE RL-Set-
InformationItem-RL-FailureInd   PRESENCE mandatory } }
|
}

RL-Set-InformationItem-RL-FailureInd ::= SEQUENCE {
  rL-Set-ID          RL-Set-ID,
  cause              Cause,
  iE-Extensions     ProtocolExtensionContainer { { RL-Set-InformationItem-RL-FailureInd-
ExtIEs } } OPTIONAL,
  ...
}

RL-Set-InformationItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- 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-Single-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-Single-Container
{{RL-InformationItemIE-RL-RestoreInd}}

RL-InformationItemIE-RL-RestoreInd NBAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-RL-RestoreInd          CRITICALITY ignore          TYPE RL-
InformationItem-RL-RestoreInd          PRESENCE mandatory }T
    ...
}

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-Single-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 }T
    ...
}

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-Single-
Container {{ RL-Set-InformationItemIE-RL-RestoreInd }}

RL-Set-InformationItemIE-RL-RestoreInd NBAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-InformationItem-RL-RestoreInd          CRITICALITY ignore          TYPE RL-Set-
InformationItem-RL-RestoreInd          PRESENCE mandatory }T
    ...
}

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 COMMAND FDD
--
-- *****

```

```

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

CompressedModeCommand-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-NodeB-CommunicationContextID      CRITICALITY    ignore    TYPE    NodeB-
CommunicationContextID      PRESENCE    mandatory } |
    { ID    id-Active-Pattern-Sequence-Information  CRITICALITY    ignore    TYPE    Active-
Pattern-Sequence-Information    PRESENCE    mandatory },
    ...
}

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

-- *****
--
-- ERROR INDICATION
--
-- *****

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

ErrorIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID      CRITICALITY    ignore    TYPE    CRNC-
CommunicationContextID      PRESENCE    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-Single-Container {{ PDSCH-Information-
AddListIEs-PSCH-ReconfRqst }}

PDSCH-Information-AddListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
  {ID id-PDSCH-Information-AddListIE-PSCH-ReconfRqst  CRITICALITY  reject          TYPE      PDSCH-
Information-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-Single-Container {{ PDSCH-Information-
ModifyListIEs-PSCH-ReconfRqst }}

PDSCH-Information-ModifyListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
    {ID id-PDSCH-Information-ModifyListIE-PSCH-ReconfRqst    CRITICALITY reject        TYPE        PDSCH-
Information-ModifyListIE-PSCH-ReconfRqst                    PRESENCE    mandatory}7
    ...
}

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      PUSCH-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-Single-Container {{ PUSCH-Information-
AddListIEs-PSCH-ReconfRqst }}

PUSCH-Information-AddListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
  {ID id-PUSCH-Information-AddListIE-PSCH-ReconfRqst CRITICALITY reject TYPE PUSCH-
Information-AddListIE-PSCH-ReconfRqst PRESENCE mandatory}7
  ...
}

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-Single-Container {{ PUSCH-Information-
ModifyListIEs-PSCH-ReconfRqst }}

PUSCH-Information-ModifyListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
  {ID id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst CRITICALITY reject TYPE PUSCH-
Information-ModifyListIE-PSCH-ReconfRqst PRESENCE mandatory}7
  ...
}

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-CauseLevel-PSCH-ReconfFailureTDD      CRITICALITY  ignore      TYPE CauseLevel-PSCH-ReconfFailureTDD      PRESENCE mandatory },
    { ID      id-CriticalityDiagnostics      CRITICALITY  ignore      TYPE      CriticalityDiagnostics      PRESENCE    optional    },
    ...
}

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

CauseLevel-PSCH-ReconfFailureTDD ::= CHOICE {
    generalCause          GeneralCauseList-PSCH-ReconfFailureTDD,
    setSpecificCause      SetSpecificCauseList-PSCH-ReconfFailureTDD,
    ...
}

GeneralCauseList-PSCH-ReconfFailureTDD ::= ProtocolIE-Single-Container {{ GeneralCauseIE-PSCH-ReconfFailureTDD }}

GeneralCauseIE-PSCH-ReconfFailureTDD NBAP-PROTOCOL-IES ::= {

```

```

    { ID id-GeneralCauseItem-PSCH-ReconfFailureTDD          CRITICALITY ignore  TYPE GeneralCauseItem-
PSCH-ReconfFailureTDD          PRESENCE mandatory }7
    ...
}

GeneralCauseItem-PSCH-ReconfFailureTDD ::= SEQUENCE {
    cause                Cause,
    iE-Extensions        ProtocolExtensionContainer { { GeneralCauseItem-PSCH-
ReconfFailureTDD-ExtIEs} }    OPTIONAL,
    ...
}

GeneralCauseItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SetSpecificCauseList-PSCH-ReconfFailureTDD ::= ProtocolIE-Single-Container {{ SetSpecificCauseIE-
PSCH-ReconfFailureTDD }}

SetSpecificCauseIE-PSCH-ReconfFailureTDD NBAP-PROTOCOL-IES ::= {
    { ID id-SetSpecificCauseItem-PSCH-ReconfFailureTDD          CRITICALITY ignore  TYPE
SetSpecificCauseItem-PSCH-ReconfFailureTDD          PRESENCE          mandatory }7
    ...
}

SetSpecificCauseItem-PSCH-ReconfFailureTDD ::= SEQUENCE {
    unsuccessful-PDSCHSetList-PSCH-ReconfFailureTDD Unsuccessful-PDSCHSetList-PSCH-ReconfFailureTDD
        OPTIONAL,
    unsuccessful-PUSCHSetList-PSCH-ReconfFailureTDD Unsuccessful-PUSCHSetList-PSCH-ReconfFailureTDD
        OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {
SetSpecificCauseItem-PSCH-ReconfFailureTDD-ExtIEs} }    OPTIONAL,
    ...
}

SetSpecificCauseItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unsuccessful-PDSCHSetList-PSCH-ReconfFailureTDD ::= SEQUENCE (SIZE (0.. maxNrOfPDSCHSets)) OF
ProtocolIE-Single-Container {{ Unsuccessful-PDSCHSetItemIE-PSCH-ReconfFailureTDD }}

Unsuccessful-PDSCHSetItemIE-PSCH-ReconfFailureTDD NBAP-PROTOCOL-IES ::= {
    { ID id-Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD CRITICALITY ignore  TYPE
Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD PRESENCE mandatory}7
    ...
}

Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD ::= SEQUENCE {
    pDSCHSet-ID          PDSCHSet-ID,
    cause                Cause,
    iE-Extensions        ProtocolExtensionContainer { {Unsuccessful-PDSCHSetItem-PSCH-
ReconfFailureTDD-ExtIEs} }    OPTIONAL,
    ...
}

Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unsuccessful-PUSCHSetList-PSCH-ReconfFailureTDD ::= SEQUENCE (SIZE (0.. maxNrOfPUSCHSets)) OF
ProtocolIE-Single-Container {{ Unsuccessful-PUSCHSetItemIE-PSCH-ReconfFailureTDD }}

Unsuccessful-PUSCHSetItemIE-PSCH-ReconfFailureTDD NBAP-PROTOCOL-IES ::= {
    { ID id-Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD CRITICALITY ignore  TYPE
Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD PRESENCE mandatory}7
    ...
}

Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD ::= SEQUENCE {
    pUSCHSet-ID          PUSCHSet-ID,
    cause                Cause,
    iE-Extensions        ProtocolExtensionContainer { {Unsuccessful-PUSCHSetItem-PSCH-
ReconfFailureTDD-ExtIEs} }    OPTIONAL,
    ...
}

Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```

```

} ...
END

```

```
-- Partly omitted --
```

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-Single-Container {NBAP-PROTOCOL-IES : IEsSetParam} ::=
    ProtocolIE-Field {{IEsSetParam}}

ProtocolIE-Field {NBAP-PROTOCOL-IES : IEsSetParam} ::= SEQUENCE {
    id      NBAP-PROTOCOL-IES.&id      ({IEsSetParam}),
    criticality NBAP-PROTOCOL-IES.&criticality ({IEsSetParam}{@id}),
    value     NBAP-PROTOCOL-IES.&Value   ({IEsSetParam}{@id})
}

-- *****
--
-- Container for Protocol IE Pairs
--
-- *****

ProtocolIE-ContainerPair {NBAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=
    SEQUENCE (SIZE (0..maxProtocolIEs)) OF
    ProtocolIE-FieldPair {{IEsSetParam}}

ProtocolIE-FieldPair {NBAP-PROTOCOL-IES-PAIR : IEsSetParam} ::= SEQUENCE {
    id      NBAP-PROTOCOL-IES-PAIR.&id      ({IEsSetParam}),
    firstCriticality NBAP-PROTOCOL-IES-PAIR.&firstCriticality ({IEsSetParam}{@id}),
    firstValue     NBAP-PROTOCOL-IES-PAIR.&FirstValue ({IEsSetParam}{@id}),
    secondCriticality NBAP-PROTOCOL-IES-PAIR.&secondCriticality ({IEsSetParam}{@id}),
}

```

```

    secondValue          NBAP-PROTOCOL-IES-PAIR.&SecondValue ({IEsSetParam}@id))
}
-- *****
--
-- Container Lists for Protocol IE Containers
--
-- *****

ProtocolIE-ContainerList {INTEGER : lowerBound, INTEGER : upperBound, NBAP-PROTOCOL-IES :
IEsSetParam} ::=
    SEQUENCE (SIZE (lowerBound..upperBound)) OF
    ProtocolIE-Container {{IEsSetParam}}

ProtocolIE-ContainerPairList {INTEGER : lowerBound, INTEGER : upperBound, NBAP-PROTOCOL-IES-PAIR :
IEsSetParam} ::=
    SEQUENCE (SIZE (lowerBound..upperBound)) OF
    ProtocolIE-ContainerPair {{IEsSetParam}}

-- *****
--
-- Container for Protocol Extensions
--
-- *****

ProtocolExtensionContainer {NBAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::=
    SEQUENCE (SIZE (1..maxProtocolExtensions)) OF
    ProtocolExtensionField {{ExtensionSetParam}}

ProtocolExtensionField {NBAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::= SEQUENCE {
    id          NBAP-PROTOCOL-EXTENSION.&id ({ExtensionSetParam}),
    criticality NBAP-PROTOCOL-EXTENSION.&criticality    ({ExtensionSetParam}@id)},
    extensionValue NBAP-PROTOCOL-EXTENSION.&Extension    ({ExtensionSetParam}@id)}
}

-- *****
--
-- Container for Private IEs
--
-- *****

PrivateIE-Container {NBAP-PRIVATE-IES : IEsSetParam} ::=
    SEQUENCE (SIZE (1..maxPrivateIEs)) OF
    PrivateIE-Field {{IEsSetParam}}

PrivateIE-Field {NBAP-PRIVATE-IES : IEsSetParam} ::= SEQUENCE {
    id          NBAP-PRIVATE-IES.&id
    ({IEsSetParam}),
    criticality NBAP-PRIVATE-IES.&criticality
    ({IEsSetParam}@id)},
    value      NBAP-PRIVATE-IES.&Value
    ({IEsSetParam}@id)}
}

END

```

CHANGE REQUEST

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

25.433 CR 228

Current Version: **3.2.0**

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

↑ CR number as allocated by MCC support team

For submission to: **TSG RAN #9**
list expected approval meeting # here ↑

for approval
for information

strategic
non-strategic (for SMG use only)

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

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

Source: R-WG3 **Date:** Aug. 2000

Subject: Correction to Compressed Mode

Work item:

Category: F Correction
A Corresponds to a correction in an earlier release
B Addition of feature
C Functional modification of feature
D Editorial modification
(only one category shall be marked with an X)

Release: Phase 2
Release 96
Release 97
Release 98
Release 99
Release 00

Reason for change: This document address the following corrections:

1. Clarifies the Transmission Gap Pattern Sequence Information IE description – it can define compressed mode gap pattern parameters for DL or UL or both for DL and UL, based on that the word downlink removed and it is stated more general that Transmission Gap Pattern Sequence Information IE defines parameters for the compressed mode gap pattern sequences
2. TGPSI renamed to TGPSI Identifier in TGPSI message definitions to clarify that it is an ID for a specific pattern - currently ambiguous as it is the same as the message name.
3. TGPLx IE clarified: The duration of transmission gap pattern clarified – unit is frame
4. DeltaSirX IE clarified: SIR target value setting -unit is dB and range from 0 to 3 dB

Clauses affected: 9.2.2.A, 9.3.4, 9.2.2.53A

Other specs affected:

Other 3G core specifications	<input type="checkbox"/>	→ List of CRs:	
Other GSM core specifications	<input type="checkbox"/>	→ List of CRs:	
MS test specifications	<input type="checkbox"/>	→ List of CRs:	
BSS test specifications	<input type="checkbox"/>	→ List of CRs:	
O&M specifications	<input type="checkbox"/>	→ List of CRs:	

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

9.2.2.A Active Pattern Sequence Information

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CM Configuration Change CFN	M		CFN	Defines when the old Active pattern sequences, if active, shall be terminated. From this moment on, the new sequences are activated at the given TGCFN .
Transmission Gap Pattern Sequence Status		0 to <MaxTGPS>		
>TGPSI <u>Identifier</u>	M		Integer(1..<MaxTGPS>)	If the group is not present, none of the pattern sequences are activated. <u>References an already defined sequence.</u>
>TGPRC	M		Integer (0..63)	The number of transmission gap patterns within the Transmission Gap Pattern Sequence. 0=Infinity
>TGCFN	M		CFN	Connection Frame Number of the first frame of the first pattern within the Transmission Gap Pattern Sequence.

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

9.2.253A Transmission Gap Pattern Sequence Information

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transmission gap pattern Sequence Information		1 to <MaxTGPS>		
>TGPSI <u>Identifer</u>	M		Integer(1..<MaxTGPS>)	Transmission Gap Pattern Sequence Identifier Establish a reference to the compressed mode pattern sequence. Up to <MaxTGPS> simultaneous compressed mode pattern sequences can be used.
>TGSN	M		Integer (0..14)	Transmission Gap Starting Slot Number The slot number of the first transmission gap slot within the TGCFN.
>TGL1	M		Integer(1..14)	The length of the first Transmission Gap within the transmission gap pattern expressed in number of slots
>TGL2	O		Integer (1..14)	The length of the second Transmission Gap within the transmission gap pattern. If omitted, then TGL2=TGL1.
>TGD	M		Integer (0, 15.. 269)	Transmission gap distance indicates the number of slots between the starting slots of two consecutive transmission gaps within a transmission gappattern. If there is only one transmission gap in the transmission gap pattern, this parameter shall be set to 0 (0 =undefined).
>TGPL1	M		Integer (1..144)	The duration of transmission gap pattern 1 in frames.
>TGPL2	O		Integer (1..144)	The duration of transmission gap pattern 2 in frames. If omitted, then TGPL2=TGPL1.
>RPP	M		Enumerated (mode 0, mode 1).	Recovery Period Power control mode during the frame after the transmission gap within the compressed frame. Indicates whether normal PC mode or compressed PC mode is applied
>ITPPRM	M		Enumerated (mode 0, mode 1).	Initial Transmit Power is the uplink power control method to be used to compute the initial transmit power after the compressed mode gap.
>UL/DL mode	M		Enumerated (UL only, DL only, UL/DL)	Defines whether only DL, only UL, or combined UL/DL compressed mode is used.
>Downlink compressed mode method	C-DL		Enumerated (puncturing, SF/2, higher layer scheduling)	Method for generating downlink compressed mode gap None means that compressed mode pattern is stopped
>Uplink compressed mode method	C-UL		Enumerated (SF/2, higher layer scheduling)	Method for generating uplink compressed mode gap
>Downlink frame type	M		Enumerated (A, B)	
≥DeltaSIR1	M		Integer (0..30)	Delta in DL SIR target value to be set in the UE during the

				compressed frames corresponding to the first transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase) Step 0.1-dB, Range 0-3dB
≥DeltaSIRafter1	M		Integer (0..30)	Delta in DL SIR target value to be set in the UE one frame after the compressed frames corresponding to the first transmission gap in the transmission gap pattern,. Step 0.1dB, Range 0-3dB
≥DeltaSIR2	O		Integer (0..30)	Delta in DL SIR target value to be set in the UE during the compressed frames corresponding to the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase) When omitted, DeltaSIR2 = DeltaSIR1. Step 0.1dB, Range 0-3dB
≥DeltaSIRafter2	O		Integer (0..30)	Delta in DL SIR target value to be set in the UE one frame after the compressed frames corresponding to the second transmission gap in the transmission gap pattern. When omitted, DeltaSIRafter2 = DeltaSIRafter1. Step 0.1dB, Range 0-3dB

Condition	Explanation
C-UL	This information element is only sent when the value of the "UL/DL mode" IE is "UL only" or "UL/DL".
C-DL	This information element is only sent when the value of the "UL/DL mode" IE is "DL only" or "UL/DL".

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

9.3.4 NBAP Information Elements

```
--*****
--
-- Information Element Definitions
--
--*****

NBAP-IEs
DEFINITIONS AUTOMATIC TAGS ::=
BEGIN

IMPORTS
    maxNrOfTFCS,
    maxNrOfErrors,
    maxCTFC,
    maxNrOfTFs,
    maxTTI-count,
    maxRateMatching,
    maxCodeNrComp-1,
    maxNrOfCodeGroups,
    maxNrOfTFCIGroups,
    maxNrOfTFCI1Combs,
    maxNrOfTFCI2Combs,
    maxNrOfTFCI2Combs-1,
    maxNrOfSF,
    maxTGPS
FROM NBAP-Constants

    Criticality,
    ProcedureCode,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage
FROM NBAP-CommonDataTypes

    ProtocolExtensionContainer{},
    NBAP-PROTOCOL-EXTENSION
FROM NBAP-Containers;

-- =====
-- A
-- =====

Acknowledged-PCPCH-access-preambles ::= INTEGER (0..15)
-- According to mapping in [4]

Acknowledged-RA-Tries-Value ::= INTEGER(0..240,...)
-- The number of L1 acknowledged random access tries per every 20 ms period.
```

```

AddorDeleteIndicator ::= ENUMERATED {
    add,
    delete,
    ...
}

```

```

Active-Pattern-Sequence-Information ::= SEQUENCE {
    cmConfigurationChangeCFN          CFN,
    transmission-Gap-Pattern-Sequence-Status  Transmission-Gap-Pattern-Sequence-Status-List  OPTIONAL,
    iE-Extensions                      ProtocolExtensionContainer { {Active-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
    ...
}

```

```

Active-Pattern-Sequence-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

Transmission-Gap-Pattern-Sequence-Status-List ::= SEQUENCE (SIZE (0..maxTGPS)) OF
SEQUENCE {
    tGPSID          TGPSID,
    tGPRC           TGPRC,
    tGCFN           CFN,
    iE-Extensions  ProtocolExtensionContainer { { Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs } } OPTIONAL,
    ...
}

```

```

Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

AICH-TransmissionTiming ::= ENUMERATED {
    v0,
    v1
}

```

```

APPreambleSignature ::= INTEGER (0..15)

```

```

APSubChannelNumber ::= INTEGER (0..11)

```

```

AvailabilityStatus ::= ENUMERATED {
    empty,
    in-test,
    failed,
    power-off,
    off-line,
}

```

```
    off-duty,  
    dependency,  
    degraded,  
    not-installed,  
    log-full,  
    ...  
}
```

```
... Text omitted ...
```

```
-- =====  
-- D  
-- =====
```

```
DCH-ID ::= INTEGER (0..255)
```

```
DedicatedChannelsCapacityConsumptionLaw ::= SEQUENCE ( SIZE(1..maxNrOfSF) ) OF  
    SEQUENCE {  
        dl-Cost      INTEGER (0..65535),  
        ul-Cost      INTEGER (0..65535)  
    }
```

```
DedicatedMeasurementType ::= ENUMERATED {  
    sir,  
    sir-error,  
    transmitted-code-power,  
    rscp,  
    round-trip-time,  
    rx-timing-deviation,  
    ...  
}
```

```
DedicatedMeasurementValue ::= CHOICE {  
    sIR-Value          SIR-Value,  
    sIR-ErrorValue     SIR-Error-Value,  
    transmittedCodePowerValue  Transmitted-Code-Power-Value,  
    rSCP               RSCP-Value,  
    roundTripTime      Round-Trip-Time-Value,  
    rxTimingDeviationValue  Rx-Timing-Deviation-Value,  
    ...  
}
```

```
Detected-PCPCH-access-preambles ::= INTEGER (0..240)  
-- According to mapping in [4]
```

```
D-FieldLength ::= ENUMERATED {  
    v1,  
    v2,  
    ...  
}
```

```
DeltaSIR ::= INTEGER (0..30)
-- Unit dB, Step 0.1dB, {Range 0..3 dB}.

DiversityControlField ::= ENUMERATED {
    may,
    must,
    must-not,
    ...
}

-- =====
-- G
-- =====

GapLength ::= INTEGER (1..14)
-- Unit slot
GapDuration ::= INTEGER (1..144)
-- Unit frame

... Text omitted ...

-- =====
-- T
-- =====

T-Cell ::= ENUMERATED {
    v0,
    v1,
    v2,
    v3,
    v4,
    v5,
    v6,
    v7,
    v8,
    v9,
    ...
}

T-RLFAILURE ::= INTEGER (0..255)
-- Unit seconds, Range 0s .. 25.5s, Step 0.1s

TDD-ChannelisationCode ::= ENUMERATED {
    chCode1div1,
    chCode2div1,
    chCode2div2,
    chCode4div1,
    chCode4div2,
    chCode4div3,
    chCode4div4,
}
```

```
    chCode8div1,
    chCode8div2,
    chCode8div3,
    chCode8div4,
    chCode8div5,
    chCode8div6,
    chCode8div7,
    chCode8div8,
    chCode16div1,
    chCode16div2,
    chCode16div3,
    chCode16div4,
    chCode16div5,
    chCode16div6,
    chCode16div7,
    chCode16div8,
    chCode16div9,
    chCode16div10,
    chCode16div11,
    chCode16div12,
    chCode16div13,
    chCode16div14,
    chCode16div15,
    chCode16div16,
    ...
}

TDD-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|15..269)
-- 0 = Undefined, only one transmission gap in the transmission gap pattern sequence

TGPRC              ::= INTEGER (0..63)
-- 0 = infinity

| TGPSID            ::= INTEGER (1.. maxTGPS)

TGSN                ::= INTEGER (0..14)

TimeSlot           ::= INTEGER (0..14)

TimeSlotDirection ::= ENUMERATED {

```

```

    ul,
    dl,
    ...
}

TimeSlot-ISCP-Value ::= INTEGER (0..81)
-- According to mapping in [5]

TimeSlot-ISCP-Value-IncrDecrThres ::= INTEGER (0..80)

TimeSlotStatus ::= ENUMERATED {
    active,
    not-active,
    ...
}

ToAWE ::= INTEGER (0..2559)
-- Unit ms

ToAWS ::= INTEGER (0..1279)
-- Unit ms

Transmission-Gap-Pattern-Sequence-Information ::= SEQUENCE (SIZE (1..maxTGPS)) OF
SEQUENCE {
    tGPSID          TGPSID,
    tGSN            TGSN,
    tGL1            GapLength,
    tGL2            GapLength  OPTIONAL,
    tGD             TGD,
    tGPL1           GapDuration,
    tGPL2           GapDuration OPTIONAL,
    rPM             RPM,
    iTPPRM          ITPPRM,
    uL-DL-mode      UL-DL-mode,
    downlink-Compressed-Mode-Method Downlink-Compressed-Mode-Method  OPTIONAL,
    -- This IE is only present if the value of the UL/DL mode IE is "DL only" or "UL/DL"
    uplink-Compressed-Mode-Method   Uplink-Compressed-Mode-Method   OPTIONAL,
    -- This IE is only present if the value of the UL/DL mode IE is "UL only" or "UL/DL"
    dL-FrameType    DL-FrameType,
    delta-SIR1      DeltaSIR,
    delta-SIR-after1 DeltaSIR,
    delta-SIR2      DeltaSIR  OPTIONAL,
    delta-SIR-after2 DeltaSIR  OPTIONAL,
    iE-Extensions   ProtocolExtensionContainer { {Transmission-Gap-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,

```

```
    ...  
}
```

```
Transmission-Gap-Pattern-Sequence-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
    ...  
}
```

CHANGE REQUEST

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

25.433 CR 233

Current Version: **3.2.0**

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

↑ CR number as allocated by MCC support team

For submission to: **RAN#9**
 list expected approval meeting # here
 ↑

for approval
 for information

strategic
 non-strategic (for SMG use only)

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

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

Source R-WG3 **Date:** 2000-08-24

Subject: Editorial modification – Minimum Spreading Factor -

Work item:

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

Reason for change: “Minimum Spreading Factor” IE in the current NBAP cannot choose “SF=8” although other SFs can be chosen. This CR proposes to modify such editorial error.
 If this CR is not approved, the NodeB cannot notify CRNC of the situation in which Minimum Spreading Factor in NodeB is equal to “8”.

Clauses affected: 9.2.1.47 Minimum Spreading Factor
 9.3.4 NBAP Information Elements

Other specs affected:	Other 3G core specifications	<input type="checkbox"/>	→ List of CRs:	
	Other GSM core specifications	<input type="checkbox"/>	→ List of CRs:	
	MS test specifications	<input type="checkbox"/>	→ List of CRs:	
	BSS test specifications	<input type="checkbox"/>	→ List of CRs:	
	O&M specifications	<input type="checkbox"/>	→ List of CRs:	

Other comments:



<----- double-click here for help and instructions on how to create a CR.

9.2.1.47 Minimum Spreading Factor

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

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

9.3.4 NBAP Information Elements

--- PARTLY OMITTED ---

```
MinSpreadingFactor ::= ENUMERATED {  
    v4,  
    v8,  
    v16,  
    v32,  
    v64,  
    v128,  
    v256,  
    v512,  
    ...  
}
```

--- PARTLY OMITTED ---

CHANGE REQUEST

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

25.433 CR 234r3

Current Version: **3.2.0**

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

↑ CR number as allocated by MCC support team

For submission to: **TSG RAN #9**

list expected approval meeting # here ↑

for approval
for information

strategic
non-strategic (for SMG use only)

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

Proposed change affects:

(at least one should be marked with an X)

(U)SIM ME UTRAN / Radio Core Network

Source:

R-WG3

Date:

August 2000

Subject:

Update of RL-SETUP procedure text, addressing optional IE's.

Work item:

Category:

(only one category)

Shall be marked

With an X)

F Correction
A Corresponds to a correction in an earlier release
B Addition of feature
C Functional modification of feature
D Editorial modification

Release:

Phase 2
Release 96
Release 97
Release 98
Release 99
Release 00

Reason for change:

The "optionality ad-hoc" indicated optional IE descriptions missing in the RL_SETUP procedure. This CR proposes to handle them as follows:

RL_SETUP_REQ (FDD):

SSDT cell id length: handled in procedure text
S-field length: handled in tabular format
SSDT cell id: handled in procedure text

RL_SETUP_REQ(TDD):

UL CCTrCH Information: handled in procedure text
UL DPCH Information: handled in procedure text
DL CCTrCH Information: handled in procedure text
DL DPCH Information: handled in procedure text
DCH Information: handled in procedure text

RL_SETUP_RESP(FDD)

DCH information: Considered already handled (it is e.g. indicated when binding id shall be included).
DSCH Information: Considered already handled (it is e.g. indicated when binding id shall be included).

RL_SETUP_RESP(TDD)

USCH information: handled in procedure text
DSCH Information: Considered already handled (it is e.g. indicated when binding id shall be included).

RL_SETUP_FAILURE (FDD)

Communication control port ID: handled in tabular format
DCH Information response: Considered already handled (it is e.g. indicated when binding id shall be included).
DSCH Information response: Considered already handled (it is e.g. indicated when binding id shall be included).

If the CR would not be accepted, procedure text would be missing, leaving the specification incomplete.

Clauses affected: 8.2.17; 9.1.36; 9.1.38

<u>Other specs</u>	Other 3G core specifications	<input type="checkbox"/>	→ List of CRs:
<u>Affected:</u>	Other GSM core specifications	<input type="checkbox"/>	→ List of CRs:
	MS test specifications	<input type="checkbox"/>	→ List of CRs:
	BSS test specifications	<input type="checkbox"/>	→ List of CRs:
	O&M specifications	<input type="checkbox"/>	→ List of CRs:

Other comments: [R3-002362 \(CR234r3\): Additional changes compared to R3-002335 \(CR234r2\) shown in yellow.](#)

8.2.17 Radio Link Setup

8.2.17.1 General

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

8.2.17.2 Successful Operation

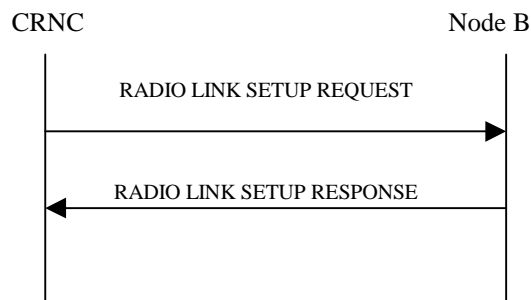


Figure 1: Radio Link Setup procedure: Successful Operation

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, including also combinations where one or more transport channel types are not present. The Radio Link Setup Request message shall include the required TFS and TFCS for the DCH, DSCH and USCH channels.]

[FDD - The *First RLS Indicator IE* indicates if the concerning RL shall be considered part of the first RLS established towards this UE. If the *First RLS indicator IE* is set to "first RLS", the Node B shall use a TPC pattern of $n \cdot "01" + "1"$ in the DL of the concerning RL and all RLs which are part of the same RLS, until UL synchronisation is achieved on the Uu. The parameter n shall be set equal to the value received in the *DL TPC pattern 01 count IE* in the Cell Setup procedure. The TPC pattern shall continuously be repeated but shall be restarted at the beginning of every frame with $CFN \bmod 4 = 0$. For all other RLs, the Node B shall use a TPC pattern of all "1"s in the DL until UL synchronisation is achieved on the Uu.]

[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. If the *Diversity Control Field IE* is set to "Must", the Node B shall combine the RL with one of the other RL. Diversity combining is applied to Dedicated Transport Channels (DCH), i.e. it is not applied to the DSCHs. When a new RL is to be combined, the Node B shall choose which RL(s) to combine it with.]

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

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

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

available for the selected DCH the Physical channel BER shall be used for the QE, ref. [16]. If the QE-Selector is set to "non-selected", the Physical channel BER shall be used for the QE in the UL data frames, ref. [16].

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

[TDD - For USCHs with the *QE-Selector* IE set to "selected", the Transport channel BER from that USCH shall be the base for the QE in the UL data frames. If no Transport channel BER is available for the selected USCH the Physical channel BER shall be used for the QE, ref. [24]. If the QE-Selector is set to "non-selected", the Physical channel BER shall be used for the QE in the UL data frames, ref. [24]].

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.

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

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

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

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

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

[FDD - The Node B shall start the DL transmission using the initial DL power specified in the message on each DL channelisation code of the RL until either UL synchronisation is achieved for the RLS or a DL POWER CONTROL REQUEST message is received. No inner loop power control or balancing shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[10], chapter 5.2.1.2) with DPC MODE=0 and the power control procedure (see 8.3.7), but shall always be kept within the maximum and minimum limit specified in the RL SETUP REQUEST message.]

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

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

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

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE, the Node B shall store the information about the Transmission Gap Pattern Sequences to be used when those are activated.]

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

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE and the *Active Pattern Sequence Information* IE, the Node B shall immediately activate the indicated Transmission Gap Pattern Sequences. For each sequence the *TGCFN* refers to the latest passed CFN with that value. If during the compressed mode measurement the gaps of two or more pattern sequences overlap, the Node B shall behave as specified in ref. [25].]

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

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

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

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

In case of coordinated DCH, the *Binding ID* IE and the *Transport Layer Address* IE shall be 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 [16].

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

8.2.17.3 Unsuccessful Operation

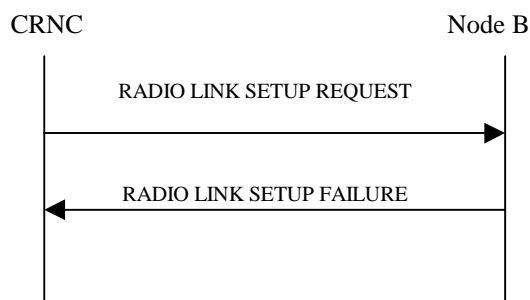


Figure 2: Radio Link Setup procedure: Unsuccessful Operation

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.

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

[FDD - If the value of the *Diversity Control Field* IE of one RL is 'Must', but the Node B cannot perform the requested combining, Node B shall indicate this with the cause value 'Combining Resources not available' in the RADIO LINK SETUP FAILURE message].

[FDD – When the *Diversity Mode* IE equals “*Closedloop mode1*” or “*Closedloop mode2*” and no Closed Loop Timing Adjustment Mode was configured for a cell during cell setup, establishment of the concerning RL shall fail with cause value “*No Closed Loop Timing Adjustment Mode configured*”.]

[FDD – If the Node B cannot provide the requested CM pattern sequences, the Node B shall regard the Radio Link Setup procedure as failed and shall respond with a RADIO LINK SETUP FAILURE message with the cause value "Invalid CM settings".]

Typical cause values are as follows:

Radio Network Layer Cause

- RL Already Activated/allocated
- Combining Resources not available
- No Closed Loop Timing Adjustment Mode configured
- Invalid CM Settings.

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

-

9.1.36 RADIO LINK SETUP REQUEST

9.1.36.1 FDD message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18		YES	reject
Transaction ID	M		9.2.1.62		–	
UL DPCH Information		1			YES	reject
>UL Scrambling Code	M		9.2.2.59		–	
>Min UL Channelisation Code length	M		9.2.2.22		–	
>Max Number of UL DPDCHs	C – CodeLen		9.2.2.21		–	
>puncture limit	M		9.2.1.50	For UL	–	
>TFCS	M		9.2.1.58	for UL	–	
>UL DPCCH Slot Format	M		9.2.2.57		–	
> UL SIR Target	M		UL SIR 9.2.2.58		–	
>Diversity mode	M		9.2.2.29		–	
>D Field Length	C – FB		9.2.2.5		–	
>SSDT cell ID Length	O		9.2.2.45		–	
>S Field Length	C-FBI 0		9.2.2.40		–	
DL DPCH Information					YES	reject
>TFCS	M		9.2.1.58	For DL	–	
>DL DPCH Slot Format	M		9.2.2.10		–	
>TFCI signalling mode	M		9.2.2.50		–	
>TFCI presence	C- SlotFormat		9.2.1.57		–	
>Multiplexing Position	M		9.2.2.29		–	
>PDSCH RL ID	C-DSCH		RL ID 9.2.1.53		–	
>PDSCH code mapping	C-DSCH		9.2.2.25		–	
>Power Offset Information		1			–	
>>PO1	M		Power Offset 9.2.2.29	Power offset for the TFCI bits	–	
>>PO2	M		Power Offset 9.2.2.29	Power offset for the TPC bits	–	
>>PO3	M		Power Offset 9.2.2.29	Power offset for the pilot bits	–	
>FDD TPC DL Step Size	M		9.2.2.16		–	
>Limited Power Increase	M				–	
DCH Information		1 to <maxnoof DCHs>			GLOBAL	reject
>Payload CRC Presence Indicator	M		9.2.1.49		–	
>UL FP mode	M		9.2.1.66		–	
>ToAWS	M		9.2.1.61		–	
>ToAWE	M		9.2.1.60		–	
>DCH Specific Info		1..<maxno ofDCHs>			–	

>>DCH ID	M		9.2.1.20		–	
>>Transport Format Set	M		9.2.1.59	For UL	–	
>>Transport Format Set	M		9.2.1.59	For DL	–	
>>Frame Handling Priority	M		9.2.1.30		–	
>>QE-Selector	M		9.2.1.50A		–	
DSCH Information		0 to <maxnoof DSCHs>			GLOBAL	reject
>DSCH ID	M		9.2.1.27		–	
>Transport Format Set	M		9.2.1.59	For DSCH	–	
>Frame handling Priority	M		9.2.1.30		–	
>ToAWS	M		9.2.1.61		–	
>ToAWE	M		9.2.1.60		–	
RL Information		1 to <maxnoof RLs>			EACH	notify
>RL ID	M		9.2.1.53		–	
>C-ID	M		9.2.1.9		–	
>First RLS Indicator	M				–	
>Frame Offset	M		9.2.1.31		–	
>Chip Offset	M		9.2.2.2		–	
>Propagation Delay	O		9.2.2.35		–	
>Diversity Control Field	C – NotFirstRL		9.2.2.7		–	
>DL Code Information		1 to <maxnoof-DLCodes>			–	
>>DL Scrambling Code	M		9.2.2.13		–	
>>FDD DL Channelisation Code Number	M		9.2.2.14		–	
>>Transmission Gap Pattern Sequence Code Information	C-SF/2				–	
>Initial DL transmission Power	M		DL Power 9.2.1.21		–	
>Maximum DL power	M		DL Power 9.2.1.21		–	
>Minimum DL power	M		DL Power 9.2.1.21		–	
>SSDT Cell Identity	O		9.2.2.44		–	
>Transmit Diversity Indicator	C – Diversity mode		9.2.2.53			
Transmission Gap Pattern Sequence Information	O				YES	reject
Active Pattern Sequence Information	O				YES	reject

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.
FBI	This IE shall be present if the <i>UL DPCCH Slot Format IE</i> indicates a slot format with 1 or 2 FBI bits (see ref.[7])
NotFirstRL	This IE is present only if the RL is not the first one in the RL Information.
DSCH	This IE is present only if the <i>DSCH Information IE</i> 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 IE</i> in <i>UL DPCH Information IE</i> is "none"
SF/2	This IE is present only if the <i>Transmission Gap Pattern Sequence Information IE</i> is included and the indicated Downlink Compressed Mode method for at least one of the included Transmission Gap Pattern Sequence is set to "SF/2".

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.

9.1.36.2 TDD message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18		YES	reject
Transaction ID	M		9.2.1.62		–	
UL CCTrCH Information		0 to <maxno CCTrCH>			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>Puncture Limit	M		9.2.1.50		–	
UL DPCH Information		0 to <maxnoOf DPCH>			GLOBAL	notify
>DPCH ID	M		9.2.3.5		–	
>TDD Channelisation Code	M		9.2.3.19		–	
>Burst Type	M		9.2.3.2		–	
>Midamble Shift	M		9.2.3.7		–	
>Time Slot	M		9.2.3.23		–	
>TDD Physical Channel Offset	M		9.2.3.20		–	
>Repetition Period	M		9.2.1.16		–	
>Repetition Length	M		9.2.1.15		–	
>TFCI Presence	M		9.2.1.57		–	
DL CCTrCH Information		0 to <maxno CCTrCH>			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>Puncture Limit	M		9.2.1.50		–	
>TDD TPC DL Step Size	M		9.2.3.21			
DL DPCH information		0 to <maxnoOf DPCH>			GLOBAL	notify
>DPCH ID	M		9.2.3.5		–	
>TDD Channelisation Code	M		9.2.3.19		–	
>Burst Type	M		9.2.3.2		–	
>Midamble Shift	M		9.2.3.7		–	
>Time Slot	M		9.2.3.23		–	
>TDD Physical Channel Offset	M		9.2.3.20		–	
>Repetition Period	M		9.2.3.16		–	
>Repetition Length	M		9.2.3.15		–	
>TFCI Presence	M		9.2.1.57		–	
DCH Information		0 to <maxnoof DCHs>			GLOBAL	reject
>Payload CRC Presence Indicator	M		9.2.1.49		–	
>UL FP mode	M		9.2.1.66		–	
>ToAWS	M		9.2.1.61		–	

>ToAWE	M		9.2.1.60		–	
>DCH Specific Info		1..<maxno ofDCHs>			–	
>>DCH ID	M		9.2.1.20		–	
>>CCTrCH ID	M		9.2.3.3	UL CCTrCH in which the DCH is mapped	–	
>>CCTrCH ID	M		9.2.3.3	DL CCTrCH in which the DCH is mapped	–	
>>Transport Format Set	M		9.2.1.59	For UL	–	
>>Transport Format Set	M		9.2.1.59	For DL	–	
>>Frame Handling Priority	O		9.2.1.30		–	
>>QE-Selector	M		9.2.1.50A		–	
DSCH Information		0 to <Maxnoof DSCHs>			GLOBAL	reject
>DSCH ID	M		9.2.1.27		–	
>CCTrCH ID	M		9.2.3.2	DL CCTrCH in which the DSCH is mapped	–	
>Transport Format Set	M		9.2.1.59	For DSCH	–	
>Frame handling Priority	M		9.2.1.30		–	
>ToAWS	M		9.2.1.61		–	
>ToAWE	M		9.2.1.60		–	
USCH Information		0 to <Maxnoof USCHs>			GLOBAL	reject
>USCH ID	M		9.2.3.27		–	
>CCTrCH ID	M		9.2.3.3	UL CCTrCH in which the USCH is mapped	–	
>Transport Format Set	M		9.2.1.59	For USCH	–	
>QE-Selector	M		9.2.1.50A		–	
RL Information		1			YES	reject
>RL ID	M		9.2.1.53		–	
>C-ID	M		9.2.1.9		–	
>Frame Offset	M		9.2.1.31		–	
>Initial DL transmission Power	M		DL Powe 9.2.1.21r		–	
>Maximum DL power	M		DL Power 9.2.1.21		–	
>Minimum DL power	M		DL Power 9.2.1.21		–	

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

9.1.37 RADIO LINK SETUP RESPONSE

9.1.37.1 FDD message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18		YES	ignore
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	ignore
Communication Control Port ID	M		9.2.1.15		YES	ignore
RL Information Response		1 to <maxnoofRLs>			EACH	ignore
>RL ID	M		9.2.1.53		–	
>RL Set ID	M		9.2.2.39			
>UL interference level	M		9.2.1.67		–	
>Diversity Indication	C-NotFirstRL		9.2.2.8		–	
>CHOICE <i>diversity Indication</i>						
>>Combining					YES	ignore
>>>RL ID	M		9.2.1.53	Reference RL ID for the combining	–	
>>Non Combining or First RL					YES	ignore
>>>DCH Information Response		0 to <maxnoofDCHs>		Only one DCH per set of coordinated DCH shall be included	–	
>>>>DCH ID	M		9.2.1.20		–	
>>>>Binding ID	M		9.2.1.4		–	
>>>>Transport Layer Address	M		9.2.1.63		–	
>DSCH Information Response		0 to <Numof DSCH>			GLOBAL	ignore
>>DSCH ID	M		9.2.1.27		–	
>>Binding ID	M		9.2.1.4		–	
>>Transport Layer Address	M		9.2.1.63		–	
>SSDT Support Indicator	M		9.2.2.46		–	
Criticality diagnostics	O		9.2.1.17		YES	ignore

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

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

9.1.37.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18		YES	ignore
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	ignore
Communication Control Port ID	M		9.2.1.15		YES	ignore
RL Information Response		1			YES	ignore
>RL ID	M		9.2.1.53		–	
>UL Interference per Time Slot		1 .. <maxnoofULts>		Interference Level for each UL time slot within the Radio Link		
>Time Slot	M		9.2.3.23			
>UL interference level	M		9.2.1.67			
>DCH Information Response		1 to <maxnoofDCH>		Only one DCH per set of coordinated DCH shall be included.	GLOBAL	ignore
>>DCH ID	M		9.2.1.20		–	
>>Binding ID	M		9.2.1.4		–	
>>Transport Layer Address	M		9.2.1.63		–	
>DSCH Information Response		0 .. <MaxnoofDSCHs>			GLOBAL	ignore
>>DSCH ID	M		9.2.1.27		–	
>>Binding ID	M		9.2.1.4		–	
>>Transport Layer Address	M		9.2.1.63		–	
>USCH Information Response		0 .. <MaxnoofUSCHs>			GLOBAL	ignore
>>USCH ID	M		9.2.3.27		–	
>>Binding ID	M		9.2.1.4		–	
>>Transport Layer Address	M		9.2.1.63		–	
Criticality diagnostics	O		9.2.1.17		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

9.1.38 RADIO LINK SETUP FAILURE

9.1.38.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18		YES	ignore
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used	YES	ignore
Communication Control Port ID	OC-Success		9.2.1.15		YES	ignore
CHOICE <i>cause level</i>						
> <i>General</i>					YES	ignore
>> <i>Cause</i>	M					
> <i>RL specific</i>					YES	ignore
>> Unsuccessful RL Information Response		1 to <maxnoo fRLs>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>Cause	M		9.2.1.6		–	
>> Successful RL Information Response		0 to <maxnoo fRLs-1>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>RL Set ID	M		9.2.2.39			
>>>UL interference level	M		9.2.1.67		–	
>>>Diversity Indication	C-NotFirstRL		9.2.2.8		–	
>>>CHOICE <i>diversity Indication</i>					–	
>>>> <i>Combining</i>					YES	ignore
>>>>>RL ID	M		9.2.1.53	Reference RL ID for the combining	–	
>>>>> <i>Non Combining or First RL</i>					YES	ignore
>>>>> DCH Information Response		0 to <maxnoo fDCHs>		Only one DCH per set of coordinated DCH shall be included	–	
>>>>>>DCH ID	M		9.2.1.20		–	
>>>>>>Binding ID	M		9.2.1.4		–	
>>>>>>Transport Layer Address	M		9.2.1.63		–	
>>> DSCH Information Response		0 to <Numof DSCH>			GLOBAL	Ignore
>>>>DSCH ID	M		9.2.1.27		–	
>>>>Binding ID	M		9.2.1.4		–	
>>>>Transport Layer	M		9.2.1.63		–	

Address						
>>>SSDT Support Indicator	M		9.2.2.46		–	
Criticality diagnostics	O		9.2.1.17		YES	ignore

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

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

9.1.38.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18		YES	ignore
Transaction ID	M		9.2.1.62		–	
CHOICE <i>cause level</i>						
> <i>General</i>					YES	ignore
>> <i>Cause</i>	M					
> <i>RL specific</i>					YES	ignore
>> Unsuccessful RL Information Response		1			YES	ignore
>>>RL ID	M		9.2.1.55		–	
>>> <i>Cause</i>	M		9.2.1.6		–	
Criticality diagnostics	O		9.2.1.17		YES	ignore

CHANGE REQUEST				Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.	
TS 25.433		CR 235r1		Current Version: 3.3.0	
GSM (AA.BB) or 3G (AA.BBB) specification number ↑			↑ CR number as allocated by MCC support team		
For submission to: RAN#9 <small>list expected approval meeting # here</small>		For approval <input checked="" type="checkbox"/> For information <input type="checkbox"/>		Strategic <input type="checkbox"/> Non-strategic <input type="checkbox"/> <small>(for SMG use only)</small>	

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

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

Source: R-WG3 **Date:** 8/2000

Subject: Physical Shared Channel procedure clarifications

Work item: _____

Category:	F Correction <input checked="" type="checkbox"/> A Corresponds to a correction in an earlier release <input type="checkbox"/> B Addition of feature <input type="checkbox"/> C Functional modification of feature <input type="checkbox"/> D Editorial modification <input type="checkbox"/>	Release:	Phase 2 <input type="checkbox"/> Release 96 <input type="checkbox"/> Release 97 <input type="checkbox"/> Release 98 <input type="checkbox"/> Release 99 <input checked="" type="checkbox"/> Release 00 <input type="checkbox"/>
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(only one category Shall be marked With an X)

Reason for change: The Physical Shared Channel procedure needs to clarify the handling of IE's which are optional to avoid problems in interoperability. The list of identified problem IE's were identified:

PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST

PUSCH and PDSCH SETS to ADD - redesigned and fixed in CR 169

PUSCH and PDSCH SETS to Modify – redesigned and fixed in CR 169

PUSCH and PDSCH Information groups and IEs– redesigned and fixed in CR 169

PUSCH and PDSCH SETS to delete – clarified in this CR

Additionally an instance of a specific cause is not necessary and is thus deleted

Clauses affected: 8.2.18

Other specs Affected:	Other 3G core specifications <input type="checkbox"/> Other GSM core specifications <input type="checkbox"/> MS test specifications <input type="checkbox"/> BSS test specifications <input type="checkbox"/> O&M specifications <input type="checkbox"/>	→ List of CRs: _____ → List of CRs: _____ → List of CRs: _____ → List of CRs: _____ → List of CRs: _____
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Other comments: _____

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

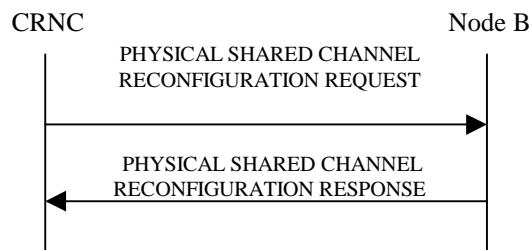


Figure 26: Physical Shared Channel Reconfiguration: Successful Operation

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

PDSCH/PUSCH Deletion

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

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

8.2.18.3 Unsuccessful Operation

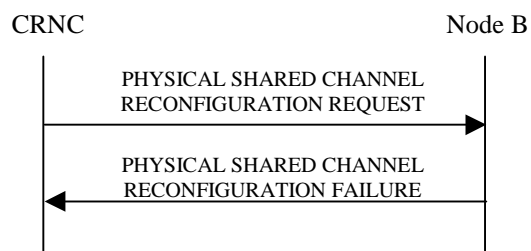


Figure 17: Physical Shared Channel Reconfiguration procedure: Unsuccessful Operation

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'.~~

TSGR3#15

Document (00)02294

e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

3GPP TSG RAN WG3 Meeting #15
Berlin, Germany, August 21st - August 25th
2000

CHANGE REQUEST

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

25.433 CR 236

Current Version: **3.2.0**

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

↑ CR number as allocated by MCC support team

For submission to: **TSG-RAN #9**

list expected approval meeting # here ↑

for approval
for information

strategic
non-strategic (for SMG use only)

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

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

Source: R-WG3 **Date:** 2000-08-24

Subject: Clarification of the Resource Status Indication procedure text

Work item:

Category: <small>(only one category shall be marked with an X)</small>	F Correction	<input checked="" type="checkbox"/>	Release:	Phase 2	<input type="checkbox"/>
	A Corresponds to a correction in an earlier release	<input type="checkbox"/>		Release 96	<input type="checkbox"/>
	B Addition of feature	<input type="checkbox"/>		Release 97	<input type="checkbox"/>
	C Functional modification of feature	<input type="checkbox"/>		Release 98	<input type="checkbox"/>
	D Editorial modification	<input type="checkbox"/>		Release 99	<input checked="" type="checkbox"/>
			Release 00	<input type="checkbox"/>	

Reason for change: The use of all optional IEs in the Resource Status Indication message was not described appropriately in the corresponding procedure text

Clauses affected: 8.2.15.2 Successful Operation

Other specs affected:	Other 3G core specifications	<input type="checkbox"/>	→ List of CRs:	
	Other GSM core specifications	<input type="checkbox"/>	→ List of CRs:	
	MS test specifications	<input type="checkbox"/>	→ List of CRs:	
	BSS test specifications	<input type="checkbox"/>	→ List of CRs:	
	O&M specifications	<input type="checkbox"/>	→ List of CRs:	

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

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 RNC
2. When a Local Cell is to be deleted in Node B, i.e. become Not Existing, the Local Cell shall be withdrawn from the CRNC
3. When the capabilities of the Local Cell 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

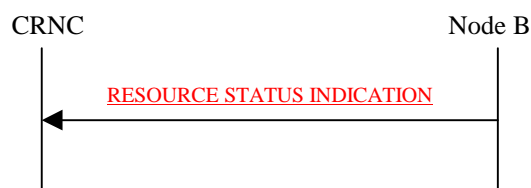


Figure 21: Resource Status Indication procedure: Successful Operation

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 Indication Type IE positioned to 'No Failure', the Local Cell Id IE and the Add/Delete Indicator IE set equal to 'Add'. 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 Local Cell are modelled independently in the Uplink and Downlink direction. If the "UL Capacity Credit" IE is not present, then the internal resource capabilities of the Local Cell are modelled as shared resources between Uplink and Downlink. The new resulting Node B capability shall be indicated within the NodeB Information IE group. 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.

When a Local Cell is to be deleted in Node B, i.e. become Not Existing, the Node B shall withdraw the Local Cell from the CRNC by sending a RESOURCE STATUS INDICATION message with the Indication Type IE positioned to 'No Failure', the Local Cell Id IE and the Add/Delete Indicator IE set equal to 'Delete'. The new resulting Node B capability shall be indicated within the NodeB Information IE group. 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. 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 Indication Type IE shall not be included in the message positioned to 'Service Impacting'. The Cause IE in the RESOURCE STATUS

INDICATION message shall be set to the appropriate value. If the internal resource capabilities of the Local Cell are affected, it shall be reported in the following way: If the internal resource capabilities of the Local Cell are modelled as shared resources between Uplink and Downlink, the new capacity shall be reported in the DL or Global Capacity Credit IE. If the internal resource capabilities of the Local Cell are modelled independently in the Uplink and Downlink direction, then the DL or Global Capacity Credit IE and the UL Capacity Credit IE shall be present in the RESOURCE STATUS INDICATION. If the maximum DL power capability of the Local Cell is affected, this shall be reported using the Maximum DL Power Capability IE.

When the capabilities and/or resource operational state of a cell changes at the Node B, the Node B shall report the new capability and/or resource operational state by sending a RESOURCE STATUS INDICATION message with the Indication Type IE positioned to 'Service Impacting' and 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 Indication Type IE positioned to 'Service Impacting' and 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 Indication Type IE positioned to 'Service Impacting' and the Communication Control Port ID IE. The Cause IE in the RESOURCE STATUS INDICATION message shall be set to the appropriate value.

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 Indication Type IE positioned to 'Service Impacting' and 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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**3GPP TSG-RAN WG3 Meeting #15
Berlin, Germany, 21-25 Aug 2000**

Document R3-002363

e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST		Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.	
25.433	CR	237r1	Current Version: 3.2.0
GSM (AA.BB) or 3G (AA.BBB) specification number ↑		↑ CR number as allocated by MCC support team	
For submission to: TSG RAN #9 <small>list expected approval meeting # here</small>	for approval for information	<input checked="" type="checkbox"/> <input type="checkbox"/>	strategic non-strategic <input type="checkbox"/> (for SMG use only)

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

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

Source: R-WG3 **Date:** 8/2000

Subject: RL ADDITION procedure text update

Work item:

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

Reason for change:

[FDD] *Compressed Mode Deactivation Flag* IE was mentioned *CM Deactivation Flag* IE in procedure text. It was corrected. And all optional IEs were mentioned in procedure text.

[TDD] Explanation of the optional IEs, *UL CCTrCH Information* IE, *DL CCTrCH Information* IE, *UL DPCH Information* IE, *DL DPCH Information* IE were added.

If this CR would not be accepted, procedure text is missing in the specification, so the specification would be incomplete.

Clauses affected: 8.3.1.2

Other specs affected:	Other 3G core specifications <input type="checkbox"/> Other GSM core specifications <input type="checkbox"/> MS test specifications <input type="checkbox"/> BSS test specifications <input type="checkbox"/> O&M specifications <input type="checkbox"/>	→ List of CRs: → List of CRs: → List of CRs: → List of CRs: → List of CRs:	
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Other comments: Update of R3-002307 (CR237). CR237r1 has just editorial updates to CR237 (replace "group" by "IE", make IE name *italic*).

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

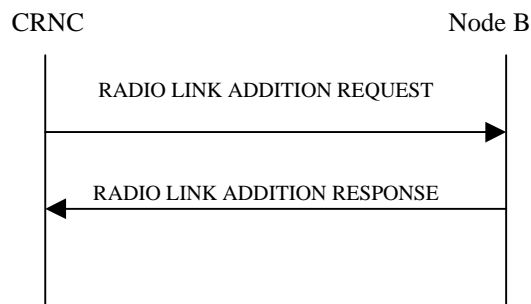


Figure: 28 Radio Link Addition procedure: Successful Operation

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.

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

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

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

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

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

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

[TDD – If the RADIO LINK ADDITION REQUEST message includes the *Initial DL Transmission Power IE*, the Node B shall apply the given power to the transmission on each DL Channelisation Code and on each Time Slot of the RL when starting transmission until the UL synchronisation is achieved for the RL. If no *Initial DL Transmission power*

IE is included, the Node B shall use any transmission power level currently used on already existing RL's for this UE. No inner loop power control shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[22], chapter 4.2.3.3.).

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

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

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

[FDD – If the RADIO LINK ADDITION REQUEST includes the *Compressed Mode Deactivation Flag* IE with value "On", the Node B shall not activate any CM pattern sequence in the new RLs. In all the other cases (Flag set to "Off" or not present), the on going CM measurement (if existing) shall be applied also to the added RLs.]

[FDD- If the RADIO LINK ADDITION REQUEST contains the *Transmission Gap Pattern Sequence Code Information* IE Node B shall use or not the alternate scrambling code as indicated for each DL Channelisation Code.]

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, [TDD - DSCH, USCH] of the RL in the RADIO LINK ADDITION RESPONSE message.

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

[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]

[FDD – After addition of the new RL, the UL out-of-sync algorithm defined in [10] shall use the maximum value of the parameters N_OUTSYNC_IND and T_RLFAILURE, and the minimum value of the parameters N_INSYNC_IND, that are configured in the cells supporting the radio links of the RL Set].

CHANGE REQUEST		Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.
25.433	CR 238	Current Version: 3.2.0
GSM (AA.BB) or 3G (AA.BBB) specification number ↑	↑ CR number as allocated by MCC support team	
For submission to: RAN#9 <small>list expected approval meeting # here</small>	for approval <input checked="" type="checkbox"/> for information <input type="checkbox"/>	strategic <input type="checkbox"/> non-strategic <input type="checkbox"/> <small>(for SMG use only)</small>

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

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

Source: R-WG3 **Date:** Aug. 2000

Subject: Procedure text proposal for optional IEs of Common Transport Channel Setup procedure.

Work item:

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

Reason for change:

- (1) For *TFCI Presence* IE, reference TS number is added
- (2) For optional *CD Signatures* IE, needed procedure text is added
- (3) For optional *Chanel Request Parameters* IE group, needed procedure text is added
- (4) For optional *AP Sub Channel Number* IE, needed text procedure text is added
- (5) Optional IEs *STTD Indicators* in *AP-AICH Parameters* IE group and *CD/CA-ICH Parameters* IE group are changed into mandatory to align with the case of *AICH*.

Clauses affected: 8.2, 9.1.3

Other specs affected:	Other 3G core specifications <input type="checkbox"/> Other GSM core specifications <input type="checkbox"/> MS test specifications <input type="checkbox"/> BSS test specifications <input type="checkbox"/> O&M specifications <input type="checkbox"/>	→ List of CRs: → List of CRs: → List of CRs: → List of CRs: → List of CRs:	
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Other comments:

8.2 NBAP Common Procedures

8.2.1 Common Transport Channel Setup

8.2.1.1 General

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

8.2.1.2 Successful Operation

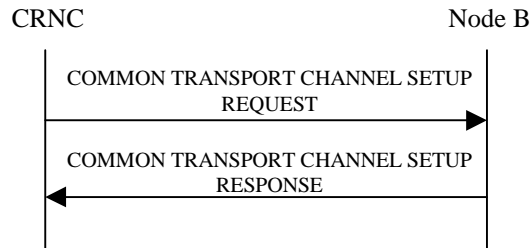


Figure 1: Common Transport Channel Setup procedure, Successful Operation

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

One message can configure only one of the following combinations:

- [FDD-one Secondary CCPCH, and 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.
- [FDD-PCPCHes, one CPCH, one AP_AICH and one CD/CA-ICH related to that group of PCPCHes 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.]~~

[FDD-PCPCHes]:

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

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

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

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

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

~~[FDD The handling of the optional STTD IE for AP AICH and CD/CA ICH is FFS.]~~

After a successful procedure, the defined common transport channels and the common physical channels shall adopt the state Enabled [6] in Node B and the common transport channels exist on the Uu interface. The Node B shall store the value of *Configuration Generation ID* IE and it shall respond with the COMMON TRANSPORT CHANNEL SETUP RESPONSE message with the transport layer information for the configured common transport channels.

8.2.1.3 Unsuccessful Operation

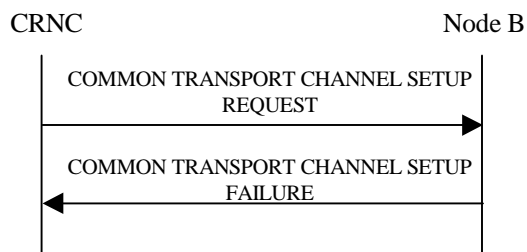


Figure 2: Common Transport Channel Setup procedure, Unsuccessful Operation

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

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

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

Typical cause values are as follows:

Radio Network Layer Cause

- Cell not available
- Unknown C-ID
- Power level not supported

- Node B Resources unavailable

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error
- Message not compatible with receiver state

Miscellaneous Cause

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

8.2.1.4 Abnormal Conditions

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9.1.3 COMMON TRANSPORT CHANNEL SETUP REQUEST

9.1.3.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject
CHOICE common physical channel to be configured					YES	ignore
>Secondary CCPCH					YES	reject
>Secondary CCPCH		1				
>>Common Physical Channel ID	M		9.2.1.13		–	
>>FDD S-CCPCH Offset	M		9.2.2.15	Corresponds to [7]: s-CCPCH,k	–	
>>DL Scrambling Code	M		9.2.2.13		–	
>>FDD DL Channelisation Code Number	M		9.2.2.14		–	
>>TFCS	M		9.2.1.54	For the DL.	–	
>>Secondary CCPCH Slot Format	M		9.2.2.43		–	
>>>TFCI Presence	C – SlotFormat		9.2.1.57	Refer to TS [7]	–	
>>Multiplexing Position	M		9.2.2.23		–	
>>Power Offset Information		1			–	
>>>PO1	M		Power Offset	Power offset for the TFCI bits	–	
>>>PO3	M		Power Offset	Power offset for the pilot bits	–	
>>STTD Indicator	M		9.2.2.47		–	
>>FACH Parameters	C-choiceCh	0..<maxnoofFACHs>			GLOBAL	reject
>>>Common transport channel ID	M		9.2.1.14		–	
>>>Transport Format Set	M		9.2.1.59	For the DL.	–	
>>>ToAWS	M		9.2.1.61		–	
>>>ToAWE	M		9.2.1.60		–	
>>>Max FACH Power	M		DL Power 9.2.1.21	Maximum allowed power on the FACH.	–	
>>PCH Parameters	C-choiceCh	0..1			YES	reject
>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>Transport Format Set	M		9.2.1.59	For the DL.	–	
>>>ToAWS	M		9.2.1.61		–	
>>>ToAWE	M		9.2.1.60		–	
>>>PCH Power	M		DL Power		–	

			9.2.1.21			
>>>PICH Parameters		1			-	
>>>>Common Physical Channel ID	M		9.2.1.13		-	
>>>>DL Scrambling Code	M		9.2.2.13		-	
>>>>FDD DL Channelisation Code Number	M		9.2.2.14		-	
>>>>PICH Power	M		DL Power 9.2.1.21	Power to be used on the PICH.	-	
>>>>PICH Mode	M		9.2.2.26	Number of PI per frame	-	
>>>>STTD Indicator	M		9.2.2.48		-	
>PRACH					YES	reject
>PRACH		1				
>>Common Physical Channel ID	M		9.2.1.13		-	
>>Scrambling Code Number	M		9.2.2.42		-	
>>TFCS	M		9.2.1.58	For the UL.	-	
>>Preamble Signatures	M		9.2.2.31		-	
>>Allowed Slot Format Information		1..<Maximum of Slots PRA CH>			-	
>>>RACH Slot Format	M		9.2.2.37		-	
>>RACH Sub Channel Numbers	M		9.2.2.38		-	
>>Puncture Limit	M		9.2.1.50	For the UL	-	
>>Preamble threshold	M		9.2.2.32		-	
>>RACH Parameters		1			YES	reject
>>>Common Transport Channel ID	M		9.2.1.14		-	
>>>Transport Format Set	M		9.2.1.59	For the UL.	-	
>>>AICH Parameters		1			-	
>>>>Common Physical Channel ID	M		9.2.1.13		-	
>>>>DL Scrambling Code	M		9.2.2.13		-	
>>>>AICH Transmission Timing	M		9.2.2.1		-	
>>>>FDD DL Channelisation Code Number	M		9.2.2.14		-	
>>>>AICH Power	M		DL Power 9.2.1.21		-	
>>>>STTD Indicator	M		9.2.2.47		-	
>PCPCHes					YES	Reject
>>CPCH Parameters		1			-	
>>>Common Transport Channel ID	M				-	
>>>Transport Format Set	M			For the UL.	-	
>>>AP Preamble Scrambling Code	M		CPCH Scrambling Code Number		-	
>>>CD Preamble Scrambling Code	M		CPCH Scrambling		-	

			g Code Number			
>>>TFCS	M			For the UL	-	
>>>CD Signatures	O		Preamble Signatures	Note: When not present, all CD signatures are to be used.	-	
>>>CD Sub Channel Numbers	C-CDSig				-	
>>>Puncture Limit	M			For the UL	-	
>>>CPCH UL DPCCH Slot Format	M			For UL CPCH message control part	-	
>>>UL SIR	M		UL SIR		-	
>>>Initial DL transmission Power	M		DL Power		-	
>>>Maximum DL Power	M		DL Power		-	
>>>Minimum DL Power	M		DL Power		-	
>>>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				-	
>>>N_Start_Message	M				-	
>>>N_EOT	M				-	
>>>Channel Assignment Indication	M				-	
>>>CPCH Allowed Total Rate	M				-	
>>>PCPCH Channel Information		<i>1..<maximum of PCPCHs></i>			-	
>>>>Common Physical Channel ID	M				-	
>>>>CPCH Scrambling Code Number	M			For UL PCPCH	-	
>>>>DL Scrambling Code	M			For DL CPCH message part	-	
>>>>FDD DL Channelisation Code Number	M			For DL CPCH message part	-	
>>>>PCP Length	M				-	
>>>>UCSM Information	C-NCA	<i>1</i>			-	
>>>>>Min UL Channelisation Code Length	M				-	
>>>>>NF_max	M				-	
>>>>>Channel Request Parameters		<i>0..<maximum APSig Num></i>			-	
>>>>>>AP Preamble Signature	M				-	
>>>>>>AP Sub Channel	O				-	

Number						
>>>VCAM Mapping Information	C-CA	1..<maxnoofLen>		Refer to TS [18]	-	
>>>>Min UL Channelisation Code Length	M				-	
>>>>NF_max	M				-	
>>>>Max Number of PCPCHes	M				-	
>>>>SF Request Parameters		1..<maxAPSigNum>			-	
>>>>>AP Preamble Signature	M				-	
>>>>>AP Sub Channel Number	O				-	
>>>>AP-AICH Parameters		1			-	
>>>>>Common Physical Channel ID	M				-	
>>>>>DL Scrambling Code	M				-	
>>>>>FDD DL Channelisation Code Number	M				-	
>>>>>AP-AICH Power	M		DL Power		-	
>>>>>CSICH Power	M		DL Power	For CSICH bits at end of AP-AICH slot	-	
>>>>>STTD Indicator	OM				-	
>>>>>CD/CA-ICH Parameters		1			-	
>>>>>>Common Physical Channel ID	M				-	
>>>>>>DL Scrambling Code	M				-	
>>>>>>FDD DL Channelisation Code Number	M				-	
>>>>>>CD/CA-ICH Power	M		DL Power		-	
>>>>>>STTD Indicator	OM				-	

Condition	Explanation
SlotFormat	This IE is present only if the Secondary CCPCH Slot Format is equal to any of the value 8 to 17
ChoiceCh	One of the channels FACH or PCH or both must be present.
CDSig	The IE may be present if the Available CD Signatures is present.
CA	The IE must be present if the Channel Assignment Indication is set to 'CA Active'.
NCA	The IE must be present if the Channel Assignment Indication is set to 'CA Inactive'.

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

9.1.3.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject
CHOICE <i>common physical channels to be configured</i>					YES	ignore
<i>Secondary CCPCHs</i>					YES	reject
>CCTrCH ID	M		9.2.3.3	For DL CCTrCH supporting one or several Secondary CCPCHs	–	
>TFCS	M		9.2.1.5	For DL CCTrCH supporting one or several Secondary CCPCHs	–	
>Secondary CCPCH		<i>1..<maxnoofS - CCPCHs></i>			GLOBAL	reject
>>Common physical channel ID	M		9.2.1.13		–	
>>TDD Channelisation Code	M		9.2.3.19		–	
>>Time Slot	M		9.2.3.23		–	
>>Burst Type	M		9.2.3.2	Long or short midamble	–	
>>Midamble shift	M		9.2.3.7		–	
>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>S-CCPCH Power	M		DL Power 9.2.1.21		–	
>>FACH	C ChoiceCh	<i>0..<maxnoofFACHs></i>			GLOBAL	reject

>>>Common transport channel ID	M		9.2.1.61		-	
>>>Transport Format Set	M		9.2.1.59	For the DL.	-	
>>>ToAWS	M		9.2.1.61		-	
>>>ToAWE	M		9.2.1.60		-	
>>PCH	C ChoiceCh	0..1			GLOBAL	reject
>>>Common transport channel ID	M		9.2.1.13		-	
>>>Transport Format Set	M		9.2.1.59	For the DL.	-	
>>>ToAWS	M		9.2.1.61		-	
>>>ToAWE	M		9.2.1.60		-	
>>>PICH Parameters		1			-	
>>>>Common Physical Channel ID	M		9.2.1.13		-	
>>>>TDD Channelisation Code	M		9.2.3.19		-	
>>>>Time Slot	M		9.2.3.23		-	
>>>>Burst type	O		9.2.3.2		-	
>>>>Midamble shift	M		9.2.3.7		-	
>>>>TDD Physical Channel Offset	M		9.2.3.20		-	
>>>>Repetition period	M		9.2.3.16		-	
>>>>Repetition length	M		9.2.3.15		-	
>>>>Paging Indicator Length	M		9.2.3.8		-	
>>>>PICH Power	M		DL Power 9.2.1.21		YES	reject
<i>PRACH</i>						
>PRACH	M	1				
>>Common physical channel ID	M		9.2.1.13			
>>Time Slot	M		9.2.3.23			
>>TDD Channelisation Code	M		9.2.3.19			
>>Max PRACH Midamble Shifts	O		9.2.3.6			
>>PRACH Midamble	M		9.2.3.14			
>>RACH					-	
>>>Common transport channel ID	M		9.2.1.13		-	

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.

```
-- *****
--
-- 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          PRESENCE mandatory } | CRITICALITY reject TYPE C-
ID
    { ID id-ConfigurationGenerationID PRESENCE mandatory } | CRITICALITY reject TYPE
ConfigurationGenerationID
    { ID id-CommonPhysicalChannelType-CTCH-SetupRqstFDD CRITICALITY ignore TYPE
CommonPhysicalChannelType-CTCH-SetupRqstFDD PRESENCE mandatory },
    ...
}

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

Secondary-CCPCH-CTCH-SetupRqstFDD ::= 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,
    powerOffsetInformation  PowerOffsetInformation-CTCH-SetupRqstFDD,
    sTTD-Indicator          STTD-Indicator,
    fACH-Parameters         FACH-ParametersList-CTCH-SetupRqstFDD OPTIONAL,
    -- One of the channels FACH or PCH or both must be present
    pCH-Parameters         PCH-Parameters-CTCH-SetupRqstFDD OPTIONAL,
    -- One of the channels FACH or PCH or both must be present
    iE-Extensions          ProtocolExtensionContainer { { Secondary-CCPCHItem-
CTCH-SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

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

PowerOffsetInformation-CTCH-SetupRqstFDD ::= SEQUENCE {
    p01-ForTFCI-Bits      PowerOffset,
    p03-ForPilotBits      PowerOffset,
    iE-Extensions         ProtocolExtensionContainer { { PowerOffsetInformation-
CTCH-SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

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

FACH-ParametersList-CTCH-SetupRqstFDD ::= ProtocolIE-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,
    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 CommonPhysicalChannelID,
    scramblingCodeNumber ScramblingCodeNumber,
    tFCS TFCS,
    preambleSignatures PreambleSignatures,
    allowedSlotFormatInformation AllowedSlotFormatInformationList-CTCH-SetupRqstFDD,

```

```

    rACH-SubChannelNumbers          RACH-SubChannelNumbers,
    ul-punctureLimit                PunctureLimit,
    preambleThreshold                PreambleThreshold,
    rACH-Parameters                  RACH-Parameters-CTCH-SetupRqstFDD,
    iE-Extensions                    ProtocolExtensionContainer { { PRACHItem-CTCH-
SetupRqstFDD-ExtIEs} }            OPTIONAL,
    ...
}

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

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

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

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

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

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

RACH-ParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonTransportChannelID        CommonTransportChannelID,
    transportFormatSet              TransportFormatSet,
    aICH-Parameters                  AICH-Parameters-CTCH-SetupRqstFDD,
    iE-Extensions                    ProtocolExtensionContainer { { RACH-ParametersItem-
CTCH-SetupRqstFDD-ExtIEs} }            OPTIONAL,
    ...
}

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 ::= {
    ...
}

PCPCH-CTCH-SetupRqstFDD ::= ProtocolIE-Container {{ PCPCHIE-CTCH-SetupRqstFDD }}

PCPCHIE-CTCH-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-PCPCHItem-CTCH-SetupRqstFDD    CRITICALITY reject    TYPE PCPCHItem-CTCH-SetupRqstFDD
PRESENCE optional },
    ...
}

PCPCHItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    cPCH-Parameters                  CPCH-Parameters-CTCH-SetupRqstFDD,
    iE-Extensions                    ProtocolExtensionContainer { { PCPCHItem-CTCH-SetupRqstFDD-
ExtIEs} }            OPTIONAL,
    ...
}

```

```

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

CPCH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    transportFormatSet            TransportFormatSet,
    aPPreambleScramblingCode      CPCHScramblingCodeNumber,
    cDPreambleScramblingCode      CPCHScramblingCodeNumber,
    tFCS                          TFCS,
    cDSignatures                  PreambleSignatures          OPTIONAL,
    cDSubChannelNumbers           CDSUBChannelNumbers        OPTIONAL,
    -- this IE may be present only if the CD Signatures is present --
    punctureLimit                 PunctureLimit,
    cPCH-UL-DPCCH-SlotFormat      CPCH-UL-DPCCH-SlotFormat,
    uL-SIR                        UL-SIR,
    initialDL-transmissionPower    DL-Power,
    maximumDLPower                DL-Power,
    minimumDLPower                DL-Power,
    pO2-ForTPC-Bits               PowerOffset,
    pO3-ForPilotBits              PowerOffset,
    fDD-TPC-DownlinkStepSize      FDD-TPC-DownlinkStepSize,
    nStartMessage                 NStartMessage,
    nEOT                           NEOT,
    channel-Assignment-Indication  Channel-Assignment-Indication,
    cPCH-Allowed-Total-Rate        CPCH-Allowed-Total-Rate,
    pCPCHChannelInformationList    PCPCHChannelInformationList-CTCH-SetupRqstFDD,
    vCAMMapping-InformationList    VCAMMapping-InformationList-CTCH-SetupRqstFDD  OPTIONAL,
    -- this IE is only present if the Channel Assignment Indication is equal to CA Active --
    aP-AICH-Parameters            AP-AICH-Parameters-CTCH-SetupRqstFDD,
    cDCA-ICH-Parameters           CDCA-ICH-Parameters-CTCH-SetupRqstFDD,
    iE-Extensions                 ProtocolExtensionContainer { { CPCH-Parameters-CTCH-
SetupRqstFDD-ExtIEs } }          OPTIONAL,
    ...
}

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

PCPCHChannelInformationList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfPCPCHs)) OF
PCPCHChannelInformationItem-CTCH-SetupRqstFDD

PCPCHChannelInformationItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID        CommonPhysicalChannelID,
    cPCHScramblingCodeNumber       CPCHScramblingCodeNumber,
    dL-ScramblingCode              DL-ScramblingCode,
    fdd-dl-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    pCP-Length                     PCP-Length,
    uCSM-Information               UCSM-Information-CTCH-SetupRqstFDD  OPTIONAL,
    -- this IE is only present if the Channel Assignment Indication is equal to CA Inactive --
    iE-Extensions                 ProtocolExtensionContainer { { PCPCHChannelInformationItem-
CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

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

UCSM-Information-CTCH-SetupRqstFDD ::= SEQUENCE {
    minUL-ChannelisationCodeLength MinUL-ChannelisationCodeLength,
    nFmax                          NFmax,
    channelRequestParametersList    ChannelRequestParametersList-CTCH-SetupRqstFDD
OPTIONAL,
    iE-Extensions                 ProtocolExtensionContainer { { UCSM-InformationItem-CTCH-
SetupRqstFDD-ExtIEs } }          OPTIONAL,
    ...
}

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

ChannelRequestParametersList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxAPSigNum)) OF
ChannelRequestParametersItem-CTCH-SetupRqstFDD

```

```

ChannelRequestParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    aPPreambleSignature      APPreambleSignature,
    aPSubChannelNumber       ASubChannelNumber      OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { { ChannelRequestParametersItem-CTCH-
SetupRqstFDD-ExtIEs} }      OPTIONAL,
    ...
}

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

VCAMMapping-InformationList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNoofLen)) OF VCAMMapping-
InformationItem-CTCH-SetupRqstFDD

VCAMMapping-InformationItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    minUL-ChannelisationCodeLength  MinUL-ChannelisationCodeLength,
    nFmax                            NFmax,
    max-Number-of-PCPCHes           Max-Number-of-PCPCHes,
    sFrequestParameters              SFrequestParametersList-CTCH-SetupRqstFDD,
    iE-Extensions                    ProtocolExtensionContainer { { VCAMMapping-InformationItem-
CTCH-SetupRqstFDD-ExtIEs} }      OPTIONAL,
    ...
}

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

SFrequestParametersList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxAPSigNum)) OF
SFrequestParametersItem-CTCH-SetupRqstFDD

SFrequestParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    aPPreambleSignature      APPreambleSignature,
    aPSubChannelNumber       ASubChannelNumber      OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { { SFrequestParametersItem-CTCH-
SetupRqstFDD-ExtIEs} }      OPTIONAL,
    ...
}

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

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

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

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

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

```

CHANGE REQUEST		Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.
25.433	CR	239
GSM (AA.BB) or 3G (AA.BBB) specification number ↑		↑ CR number as allocated by MCC support team
For submission to: TSG RAN #9	for approval <input checked="" type="checkbox"/>	strategic <input type="checkbox"/>
list expected approval meeting # here ↑	for information <input type="checkbox"/>	non-strategic <input type="checkbox"/> (for SMG use only)

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

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

Source: R-WG3 **Date:** 24.08.00

Subject: New Abstract Syntax Error for wrong order or number of IEs

Work item:

Category:	F Correction <input checked="" type="checkbox"/> A Corresponds to a correction in an earlier release <input type="checkbox"/> B Addition of feature <input type="checkbox"/> C Functional modification of feature <input type="checkbox"/> D Editorial modification <input type="checkbox"/>	Release:	Phase 2 <input type="checkbox"/> Release 96 <input type="checkbox"/> Release 97 <input type="checkbox"/> Release 98 <input type="checkbox"/> Release 99 <input checked="" type="checkbox"/> Release 00 <input type="checkbox"/>
------------------	--	-----------------	--

(only one category shall be marked with an X)

Reason for change: It has been defined in Section 9.3 that the order of IEs and the number of their occurrence should be as specified in that section, even though ASN.1 decoding rules allow otherwise. Also it is stated that if a message structured otherwise is received, this shall be considered an Abstract Syntax Error, and treated as specified in section 10. However, that case is not covered in section 10, and this CR proposes the corresponding definition.

If this CR is not implemented, a receiving entity will not know how to behave in the defined error case for receiving correct IEs but in wrong construction.

Clauses affected: 9.2.1.6, 9.3.0, 9.3.4, 10.3.1 and new section 10.3.6

Other specs affected:	Other 3G core specifications <input type="checkbox"/> → List of CRs: Other GSM core specifications <input type="checkbox"/> → List of CRs: MS test specifications <input type="checkbox"/> → List of CRs: BSS test specifications <input type="checkbox"/> → List of CRs: O&M specifications <input type="checkbox"/> → List of CRs:	
------------------------------	--	--

Other comments:



<----- double-click here for help and instructions on how to create a CR.

9.2.1.6 Cause

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE Cause group				
>Radio Network Layer				
>Radio Network Layer Cause	M		Enumerated (unknown C-ID, Cell not available, Power level not supported, 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, Combining Resources not available, Reconfiguration not allowed, Requested configuration not supported, Synchronization failure, Priority transport channel established,SIB Origination in Node B not Supported, No Closed Loop Timing Adjustment Mode configured, Unspecified, BCCH scheduling error, Measurement Temporarily not Available, Invalid CM Setting, ...)	
>Transport Layer				
>Transport Layer Cause	M		Enumerated (Transport link failure, Transmission port not available, Transport resource unavailable, Unspecified, ...)	
>Protocol				
>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, <u>Abstract syntax error (falsely constructed message)</u> , ...)	
>Misc				
>Miscellaneous Cause	M		Enumerated (Control processing overload Hardware failure,	

			O&M intervention, Not enough user plane processing resources, Unspecified, ...)	
--	--	--	---	--

NEXT MODIFIED SECTION

9.3.0 General

Section 9.3 presents the Abstract Syntax of NBAP protocol with ASN.1. In case there is contradiction between the ASN.1 definition in this section and the tabular format in sections 9.1 and 9.2, the ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional elements, where the tabular format shall take precedence.

The ASN.1 definition specifies the structure and content of NBAP messages. NBAP messages can contain any IEs specified in the object set definitions for that message without the order or number of occurrence being restricted by ASN.1. However, for this version of the standard, a sending entity shall construct a NBAP message according to the PDU definitions module and with the following additional rules (Note that in the following IE means an IE in the object set with an explicit id. If one IE needed to appear more than once in one object set, then the different occurrences have different IE ids):

- IEs shall be ordered (in an IE container) in the order they appear in object set definitions.
- Object set definitions specify how many times IEs may appear. An IE shall appear exactly once if the presence field in an object has value "mandatory". An IE may appear at most once if the presence field in an object has value "optional" or "conditional". If in a tabular format there is multiplicity specified for an IE (i.e. an IE list) then in the corresponding ASN.1 definition the list definition is separated into two parts. The first part defines an IE container list where the list elements reside. The second part defines list elements. The IE container list appears as an IE of its own. For this version of the standard an IE container list may contain only one kind of list elements.

If a NBAP message that is not constructed as defined above is received, this shall be considered as Abstract Syntax Error, and the message shall be handled as defined for Abstract Syntax Error in section 10.3.6.

NEXT MODIFIED SECTION**9.3.4 Information Element Definitions****Unaffected ASN.1 definition not shown**

```
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,
    abstract-syntax-error-falsely-constructed-message,
    ...
}

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,
    r1-already-ActivatedOrAllocated,
```

```
nodeB-Resources-unavailable,  
insufficient-physical-channel-resources,  
measurement-not-supported-for-the-object,  
combining-resources-not-available,  
reconfiguration-not-allowed,  
requested-configuration-not-supported,  
synchronisation-failure,  
sIB-Origination-in-Node-B-not-Supported,  
unspecified,  
priority-transport-channel-established,  
bCCH-scheduling-error,  
measurement-temporarily-not-available,  
no-closed-loop-timing-adjustment-mode-configured,  
invalid-CM-settings,  
...  
}  
  
CauseTransport ::= ENUMERATED {  
transport-link-failure,  
transmission-port-not-available,  
transport-resource-unavailable,  
unspecified,  
...  
}
```

Unaffected ASN.1 definition not shown

NEXT MODIFIED SECTION

10.3 Abstract Syntax Error

10.3.1 General

An Abstract Syntax Error occurs when the receiving functional NBAP entity:

1. receives IEs or IE groups that cannot be understood (unknown id);
2. receives IEs for which the logical range is violated (e.g.: ASN.1 definition: 0 to 15, the logical range is 0 to 10 (values 11 to 15 are undefined), and 12 will be received; this case will be handled as an abstract syntax error using criticality information sent by the originator of the message);
3. does not receive IEs or IE groups but according to the specified presence of the concerning object, the IEs or IE groups should have been present in the received message.
4. receives IEs or IE groups that are defined to be part of that message in wrong order or with too many occurrences of the same IE or IE group

Cases 1 and 2 (not comprehended IE/IE group) are handled based on received Criticality information. Case 3 (missing IE/IE group) is handled based on Criticality information and Presence information for the missing IE/IE group specified in the version of the specification used by the receiver. Case 4 (IEs or IE groups in wrong order or with too many occurrences) results in rejecting the procedure.

If an Abstract Syntax Error occurs, the receiver shall read the remaining message and shall then for each detected Abstract Syntax Error that belong to cases 1-3 act according to the Criticality Information and Presence Information for the IE/IE group due to which Abstract Syntax Error occurred in accordance with subclauses 10.3.4 and 10.3.5. The handling of case 4 is specified in subclause 10.3.6.

10.3.2 Criticality Information

In the NBAP messages there is criticality information set for individual IEs and/or IE groups. This criticality information instructs the receiver how to act when receiving an IE or an IE group that is not comprehended, i.e. the entire item (IE or IE group) which is not (fully or partially) comprehended shall be treated in accordance with its own criticality information as specified in chapter 10.3.4.

In addition, the criticality information is used in case of the missing IE/IE group abstract syntax error (see subclause 10.3.5).

The receiving node shall take different actions depending on the value of the Criticality Information. The three possible values of the Criticality Information for an IE/IE group are:

- Reject IE
- Ignore IE and Notify Sender
- Ignore IE

10.3.3 Presence Information

For many IEs/IE groups which are optional according to the ASN.1 transfer syntax, NBAP specifies separately if the presence of these IEs/IE groups is optional or mandatory with respect to RNS application by means of the presence field of the concerning object of class NBAP-PROTOCOL-IES, NBAP-PROTOCOL-IES-PAIR, NBAP-PROTOCOL-EXTENSION or NBAP-PRIVATE-IES.

The presence field of the indicated classes supports three values:

1. Optional;
2. Conditional;

3. Mandatory.

If an IE/IE group is not included in a received message and the presence of the IE/IE group is mandatory or the presence is conditional and the condition is true according to the version of the specification used by the receiver, an abstract syntax error occurs due to a missing IE/IE group.

10.3.4 Not comprehended IE/IE group

10.3.4.1 Procedure Code

The receiving node shall treat the different types of received 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.

10.3.4.2 IEs other than the Procedure Code

The receiving node shall treat the different types of received 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 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 the understood IEs/IE groups.

10.3.5 Missing IE or IE group

The receiving node shall treat the missing IE/IE group according to the criticality information for the missing IE/IE group in the received message specified in the version of this specification used by the receiver:

Reject IE:

- if a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Reject IE*"; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the missing IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure.
- if a received message *initiating* a procedure that does not have a message to report unsuccessful outcome is missing one or more IEs/IE groups with specified criticality "*Reject IE*", the receiving node shall initiate the Error Indication procedure.
- if a received *response* message is missing one or more IEs/IE groups with specified criticality "*Reject IE*", the receiving node shall initiate local error handling.

Ignore IE and Notify Sender:

- if a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message and report in the response message of the procedure that one or more IEs/IE groups were missing.
- if a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall initiate the Error Indication procedure.

Ignore IE:

- if a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message.

10.3.6 IEs or IE groups received in wrong order or with too many occurrences

If a message with IEs or IE groups in wrong order or with too many occurrences is received, the receiving node shall behave according to the following:

- If a message *initiating* a procedure is received containing IEs or IE groups in wrong order or with too many occurrences, none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the cause value "Abstract Syntax Error (Falsely Constructed Message)" using the message normally used to report unsuccessful outcome of the procedure.
- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing IEs or IE groups in wrong order or with too many occurrences, the receiving node shall initiate the Error Indication procedure, and use cause value "Abstract Syntax Error (Falsely Constructed Message)".
- If a *response* message is received containing IEs or IE groups in wrong order or with too many occurrences, the receiving node shall initiate local error handling.

CHANGE REQUEST				Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.	
25.433		CR		240_{r4}	
GSM (AA.BB) or 3G (AA.BBB) specification number ↑				↑ CR number as allocated by MCC support team	
For submission to: RAN#9		for approval		Current Version: 3.2.0	
list expected approval meeting # here ↑		<input checked="" type="checkbox"/>		strategic <input type="checkbox"/>	
		<input type="checkbox"/>		non-strategic <input type="checkbox"/> (for SMG use only)	

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

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

Source: R-WG3 **Date:** 3/9/00

Subject: NBAP Common IEs extensibility corrections

Work item:

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

Reason for change: In version 3.2.0, there are inconsistencies between the ASN.1 and the tabular format with respect to extensibility. Furthermore, they are internally inconsistent.

This CR proposes modifying the extensibility of a number of IEs in either the tabular, the ASN.1 or both. Furthermore, where a misalignment of an IE with another specification was discovered, this was corrected.

[R1 – modifications to various CPCH IEs, after comments from Samsung.](#)
[R2 – modifications to various IEs after comments from Ericsson.](#)
[R3 – removal of semantic changes for CPCH items after comments from Siemens.](#)
[R4 – modifications to CPCH tabular after comments from Samsung.](#)

If not approved, there is a risk that NBAP will not be future-proof, and also will be misaligned with other specifications (notably RRC).

Clauses affected: 9.2.x (several subsections affected), 9.3.4

Other specs affected:

Other 3G core specifications	<input type="checkbox"/>	→ List of CRs:	
Other GSM core specifications	<input type="checkbox"/>	→ List of CRs:	
MS test specifications	<input type="checkbox"/>	→ List of CRs:	
BSS test specifications	<input type="checkbox"/>	→ List of CRs:	
O&M specifications	<input type="checkbox"/>	→ List of CRs:	

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

9.2 Information Element Functional Definition and Contents

9.2.0 General

Section 9.2 presents the NBAP IE definitions in tabular format. The corresponding ASN.1 definition is presented in section 9.3. In case there is contradiction between the tabular format in section 9.2 and the ASN.1 definition, the ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional elements, where the tabular format shall take precedence.

9.2.1 Common parameters

9.2.1.1 Add/Delete Indicator

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

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

9.2.1.2 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..511)	All SFN values in which MIB may be mapped are allowed. The tabular description is presented in [18].

9.2.1.4 Binding ID

The Binding ID is the identifier of a user data stream. It is allocated at Node B and it is unique for each transport bearer under establishment to/from the Node B. 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
CHOICE <i>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, Combining Resources not available, Reconfiguration not allowed, Requested configuration not supported, Synchronization failure, Priority transport channel established,SIB Origination in Node B not Supported, No Closed Loop Timing Adjustment Mode configured, Unspecified, BCCH scheduling error, Measurement Temporarily not Available, Invalid CM Setting, ...)	
> <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. [17].

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

9.2.1.8 CFN Offset

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.

9.2.1.9 C-ID

The C-ID (Cell identifier) is the identifier of a cell in one RNC.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
C-ID			INTEGER (0...65535)	

9.2.1.10 Common Measurement Object Type

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

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

9.2.1.11 Common Measurement Type

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

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

9.2.1.12 Common Measurement Value

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
>Transmitted Carrier Power Value	C <i>MeasValue</i>		INTEGER(0..100)	According to mapping in [4] and [5]
>RSSI Value	C <i>MeasValue</i>		INTEGER(0..621)	According to mapping in [4] and [5]
>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 [5]
>Acknowledged PCPCH Access Preambles (FDD only)	C <i>MeasValue</i>		INTEGER(0..15, ...)	According to mapping in [4]
>Detected PCPCH Access Preambles (FDD only)	C <i>MeasValue</i>		INTEGER(0..240, ...)	According to mapping in [4]

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

9.2.1.13 Common Physical Channel Id

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

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

9.2.1.14 Common Transport Channel Id

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

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

9.2.1.15 Communication Control Port ID

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Communication Control Port ID			INTEGER (0..65535)	

9.2.1.16 Configuration Generation ID

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

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

9.2.1.17 Criticality diagnostics

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)	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 or missing 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.

9.2.1.18 CRNC Communication Context ID

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CRNC Communication Context ID			INTEGER (0..2 ²⁰ -1)	

9.2.1.19 DCH Combination Indicator

Void

9.2.1.20 DCH ID

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

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

9.2.1.21 DL Power

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

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

9.2.1.22 Dedicated Measurement Object Type

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

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

9.2.1.23 Dedicated Measurement Type

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dedicated Measurement Type			ENUMERATED (SIR, SIR Error, Transmitted Code Power, RSCP, Rx Timing Deviation, Round Trip Time,...)	RSCP, Rx Timing Deviation are used by TDD only, Round Trip Time is used by FDD only.

Note. For definitions of the measurement types refer to [4] and [5].

9.2.1.24 Dedicated Measurement Value

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dedicated measurement Value				
>SIR value	C <i>MeasValue</i>		INTEGER(0..63)	According to mapping in [4] and [5]
>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 [4] and [5]
>RSCP	C <i>MeasValue</i>		INTEGER(0..81)	According to mapping in [5]
>Rx Timing Deviation	C <i>MeasValue</i>		INTEGER(0..2047)	According to mapping in [5]
>Round Trip Time	C <i>MeasValue</i>		INTEGER(0..8191)	According to mapping in [4]

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

9.2.1.25 Diversity Control Field

The Diversity Control Field indicates if the current RL may, must or must not be combined with the already existing RLs.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Diversity Control Field			ENUMERATED(May, Must, Must not)	

9.2.1.26 Diversity Indication

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

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

9.2.1.27 DSCH ID

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

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

9.2.1.28 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

9.2.1.29 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

9.2.1.30 Frame Handling Priority

This parameter indicates the priority level to be used during the lifetime of the DCH/DSCH for temporary restriction of the allocated resources due overload reason.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Frame Handling Priority			INTEGER (0..15)	0=lower priority, 15=higher priority

9.2.1.31 Frame Offset

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

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

9.2.1.32 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: [18].

9.2.1.33 IB_SG_POS

First position of an Information Block segment in the SFN cycle (IB_SG_POS < IB_SG_REP).

IE/Group Name	Presence	Range	IE type and reference	Semantics description
IB SG POS			INTEGER (0.. 2046)	Only even positions allowed. Reference [18]

9.2.1.34 IB_SG_REP

Repetition distance for an Information Block segment. The segment shall be transmitted when $SFN \bmod IB_SG_REP = IB_SG_POS$.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
IB SG REP			ENUMERATED (4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048)	Repetition period for the IB segment in frames

9.2.1.35 IB Type

The IB type identifies a specific system information block.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
IB Type			Enumerated (MIB, SIB1, SIB2, SIB3, SIB4, SIB5, SIB6, SIB7, SIB8, SIB9, SIB10, SIB11, SIB12, SIB13, SIB13.1, SIB13.2, SIB13.3, SIB13.4, SIB14, SIB15 , SIB15.1 , SIB15.2 , SIB15.3 , SIB16 , ...)	

9.2.1.36 Indication Type

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

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

9.2.1.37 Limited Power Increase

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

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

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

9.2.1.38 Local Cell ID

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

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

9.2.1.39 Maximum DL Power Capability

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

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

9.2.1.40 Maximum Transmission Power

Maximum Transmission Power is maximum power for all downlink channels added together, that is allowed to be used simultaneously in a cell.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Maximum transmission Power			ENUMERATED(0,..500)	Unit dBm Granularity 0.1 dB 0: 0 dBm 1: 0.1 dBm ... 499: 49.9 dBm 500: 50.0 dBm

9.2.1.40A Measurement Availability Indicator

Indicates if measurement is available or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Measurement Availability Indicator			ENUMERATED(measurement available, measurement not available)	

9.2.1.41 Measurement Filter Coefficient

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Measurement Filter Coefficient			INTEGER (1..256) ENUMERATED(1,2,3,4,5,6,7,8,9,11,13,15,17,19...)	

9.2.1.42 Measurement ID

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

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

9.2.1.43 Measurement Increase/Decrease Threshold

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

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
RSSI	<i>C – Threshold</i>		INTEGER(0..620)	0: 0 dB 1: 0.1 dB 2: 0.2 dB ... 620: 62dB
Transmitted Carrier Power	<i>C – Threshold</i>		INTEGER(0..100)	According to mapping in [4] and [5]
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
Round Trip Time	<i>C – Threshold</i>		INTEGER(0..8190)	0: 0 chips 1: 0.25 chips 2: 0.5 chips ... 8190: 2047.5 chips
Acknowledged PCPCH Access Preambles	<i>C – Threshold</i>		INTEGER(0..15,...)	According to mapping in [4] (FDD only)
Detected PCPCH Access Preambles	<i>C – Threshold</i>		INTEGER(0..240,...)	According to mapping in [4] (FDD only)

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

9.2.1.44 Measurement Threshold

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

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
RSSI	<i>C – Threshold</i>		INTEGER(0..621)	According to mapping in [4] and [5]
Transmitted Carrier Power	<i>C – Threshold</i>		INTEGER(0..100)	According to mapping in [4] and [5]
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 [5] (TDD only)
SIR	<i>C – Threshold</i>		INTEGER(0..63)	According to mapping in [4] and [5]
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 [4] and [5]
RSCP	<i>C – Threshold</i>		INTEGER(0..81)	According to mapping in [5] (TDD only)
Rx Timing Deviation	<i>C – Threshold</i>		INTEGER(0..2047)	According to mapping in [5] (TDD only)
Round Trip Time	<i>C – Threshold</i>		INTEGER(0..8191)	According to mapping in [4] (FDD only)
Acknowledged PCPCH Access Preambles	<i>C – Threshold</i>		INTEGER(0..15,...)	According to mapping in [4] (FDD only)
Detected PCPCH Access Preambles	<i>C – Threshold</i>		INTEGER(0..240,...)	According to mapping in [4] (FDD only)

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

9.2.1.45 Message discriminator

This field is used to discriminate between Dedicated NBAP and Common NBAP messages.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Discriminator			ENUMERATED(Common, Dedicated)	

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

9.2.1.47 Minimum Spreading Factor

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

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

9.2.1.47A N_INSYNC_IND

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

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

9.2.1.47B N_OUTSYNC_IND

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

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

9.2.1.48 Node B Communication Context ID

The Node B Communication Context ID is the identifier of the Communication Context in the Node B, it corresponds to the dedicated resources which are necessary for an UE using one or more dedicated channels in a given Node B.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Node B Communication Context ID			INTEGER (0..2 ²⁰ -1)	2 ²⁰ -1 is reserved value to indicate all the existing and future Node B communication contexts that can be reached by the communication control port (All NBCC).

9.2.1.49 Payload CRC presence Indicator

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

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

9.2.1.50 Puncture limit

The Puncture limit limits the amount of puncturing that can be applied in order to minimise the number of dedicated physical channels.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Puncture limit			INTEGER (0..15)	0: 40% 1: 44 % ... 14: 96% 15: 100%

9.2.1.50A QE-Selector

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

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

9.2.1.51 Report Characteristics

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Report characteristics				
>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"

9.2.1.52 Resource Operational State

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

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

9.2.1.53 RL ID

The RL ID is the unique identifier for one RL associated with a UE.

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

9.2.1.53A SFN

System Frame Number of the cell, see ref. [17].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SFN			Integer (0..4095)	

9.2.1.54 SIB Deletion Indicator

Void.

9.2.1.55 SIB Originator

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

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

9.2.1.56 Shutdown Timer

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

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

9.2.1.56A T_RLFAILURE

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

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

9.2.1.57 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)	

9.2.1.58 TFCS (Transport Format Combination Set)

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

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

Method #1 - TFCI range

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

Method #2 - Explicit

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

]

[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:

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Method #2 - Explicit

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE <i>DSCH</i>				
> <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)	Integer number calculated according to [18]
>>>CHOICE Gain Factors	C-PhysChan			
>>>>Signalled Gain Factors				
>>>>Gain Factor β_c	M		Integer (0..15)	For UL DPCCH or control part of PRACH or control part of PCPCH in FDD; mapping in accordance to [9]
>>>>Gain Factor β_b	M		Integer (0..15)	For UL DPDCH or data part of PRACH or data part of PCPCH in FDD; mapping in accordance to [9]
>>>>Reference TFC nr	O		Integer (0..3)	If this TFC is a reference TFC, this IE indicates the reference number
>>>>Computed Gain Factors				
>>>>Reference TFC nr	M		Integer (0..3)	Indicates the reference TFC to be used to calculate the gain factors for this TFC
> <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_Combos>		The first instance of the parameter <i>Transport format combination_DCH</i> corresponds to TFCI (field 1) = 0, the second to TFCI (field 1) = 1 and so on.
>>>CTFC(field1)	M		Integer(0..MaxCTFC)	Integer number calculated according to [18]. The calculation of CTFC ignores any DSCH transport channels which may be assigned
>>Choice Signalling method				
>>>TFCI range				
>>>>TFC mapping on DSCH		1 to <MaxNoTFCIGroups>		
>>>>Max TFCI(field2) value	M		Integer(1..1023)	This is the Maximum value in the range of TFCI(field2) values for which the specified CTFC(field2) applies
>>>>>CTFC(field 2)	M		Integer(0..MaxCTFC)	Integer number calculated according to [18]. The calculation of CTFC ignores any

				DCH transport channels which may be assigned
>>>>Explicit				
>>>>Transport format combination_DSCH		1 to <MaxTFCI_2_Combs>		The first instance of the parameter <i>Transport format combination_DSCH</i> corresponds to TFCI (field2) = 0, the second to TFCI (field 2) = 1 and so on.
>>>>>CTFC(field2)	M		Integer(0..MaxCTFC)	Integer number calculated according to [18]. The calculation of CTFC ignores any DCH transport channels which may be assigned

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

Range bound	Explanation
MaxnoofTFCS	The maximum number of Transport Format Combinations.
MaxTFCI_1_Combs	Maximum number of TFCI (field 1) combinations (given by 2 raised to the power of the length of the TFCI (field 1))
MaxTFCI_2_Combs	Maximum number of TFCI (field 2) combinations (given by 2 raised to the power of the length of the TFCI (field 2))
MaxNoTFCIGroups	Maximum number of groups, each group described in terms of a range of TFCI(field 2) values for which a single value of CTFC(field2) applies
MaxCTFC	Maximum number of the CTFC value is calculated according to the following: $\sum_{i=1}^I (L_i - 1)P_i$ with the notation according to [18]

9.2.1.59 Transport Format Set

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transport Format Set				
Dynamic Transport Format Information		1 to <maxTFcount>		
>Number of Transport blocks	M		INTEGER (0..4095)	
>Transport Block Size	C – Blocks		INTEGER (0..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.
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.

9.2.1.60 ToAWE

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

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

9.2.1.61 ToAWS

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
ToAWS			INTEGER (0..1279)	msec.

9.2.1.62 Transaction ID

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

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

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

9.2.1.63 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, ...)	

9.2.1.64 TSTD Indicator

Indicates if TSTD shall be active or not.

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

9.2.1.65 UARFCN

Designate the central frequency of the channel number.

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
UARFCN			INTEGER (0..16383, ...)	corresponds to 0.0Hz.. 3276.6MHz ([15] section 5.4 and [15])

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

9.2.1.66 UL FP mode

This parameter defines if normal or silent mode of the Frame Protocol shall be used for the UL.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL FP mode			ENUMERATED(0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 13, 15, 17, 19) Normal, Silent, ...)	

9.2.1.67 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.

9.3.4 NBAP Information Elements

```

--*****
--
-- Information Element Definitions
--
--*****

NBAP-IEs
DEFINITIONS AUTOMATIC TAGS ::=
BEGIN

IMPORTS
    maxNrOfTFCs,
    maxNrOfErrors,
    maxCTFC,
    maxNrOfTFs,
    maxTTI-count,
    maxRateMatching,
    maxCodeNrComp-1,
    maxNrOfCodeGroups,
    maxNrOfTFCIGroups,
    maxNrOfTFCI1Combs,
    maxNrOfTFCI2Combs,
    maxNrOfTFCI2Combs-1,
    maxNrOfSF,
    maxTGPS
FROM NBAP-Constants

    Criticality,
    ProcedureCode,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage
FROM NBAP-CommonDataTypes

    ProtocolExtensionContainer{ },
    NBAP-PROTOCOL-EXTENSION
FROM NBAP-Containers;

-- =====
-- A
-- =====

Acknowledged-PCPCH-access-preambles ::= INTEGER (0..15, ...)
According to mapping in [4]

Acknowledged-RA-Tries-Value ::= INTEGER(0..240, ...)
-- The number of L1 acknowledged random access tries per every 20 ms period.

AddorDeleteIndicator ::= ENUMERATED {
    add,
    delete,
    ...
}

Active-Pattern-Sequence-Information ::= SEQUENCE {
    cmConfigurationChangeCFN CFN,
    transmission-Gap-Pattern-Sequence-Status Transmission-Gap-Pattern-Sequence-Status-List
OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {Active-Pattern-
Sequence-Information-ExtIEs} } OPTIONAL,
    ...
}

Active-Pattern-Sequence-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Transmission-Gap-Pattern-Sequence-Status-List ::= SEQUENCE (SIZE (0..maxTGPS)) OF
SEQUENCE {

```

```

        tGPSI          TGPSI,
        tGPRC          TGPRC,
        tGCFN          CFN,
        iE-Extensions  ProtocolExtensionContainer { { Transmission-Gap-Pattern-Sequence-Status-
List-ExtIEs } } OPTIONAL,
        ...
    }

Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AICH-TransmissionTiming ::= ENUMERATED {
    v0,
    v1
}

APPreambleSignature ::= INTEGER (0..15)

APSubChannelNumber ::= INTEGER (0..11)

AvailabilityStatus ::= ENUMERATED {
    empty,
    in-test,
    failed,
    power-off,
    off-line,
    off-duty,
    dependency,
    degraded,
    not-installed,
    log-full,
    ...
}

-- =====
-- B
-- =====

BCCH-ModificationTime ::= INTEGER (0..511)
-- Time = BCCH-ModificationTime * 8
-- Range 0 to 4088, step 8
-- All SFN values in which MIB may be mapped are allowed

BindingID ::= OCTET STRING (SIZE (1..4, ...))

BetaCD ::= INTEGER (0..15)

BlockingPriorityIndicator ::= ENUMERATED {
    high,
    normal,
    low,
    ...
}
-- High priority: Block resource immediately.
-- Normal priority: Block resource when idle or upon timer expiry.
-- Low priority: Block resource when idle.

BlockSTTD-Indicator ::= ENUMERATED {
    active,
    inactive
}

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-scrambblingcode-already-in-use,
    dl-radio-resources-not-available,
    ul-radio-resources-not-available,
    rl-already-ActivatedOrAllocated,
    nodeB-Resources-unavailable,
    insufficient-physical-channel-resources,
    measurement-not-supported-for-the-object,
    combining-resources-not-available,
    reconfiguration-not-allowed,
    requested-configuration-not-supported,
    synchronisation-failure,
    sIB-Origination-in-Node-B-not-Supported,
    unspecified,
    priority-transport-channel-established,
    bCCH-scheduling-error,
    measurement-temporarily-not-available,
    no-closed-loop-timing-adjustment-mode-configured,
    invalid-CM-settings,
    ...
}

CauseTransport ::= ENUMERATED {
    transport-link-failure,
    transmission-port-not-available,
    transport-resource-unavailable,
    unspecified,
    ...
}

CCTrCH-ID ::= INTEGER (0..15)

CDSubChannelNumbers ::= BIT STRING (SIZE (12))

CellParameterID ::= INTEGER (0..127)

CFN ::= INTEGER (0..255)

Channel-Assignment-Indication ::= ENUMERATED {
    cA-Active,
    cA-Inactive
}

ChipOffset ::= INTEGER (0..38399)
-- Unit Chip

C-ID ::= INTEGER (0..65535)

Closedlooptimingadjustmentmode ::= ENUMERATED {

```

```

    adj-1-slot,
    adj-2-slot,
    ...
}

CommonChannelsCapacityConsumptionLaw ::= SEQUENCE (SIZE(1..maxNrOfSF)) OF
    SEQUENCE {
        dl-Cost      INTEGER (0..65535),
        ul-Cost      INTEGER (0..65535)
    }

CommonMeasurementType ::= ENUMERATED {
    rssi,
    transmitted-carrier-power,
    acknowledged-ra-tries,
    time-slot-iscp,
    acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles,
    ...
}

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,
    acknowledged-PCPCH-access-preambles  Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles      Detected-PCPCH-access-preambles,
    ...
}

CommonPhysicalChannelID ::= INTEGER (0..255)

CommonTransportChannelID ::= INTEGER (0..255)

CommunicationControlPortID ::= INTEGER (0..65535)

Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD ::= ENUMERATED {
    on,
    off
}
-- on=deactivate

ConfigurationGenerationID ::= INTEGER (0..255)
-- Value '0' means "No configuration"

ConstantValue ::= INTEGER (-10..10)
-- -10 dB - +10 dB
-- unit dB
-- step 1 dB

CPCH-Allowed-Total-Rate ::= ENUMERATED {
    v15,
    v30,
    v60,
    v120,
    v240,
    v480,
    v960,
    v1920,
    v2880,
    v3840,
    v4800,
    v5760,
    ...
}

CPCHScramblingCodeNumber ::= INTEGER (0..79)

CPCH-UL-DPCCH-SlotFormat ::= INTEGER (0..2)

CriticalityDiagnostics ::= SEQUENCE {
    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-ID ::= INTEGER (0..255)

DedicatedChannelsCapacityConsumptionLaw ::= SEQUENCE ( SIZE(1..maxNrOfSF) ) OF
    SEQUENCE {
        dl-Cost    INTEGER (0..65535),
        ul-Cost    INTEGER (0..65535)
    }
}

DedicatedMeasurementType ::= ENUMERATED {
    sir,
    sir-error,
    transmitted-code-power,
    rscp,
    round-trip-time,
    rx-timing-deviation,
    ...
}

DedicatedMeasurementValue ::= CHOICE {
    sIR-Value                SIR-Value,
    sIR-ErrorValue           SIR-Error-Value,
    transmittedCodePowerValue Transmitted-Code-Power-Value,
    rSCP                     RSCP-Value,
    roundTripTime            Round-Trip-Time-Value,
    rxTimingDeviationValue   Rx-Timing-Deviation-Value,
    ...
}

Detected-PCPCH-access-preambles ::= INTEGER (0..240, ...)
--- According to mapping in [4]

D-FieldLength ::= ENUMERATED {
    v1,
    v2,
    ...
}

DeltaSIR ::= INTEGER (0..30)
-- Step 0.1 (Range 0..3).

DiversityControlField ::= ENUMERATED {
    may,
    must,
    must-not,
    ...
}

DiversityMode ::= ENUMERATED {
    none,

```



```

    sTTD,
    closed-loop-model,
    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

DLPowerAveragingWindowSize ::= INTEGER (1..60)

DL-ScramblingCode ::= INTEGER (0..15)
-- 0= Primary scrambling code of the cell, 1..15= Secondary scrambling code --

DL-TimeslotISCP ::= INTEGER (0..91)

DL-TPC-Pattern01Count ::= INTEGER (0..30,...)

Downlink-Compressed-Mode-Method ::= ENUMERATED {
    puncturing,
    sFdiv2,
    higher-layer-scheduling
}

DPCH-ID ::= INTEGER (0..239)

DSCH-ID ::= INTEGER (0..255)

-- 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 [7] --

FDD-TPC-DownlinkStepSize ::= ENUMERATED {
    step-size0-5,
    step-size1,
    step-size1-5,
    step-size2,
    ...
}

FirstRLS-Indicator ::= ENUMERATED {
    first-RLS,
    not-first-RLS,
    ...
}

FrameHandlingPriority ::= INTEGER (0..15)
-- 0=lower priority, 15=higher priority --

```

```

FrameOffset ::= INTEGER (0..255)

-- =====
-- G
-- =====

GapLength      ::= INTEGER (1..14)

GapDuration    ::= INTEGER (1..144)

-- =====
-- H
-- =====

-- =====
-- I
-- =====

IB-SG-DATA ::= BIT STRING

IB-SG-POS ::= INTEGER (0..2046)
-- 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,
    sIB15,
    sIB15dot1,
    sIB15dot2,
    sIB15dot3,
    sIB16,
    ...
}

IndicationType ::= ENUMERATED {
    noFailure,
    serviceImpacting,
    ...
}

ITPPRM      ::= ENUMERATED {
    mode-0,
    mode-1
}

-- =====
-- J
-- =====

-- =====
-- K
-- =====

-- =====
-- L
-- =====

Local-Cell-ID ::= INTEGER (0..268435455)

```

```

-- =====
-- M
-- =====

MaximumDL-PowerCapability ::= INTEGER(0..500)
-- Unit dBm, Range 0dBm .. 50dBm, Step +0.1dB

MaximumTransmissionPower ::= INTEGER(0..500)
-- Unit dBm, Range 0dBm .. 50dBm, Step +0.1dB

MaxNrOfUL-DPDCHs ::= INTEGER (1..6)

Max-Number-of-PCPCHes ::= INTEGER (1..64)

MaxPRACH-MidambleShifts ::= ENUMERATED {
    shift4,
    shift8,
    ...
}

MeasurementAvailabilityIndicator ::= ENUMERATED {
    measurementAvailable,
    measurementnotAvailable
}

MeasurementFilterCoefficient ::= ENUMERATED {k0, k1, k2, k3, k4, k5, k6, k7, k8, k9, k11, k13, k15,
k17, k19, {0,1,2,3,4,5,6,7,8,9,11,13,15,17,19,...}}
-- 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
-- =====

NEOT ::= INTEGER (0..8)

NFmax ::= INTEGER (1..64)

N-INSYNC-IND ::= INTEGER (1..256)

N-OUTSYNC-IND ::= INTEGER (1..256)

NodeB-CommunicationContextID ::= INTEGER (0..1048575)

NStartMessage ::= INTEGER (1..8)

```

```

-- =====
-- O
-- =====

-- =====
-- P
-- =====

PagingIndicatorLength ::= ENUMERATED {
    v2,
    v4,
    v8
}

PayloadCRC-PresenceIndicator ::= ENUMERATED {
    cRC-Included,
    cRC-NotIncluded,
    ...
}

PCCPCH-Power ::= INTEGER (-150..400)
-- PCCPCH-power = power * 10
-- If power <= -15 PCCPCH shall be set to -150
-- If power >= 40 PCCPCH shall be set to 400
-- Unit dBm, Range -15dBm .. +40 dBm, Step +0.1dBm

PCP-Length ::= ENUMERATED{
    v0,
    v8
}

PDSCH-CodeMapping ::= SEQUENCE {
    dl-ScramblingCode          DL-ScramblingCode,
    signallingMethod          CHOICE {
        code-Range            PDSCH-CodeMapping-PDSCH-CodeMappingInformationList,
        tFCI-Range            PDSCH-CodeMapping-DSCH-MappingInformationList,
        explicit               PDSCH-CodeMapping-PDSCH-CodeInformationList
    },
    iE-Extensions              ProtocolExtensionContainer { { PDSCH-CodeMapping-
ExtIEs} } OPTIONAL,
    ...
}

PDSCH-CodeMapping-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-CodeMapping-CodeNumberComp ::= INTEGER (0..maxCodeNrComp-1)

PDSCH-CodeMapping-SpreadingFactor ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32,
    v64,
    v128,
    v256,
    ...
}

PDSCH-CodeMapping-PDSCH-CodeMappingInformationList ::= SEQUENCE (SIZE (1..maxNrOfCodeGroups)) OF
SEQUENCE {
    spreadingFactor            PDSCH-CodeMapping-SpreadingFactor,
    multi-CodeInfo             PDSCH-Multi-CodeInfo,
    start-CodeNumber           PDSCH-CodeMapping-CodeNumberComp,
    stop-CodeNumber            PDSCH-CodeMapping-CodeNumberComp,
    iE-Extensions              ProtocolExtensionContainer { { PDSCH-CodeMapping-PDSCH-
CodeMappingInformationList-ExtIEs} } OPTIONAL,
    ...
}

PDSCH-CodeMapping-PDSCH-CodeMappingInformationList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-CodeMapping-DSCH-MappingInformationList ::= SEQUENCE (SIZE (1..maxNrOfTFCIGroups)) OF
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
}

PowerOffset ::= INTEGER (0..24)
-- PowerOffset = offset * 0.25
-- Unit dB, Range 0dB .. +6dB, Step +0.25dB

PowerRaiseLimit ::= INTEGER (0..10)

PRACH-Midamble ::= ENUMERATED {
    inverted,
    direct,
    ...
}

PreambleSignatures ::= BIT STRING (SIZE (16))
-- Bit 0=P0, Bit 1=P1, .. ,Bit 15=P15 [9] --

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,
    non-selected
}

-- =====
-- R
-- =====

RACH-SlotFormat ::= ENUMERATED {
    v0,
    v1,
    v2,
    v3,
    ...
}

RACH-SubChannelNumbers ::= BIT STRING (SIZE (12))
-- Bit 0=Sub Channel Number 0, Bit 1=Sub Channel Number 1, ..., Bit 11=Sub Channel Number 11

RepetitionLength ::= INTEGER (1..63)

RepetitionPeriod ::= ENUMERATED {
    v1,
    v2,
    v4,
    v8,
    v16,
    v32,
    v64,
    ...
}

RepetitionNumber ::= INTEGER (0..255)

RefTFCNumber ::= INTEGER (0..3)

ReportCharacteristics ::= CHOICE {
    onDemand          NULL,
    periodic          ReportCharacteristicsType-ReportPeriodicity,
    event-a           ReportCharacteristicsType-EventA,
    event-b           ReportCharacteristicsType-EventB,
    event-c           ReportCharacteristicsType-EventC,
    event-d           ReportCharacteristicsType-EventD,
    event-e           ReportCharacteristicsType-EventE,
    event-f           ReportCharacteristicsType-EventF,
    ...
}

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,
    round-trip-time                 Round-Trip-Time-IncrDecrThres,
    acknowledged-PCPCH-access-preambles Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles  Detected-PCPCH-access-preambles,
    ...
}

```

```

}

ReportCharacteristicsType-MeasurementThreshold ::= CHOICE {
    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,
    round-trip-time        Round-Trip-Time-Value,
    rx-timing-deviation    Rx-Timing-Deviation-Value,
    acknowledged-PCPCH-access-preambles    Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles    Detected-PCPCH-access-preambles,
    ...
}

ReportCharacteristicsType-ScaledMeasurementChangeTime ::= CHOICE {
    msec                MeasurementChangeTime-Scaledmsec,
    ...
}

MeasurementChangeTime-Scaledmsec ::= INTEGER (1..600,....)
-- ReportCharacteristicsType-MeasurementChangeTime-Scaledmsec = Time * 10
-- Unit ms, Range 10ms .. 6000ms(1min), Step 10ms

ReportCharacteristicsType-ScaledMeasurementHysteresisTime ::= CHOICE {
    msec                MeasurementHysteresisTime-Scaledmsec,
    ...
}

MeasurementHysteresisTime-Scaledmsec ::= INTEGER (1..600,....)
-- ReportCharacteristicsType-MeasurementHysteresisTime-Scaledmsec = 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)

RPM ::= ENUMERATED {
    mode-0,
    mode-1
}

Round-Trip-Time-IncrDecrThres ::= INTEGER(0..8190)

Round-Trip-Time-Value ::= INTEGER(0..8191)
-- According to mapping in 25.215

RSCP-Value ::= INTEGER (0..81)
-- According to mapping in [5]

RSCP-Value-IncrDecrThres ::= INTEGER (0..80)

```



```

RSSI-Value ::= INTEGER(0..621)
-- According to mapping in [4]/[5]

RSSI-Value-IncrDecrThres ::= INTEGER (0..620)

Rx-Timing-Deviation-Value ::= INTEGER (0..2047)

-- =====
-- S
-- =====

AdjustmentPeriod          ::= INTEGER(1..300)
-- Unit Frame

ScaledAdjustmentRatio     ::= INTEGER(0..100)
-- AdjustmentRatio = ScaledAdjustmentRatio / 100

MaxAdjustmentStep        ::= INTEGER(1..10)
-- Unit Slot

ScramblingCodeNumber ::= INTEGER (0..15)

SecondaryCCPCH-SlotFormat ::= INTEGER(0..17)

S-FieldLength ::= ENUMERATED {
    v1,
    v2,
    ...
}

SFN ::= INTEGER (0..4095)

ShutdownTimer ::= INTEGER (1..3600)
-- Unit sec

SIB-Originator ::= ENUMERATED {
    nodeB,
    cRNC,
    ...
}

SIR-Error-Value ::= INTEGER (0..125)

SIR-Error-Value-IncrDecrThres ::= INTEGER (0..124)

SIR-Value ::= INTEGER (0..63)
-- According to mapping in [4]/[5]

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,
    ...
}

T-RLFFAILURE ::= INTEGER (0..255)
-- Unit seconds, Range 0s .. 25.5s, Step 0.1s

TDD-ChannelisationCode ::= ENUMERATED {
    chCode1div1,
    chCode2div1,
    chCode2div2,
    chCode4div1,
    chCode4div2,
    chCode4div3,
    chCode4div4,
    chCode8div1,
    chCode8div2,
    chCode8div3,
    chCode8div4,
    chCode8div5,
    chCode8div6,
    chCode8div7,
    chCode8div8,
    chCode16div1,
    chCode16div2,
    chCode16div3,
    chCode16div4,
    chCode16div5,
    chCode16div6,
    chCode16div7,
    chCode16div8,
    chCode16div9,
    chCode16div10,
    chCode16div11,
    chCode16div12,
    chCode16div13,
    chCode16div14,
    chCode16div15,
    chCode16div16,
    ...
}

TDD-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|15..269)
-- 0 = Undefined, only one transmission gap in the transmission gap pattern sequence

TGPRC              ::= INTEGER (0..63)
-- 0 = infinity

TGPSI              ::= INTEGER (1.. maxTGPS)

TGSN               ::= INTEGER (0..14)

TimeSlot ::= INTEGER (0..14)

TimeSlotDirection ::= ENUMERATED {
    ul,
    dl,
    ...
}

TimeSlot-ISCP-Value ::= INTEGER (0..81)
-- According to mapping in [5]

TimeSlot-ISCP-Value-IncrDecrThres ::= INTEGER (0..80)

TimeSlotStatus ::= ENUMERATED {
    active,
    not-active,
    ...
}

ToAWE ::= INTEGER (0..2559)
-- Unit ms

ToAWS ::= INTEGER (0..1279)
-- Unit ms

```

```

Transmission-Gap-Pattern-Sequence-Information ::= SEQUENCE (SIZE (1..maxTGPS)) OF
SEQUENCE {
    tGPSI          TGPSI,
    tGSN           TGSN,
    tGL1           GapLength,
    tGL2           GapLength  OPTIONAL,
    tGD            TGD,
    tGPL1          GapDuration,
    tGPL2          GapDuration OPTIONAL,
    rPM            RPM,
    iTPPRM        ITPPRM,
    uL-DL-mode     UL-DL-mode,
    downlink-Compressed-Mode-Method Downlink-Compressed-Mode-Method  OPTIONAL,
    -- This IE is only present if the value of the UL/DL mode IE is "DL only" or "UL/DL"
    uplink-Compressed-Mode-Method  Uplink-Compressed-Mode-Method  OPTIONAL,
    -- This IE is only present if the value of the UL/DL mode IE is "UL only" or "UL/DL"
    dL-FrameType  DL-FrameType,
    delta-SIR1    DeltaSIR,
    delta-SIR-after1 DeltaSIR,
    delta-SIR2    DeltaSIR  OPTIONAL,
    delta-SIR-after2 DeltaSIR  OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {Transmission-Gap-Pattern-Sequence-
Information-ExtIEs} } OPTIONAL,
    ...
}

```

```

Transmission-Gap-Pattern-Sequence-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

TransmissionGapPatternSequenceCodeInformation ::= ENUMERATED{
    code-change,
    nocode-change
}

```

```

Transmitted-Carrier-Power-Value ::= INTEGER(0..100)
-- According to mapping in [4]/[5]

```

```

Transmitted-Code-Power-Value ::= INTEGER (0..127)
-- According to mapping in [4]/[5]

```

```

Transmitted-Code-Power-Value-IncrDecrThres ::= INTEGER (0..112,...)

```

```

TransmissionDiversityApplied ::= BOOLEAN
-- true: applied, false: not applied

```

```

TransmitDiversityIndicator ::= ENUMERATED {
    active,
    inactive,
    ...
}

```

```

TFCS ::= SEQUENCE {
    tFCSvalues          CHOICE {
        no-Split-in-TFCI      TFCS-TFCSList,
        split-in-TFCI         SEQUENCE {
            transportFormatCombination-DCH TFCS-DCHList,
            signallingMethod              CHOICE {
                tFCI-Range                TFCS-MapingOnDSCHList,
                explicit                    TFCS-DSCHList
            }
        }
    },
    iE-Extensions      ProtocolExtensionContainer { { 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 (0..maxCTFC)
TFCS-DCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCi1Combs)) OF
  SEQUENCE {
    cTFC                TFCS-CTFC,
    iE-Extensions       ProtocolExtensionContainer { { TFCS-DCHList-ExtIEs } }    OPTIONAL,
    ...
  }
TFCS-DCHList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
TFCS-MappingOnDSCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCiGroups)) OF
  SEQUENCE {
    maxTFCi-field2-Value    TFCS-MaxTFCi-field2-Value,
    cTFC-DSCH              TFCS-CTFC,
    iE-Extensions          ProtocolExtensionContainer { { TFCS-MappingOnDSCHList-ExtIEs } }
    OPTIONAL,
    ...
  }
TFCS-MappingOnDSCHList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
TFCS-MaxTFCi-field2-Value ::= INTEGER (1..maxNrOfTFCi2Combs-1)
TFCS-DSCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCi2Combs)) OF
  SEQUENCE {
    cTFC-DSCH              TFCS-CTFC,
    iE-Extensions          ProtocolExtensionContainer { { TFCS-DSCHList-ExtIEs } }
    OPTIONAL,
    ...
  }
TFCS-DSCHList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
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 ::= {
  ...
}

TransmissionTimeIntervallList ::= SEQUENCE (SIZE (1..maxTTI-count)) OF
  SEQUENCE {
    transmissionTimeInterval      TransportFormatSet-TransmissionTimeInterval,
    iE-Extensions                 ProtocolExtensionContainer { { TransmissionTimeIntervallList-
ExtIEs} } OPTIONAL,
    ...
  }

TransmissionTimeIntervallList-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'
  rateMatcingAttribute          TransportFormatSet-RateMatchingAttribute,
  cRC-Size                       TransportFormatSet-CRC-Size,
  mode                           TransportFormatSet-ModeSSP ,
  iE-Extensions                 ProtocolExtensionContainer { { TransportFormatSet-Semi-
staticPart-ExtIEs} } OPTIONAL,
  ...
}

TransportFormatSet-Semi-staticPart-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

TransportFormatSet-ChannelCodingType ::= ENUMERATED {
  no-coding,
  convolutional-coding,
  turbo-coding,
  ...
}

TransportFormatSet-CodingRate ::= ENUMERATED {
  half,
  third,
  ...
}

TransportFormatSet-CRC-Size ::= ENUMERATED {
  v0,
  v8,
  v12,
  v16,
  v24,
  ...
}

TransportFormatSet-ModeDP ::= CHOICE {
  tdd      TransmissionTimeIntervallList,
  -- This IE is mandatory if not defined as semistatic parameter, otherwise it is absent
  notApplicable      NULL,
  ...
}

TransportFormatSet-ModeSSP ::= CHOICE {
  tdd      TransportFormatSet-SecondInterleavingMode,
  notApplicable      NULL,
  ...
}

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 (0..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-mode ::= ENUMERATED {
    ul-only,
    dl-only,
    both-ul-and-dl
}

Uplink-Compressed-Mode-Method ::= ENUMERATED {
    sFdiv2,
    higher-layer-scheduling
}

UL-DPCCH-SlotFormat ::= INTEGER (0..5)

UL-SIR ::= INTEGER (-82..173)
-- According to mapping in [16]

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

<h2 style="margin: 0;">CHANGE REQUEST</h2>		Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.	
25.433	CR	214r1	Current Version: 3.2.0
GSM (AA.BB) or 3G (AA.BBB) specification number ↑		↑ CR number as allocated by MCC support team	
For submission to: TSG RAN #9 <i>list expected approval meeting # here</i> ↑	for approval for information	<input checked="" type="checkbox"/> <input type="checkbox"/>	strategic <input type="checkbox"/> non-strategic <input type="checkbox"/> <i>(for SMG use only)</i>

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

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

Source: R-WG3 **Date:** Sep. 2000

Subject: FDD IE's extension capability

Work item: _____

Category:	F Correction <input checked="" type="checkbox"/> A Corresponds to a correction in an earlier release <input type="checkbox"/> B Addition of feature <input type="checkbox"/> C Functional modification of feature <input type="checkbox"/> D Editorial modification <input type="checkbox"/>	Release:	Phase 2 <input type="checkbox"/> Release 96 <input type="checkbox"/> Release 97 <input type="checkbox"/> Release 98 <input type="checkbox"/> Release 99 <input checked="" type="checkbox"/> Release 00 <input type="checkbox"/>
------------------	--	-----------------	--

(only one category shall be marked with an X)

Reason for change: In the R3#15 meeting the work task for defining IE extension capability was divided. This document covers extension capability for FDD IE's. IE's proposed to be extendable are

- 9.2.2A Active Pattern Sequence Information –TGPSI range bound from 6->8,
- 9.2.2.4C CPCH UL DPCCH Slot Format ,
- 9.2.2.5 D-Field Length,
- 9.2.2.9 Diversity Mode,
- 9.2.2.10 DL DPCH Slot Format,
- 9.2.2.16 FDD TPC DL step size,
- 9.2.2.20A Max Number of PCPCHes,
- 9.2.2.23B NF_max,
- 9.2.2.43 Secondary CCCPCH Slot Format,
- 9.2.253A Transmission Gap Pattern Sequence Information- TGPL1, TGPL2, DL compressed mode method, UL compressed mode method, TGPSI 6->8,
- 9.2.2.57UL DPCCH Slot Format.

The tabular format and ASN.1 are updated according the extensibility decisions. Note also that extension capability for following IE's is removed from ASN.1 description.

- 9.2.2.40 S-Field length
- 9.2.2.23 Multiplexing position
- 9.2.2.45 SSDT Cell Id length
- 9.2.2.46 SSDT Support Indicator
- 9.2.2.47 SSDT Indicator
- 9.2.2.49 T_Cell
- 9.2.2.50 TFCI signalling mode –TFCI signaling option, Split type
- 9.2.2.53 Transmit Diversity Indicator
- 9.2.2.59 UL Scrambling Code-UL Scrambling code length

Additional corrections
9.2.2.2A Notation to reference corrected
9.2.2.58 UL SIR range corrected , correct range is -7.0 – 20.0dB

Notes for revision 1 (highlighted with yellow) :
- 9.2.2.4A CPCH Allowed Total Rate IE made as extendable
- Changes for the Range of maxTGPS rejected.
- Changes for D-field length rejected
- 9.2.2.40S-Field Length made as extendable
- DL Frame type IE made as extendable
- changes to 9.2.2.58 UL SIR range rejected

Clauses affected: 9.2.2.-
2A, 4A, 4C, 9, 10, 16, 20A, 23B, 40, 43, 53A, 57, 9.3.4

<u>Other specs affected:</u>	Other 3G core specifications	<input type="checkbox"/>	→ List of CRs:	
	Other GSM core specifications	<input type="checkbox"/>	→ List of CRs:	
	MS test specifications	<input type="checkbox"/>	→ List of CRs:	
	BSS test specifications	<input type="checkbox"/>	→ List of CRs:	
	O&M specifications	<input type="checkbox"/>	→ List of CRs:	

Other comments:



<----- double-click here for help and instructions on how to create a CR.

9.2.2 FDD specific parameters

9.2.2.A Active Pattern Sequence Information

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CM Configuration Change CFN	M		CFN	Defines when the old Active pattern sequences, if active, shall be terminated. From this moment on, the new sequences are activated at the given TGCFN .
Transmission Gap Pattern Sequence Status		0 to <MaxTGPS>		
>TGPSI	M		Integer(1..<MaxTGPS>)	If the group is not present, none of the pattern sequences are activated.
>TGPRC	M		Integer (0..63)	The number of transmission gap patterns within the Transmission Gap Pattern Sequence. 0=Infinity
>TGCFN	M		CFN	Connection Frame Number of the first frame of the first pattern within the Transmission Gap Pattern Sequence.

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

9.2.2.B Adjustment Period

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Adjustment Period			INTEGER (1 .. 300)	Frames

9.2.2.C Adjustment Ratio

Adjustment Ratio IE (*Radj*) defines the convergence rate used for the associated Adjustment Period.

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

9.2.2.1 AICH Transmission Timing

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

9.2.2.1A AP Preamble Signature

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
AP Preamble Signature			INTEGER (0..15)	Described in [9]

9.2.2.1B AP Sub Channel Number

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
AP Sub Channel Number			INTEGER (0..11)	Described in [10]

9.2.2.1C CD Sub Channel Numbers

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
CD Sub Channel Numbers			BIT STRING (12)	Bit 0=Sub Channel Number 0 Bit 1=Sub Channel Number 1 ... Bit 11=Sub Channel Number 11 [10]

9.2.2.1D Channel Assignment Indication

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Channel Assignment Indication			ENUMERATED (CA Active, CA Inactive)	

9.2.2.2 Chip Offset

The Chip Offset is defined as the radio timing offset inside a radio frame. The Chip offset is used as offset for the DL DPCH relative to the Primary CPICH timing.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Chip Offset			INTEGER (0..38399)	Chips

9.2.2.2A Closed Loop Timing Adjustment Mode

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

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Closed Loop Timing Adjustment Mode			ENUMERATED (Offset1, Offset2,...)	According to [10]25.214 chapter 7.1: Offset1 = slot(j+1)mod15 Offset2 = slot(j+2)mod15

9.2.2.3 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)	

9.2.2.3A Compressed Mode Deactivation Flag

Compressed Mode Deactivation Flag indicates whether Compressed Mode shall be deactivated or not in the new RL.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Compressed Mode Deactivation flag			ENUMERATED (On, Off)	On = deactivate.

9.2.2.4 Compressed Mode Method

Defines the method for generating the downlink compressed mode gap, as described in [8].

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

9.2.2.4A CPCH Allowed Total Rate

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CPCH Allowed Total Rate			ENUMERATED (15, 30, 60, 120, 240, 480, 960, 1920, 2880, 3840, 4800, 5760,...)	Channel Symbol Rate (ksps)

9.2.2.4B CPCH Scrambling Code Number

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
CPCH Scrambling Code Number			INTEGER (0..79)	Described in [9]

9.2.2.4C CPCH UL DPCCH Slot Format

Indicates the slot format used in UL CPCH message control part, accordingly to [7]

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL DPCCH slot format			INTEGER (0..2,...)	

9.2.2.5 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)	

9.2.2.6 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)	

9.2.2.7 Diversity Control Field

Void.

9.2.2.8 Diversity Indication

Void.

9.2.2.9 Diversity mode

Define the diversity mode to be applied.

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

9.2.2.10 DL DPCH Slot Format

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

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

9.2.2.11 DL frame type

This parameter defines if frame structure type 'A' or 'B' shall be used in downlink compressed mode. This is defined in [8].

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

9.2.2.12 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)	

9.2.2.12A DL_power_averaging_window_size

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL_power_averaging_window_size			INTEGER (1..60)	1-60 time slots, step size 1 slot

9.2.2.13 DL Scrambling Code

DL scrambling code to be used by the RL. One cell may have multiple DL scrambling codes available.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL Scrambling Code			INTEGER (0..15)	0= Primary scrambling code of the cell 1...15= Secondary scrambling code

9.2.2.13A DL TPC pattern 01 count

The *DL TPC pattern 01 count* IE contains the value of the parameter *n*, which is used for determining the DL TPC pattern on Radio Links marked with “first RLS” by the *First RLS indicator* IE before UL synchronisation is achieved.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL TPC pattern 01 count			INTEGER(0..30,...)	

9.2.2.14 FDD DL Channelisation Code Number

The DL Channelisation Code Number indicates the DL Channelisation Code number for a specific DL physical channel.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
FDD DL ChannelisationCode Number			INTEGER(0.. 255)	The maximum value is equal to the DL spreading factor –1

9.2.2.15 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 [7]

9.2.2.16 FDD TPC DL step size

This parameter indicates step size for the DL power adjustment.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
FDD TPC Downlink step size			ENUMERATED (0.5, 1, 1.5, 2,...)	

9.2.2.16A First RLS Indicator

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

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

9.2.2.17 Gap Period

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

9.2.2.18 Gap Position Mode

The gap position can be fixed or adjustable, as defined in [8].

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

9.2.2.19 Max Adjustment Period

Void.

9.2.2.20 Max Adjustment Step

Defines the maximum allowed value for the change of DL power level during a certain number of slots that can be utilised by the downlink power balancing algorithm. *Max Adjustment Step* IE defines a time period, in terms of number of slots, in which the accumulated power adjustment shall be maximum 1dB. This value does not include the DL inner loop PC adjustment.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Max Adjustment Step			INTEGER (1 .. 10)	Slots

9.2.2.20A Max Number of PCPCHes

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Max Number of PCPCHes			INTEGER (1..64,...)	

9.2.2.21 Maximum Number of UL DPDCHs

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)	

9.2.2.22 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)	

9.2.2.23 Multiplexing Position

Multiplexing Position specifies whether fixed or flexible positions of transport channels shall be used in the physical channel.

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

9.2.2.23A N_EOT

The N_EOT is defined as number of End of Transmission for release of PCPCH transmission.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
N_EOT			INTEGER (0..8)	TTI

9.2.2.23B NF_max

The NF_max is defined as maximum number of Frame in a PCPCH message data part.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
NF_max			INTEGER (1..64,...)	

9.2.2.23C N_Start_Message

The N_Start_Message is defined as number of Frames for start message of DL DPDCHes for a CPCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
N_Start_Message			INTEGER (1..8)	

9.2.2.24 Pattern Duration (PD)

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PD			INTEGER(0. .2047, ...)	Frames If the value is set to '0', the Pattern Duration shall be interpreted as 'infinite'

9.2.2.24A PCP Length

Indicates CPCH power control preamble length.

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

9.2.2.25 PDSCH code mapping

This IE indicates the association between each possible value of TFCI(field 2) and the corresponding PDSCH channelisation code. 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(field2) to 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' then 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(field2)'. The PDSCH code specified in the second group applies for all values of TFCI(field 2) between the 'Max TFCI(field2) value' specified in the last group plus one and the specified 'Max TFCI(field2)' in the second group. The process continues in the same way for the following groups with the TFCI(field 2) value starting at the largest value reached in the previous group plus one.

Method #3 - Explicit

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

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

<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 [18]
>>Code number	M		Integer(0..maxCodeNumComp-1)	PDSCH code stop, Numbering as described in [18]
<i>>TFCI range</i>				
<i>>>DSCH mapping</i>				
>>>Max TFCI(field2) value	M		Integer(1..1023)	This is the maximum value in the range of TFCI(field 2) values for which the specified PDSCH code applies
>>>Spreading factor	M		Enumerated(4, 8, 16, 32, 64, 128, 256)	SF of PDSCH code
>>>multi-code info	M		Integer(1..16)	Semantics as described for this parameter above
>>>Code number	M		Integer(0..maxCodeNumComp-1)	Code number of PDSCH code. Numbering as described in [18]
<i>>Explicit</i>				
<i>>>PDSCH code</i>				
>>>Spreading factor	M		Enumerated(4, 8, 16, 32, 64, 128, 256)	SF of PDSCH code
>>>multi-code info	M		Integer(1..16)	Semantics as described for this parameter above
>>>Code number	M		Integer(0..maxCodeNumComp-1)	Code number of PDSCH code. Numbering as described in [18]

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

9.2.2.26 PICH Mode

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

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

9.2.2.27 Power Adjustment Type

Defines the characteristic of the power adjustment.

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

9.2.2.28 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 [10].

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

9.2.2.29 Power Offset

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

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

9.2.2.29A Power_Raise_Limit

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

9.2.2.30 Power Resume Mode

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 [10].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Power Resume Mode			ENUMERATED (0, 1,..)	Described in [10]

9.2.2.31 Preamble Signature

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Preamble Signatures			BIT STRING (16)	Bit 0=P0 Bit 1=P1 .. Bit 15=P15 [9]

9.2.2.32 Preamble threshold

The IE sets the threshold for preamble detection. The 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

9.2.2.33 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

9.2.2.34 Primary Scrambling code

The Primary scrambling code to be used in the cell.

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

9.2.2.35 Propagation Delay

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Propagation Delay			INTEGER (0..255)	Chips. Step size is 3 chips. 0=0 chips, 1=3 chips, ...

9.2.2.36 QE-Selector

Void

9.2.2.37 RACH Slot Format

IE/Group Name	Presence	Range	IE type and reference	Semantics description
RACH Slot Format			ENUMERATED(0..3, ...)	See [7].

9.2.2.38 RACH sub Channel numbers

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

9.2.2.39 RL Set ID

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

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

9.2.2.40 S-Field Length

The UE uses the S Field of the UL DPCCH slot to send the SSID Cell ID to the network.

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

9.2.2.41 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)	

9.2.2.42 Scrambling Code Number

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Scrambling Code Word Number			INTEGER (0..15)	Identification of scrambling code see Ref. [9].

9.2.2.43 Secondary CCPCH Slot Format

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

9.2.2.44 SSDT Cell Identity

The SSDT Cell ID is a temporary ID for SSDT assigned to a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SSDT Cell Identity			ENUMERATED (a, b.., h)	

9.2.2.45 SSDT Cell ID Length

The SSDT Cell ID Length parameter shows the length of the SSDT Cell ID.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Cell ID Length			ENUMERATED (Short, Medium, Long)	

9.2.2.46 SSDT Support Indicator

The SSDT Support Indicator indicates whether a RL supports SSDT or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SSDT Support Indicator			ENUMERATED (SSDT Supported, SSDT not supported).	

9.2.2.47 SSdT Indication

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

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

9.2.2.48 STTD Indicator

Indicates if STTD shall be active or not.

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

9.2.2.49 T_Cell

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
T Cell			Enumerated (0 , 1, ...,9)	0: 0 chip 1: 256 chip .. 9: 2304 chip [17]

9.2.2.50 TFCl signalling mode

This parameter indicates if the normal or split mode is used for the TFCl. 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 TFCl (field 2).

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

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

9.2.2.51 TGD

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

9.2.2.52 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			ENUMERATED (3,4,7,10,14)	Slot

9.2.2.53 Transmit Diversity Indicator

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

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

9.2.253A Transmission Gap Pattern Sequence Information

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transmission gap pattern Sequence Information		1 to <MaxTGPS>		
>TGPSI	M		Integer(1..<MaxTGPS>)	Transmission Gap Pattern Sequence Identifier Establish a reference to the compressed mode pattern sequence. Up to <MaxTGPS> simultaneous compressed mode pattern sequences can be used.
>TGSN	M		Integer (0..14)	Transmission Gap Starting Slot Number The slot number of the first transmission gap slot within the TGCFN.
>TGL1	M		Integer(1..14)	The length of the first Transmission Gap within the transmission gap pattern expressed in number of slots
>TGL2	O		Integer (1..14)	The length of the second Transmission Gap within the transmission gap pattern. If omitted, then TGL2=TGL1.
>TGD	M		Integer (0, 15.. 269)	Transmission gap distance indicates the number of slots between the starting slots of two consecutive transmission gaps within a transmission gappattern. If there is only one transmission gap in the transmission gap pattern, this parameter shall be set to 0 (0 =undefined).
>TGPL1	M		Integer (1..144,...)	The duration of transmission gap pattern 1.
>TGPL2	O		Integer (1..144,...)	The duration of transmission gap pattern 2. If omitted, then TGPL2=TGPL1.
>RPP	M		Enumerated (mode 0, mode 1).	Recovery Period Power control mode during the frame after the transmission gap within the compressed frame. Indicates whether normal PC mode or compressed PC mode is applied
>ITPPRM	M		Enumerated (mode 0, mode 1).	Initial Transmit Power is the uplink power control method to be used to compute the initial transmit power after the compressed mode gap.
>UL/DL mode	M		Enumerated (UL only, DL only, UL/DL)	Defines whether only DL, only UL, or combined UL/DL compressed mode is used.
>Downlink compressed mode method	C-DL		Enumerated (puncturing, SF/2, higher layer scheduling, ...)	Method for generating downlink compressed mode gap None means that compressed mode pattern is stopped
>Uplink compressed mode method	C-UL		Enumerated (SF/2, higher layer scheduling, ...)	Method for generating uplink compressed mode gap
>Downlink frame type	M		Enumerated (A, B, ...)	

DeltaSIR1	M		Integer (0..30)	Delta in DL SIR target value to be set in the UE during the compressed frames corresponding to the first transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase) Step 0.1
DeltaSIRafter1	M		Integer (0..30)	Delta in DL SIR target value to be set in the UE one frame after the compressed frames corresponding to the first transmission gap in the transmission gap pattern,, Step 0.1
DeltaSIR2	O		Integer (0..30)	Delta in DL SIR target value to be set in the UE during the compressed frames corresponding to the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase) When omitted, DeltaSIR2 = DeltaSIR1. Step 0.1
DeltaSIRafter2	O		Integer (0..30)	Delta in DL SIR target value to be set in the UE one frame after the compressed frames corresponding to the second transmission gap in the transmission gap pattern. When omitted, DeltaSIRafter2 = DeltaSIRafter1. Step 0.1

Condition	Explanation
C-UL	This information element is only sent when the value of the "UL/DL mode" IE is "UL only" or "UL/DL".
C-DL	This information element is only sent when the value of the "UL/DL mode" IE is "DL only" or "UL/DL".

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

9.2.2.53B Transmission Gap Pattern Sequence Code Information

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

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

9.2.2.54 UL/DL compressed mode selection:

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)	

9.2.2.55 UL delta SIR

The delta in uplink SIR 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.

9.2.2.56 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.

9.2.2.57 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...)	

9.2.2.58 UL SIR

The UL SIR indicates a received UL SIR.

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

9.2.2.59 UL Scrambling Code

The UL Scrambling Code is the scrambling code used by UE. Every UE has its specific UL Scrambling Code.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL scrambling code				
>UL scrambling code number	M		INTEGER (0.. $2^{24}-1$)	
>UL scrambling code length	M		ENUMERATED(Short, Long)	

9.2.2.60 UL Capacity Credit

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)	

9.3.4 NBAP Information Elements

```

--*****
--
-- Information Element Definitions
--
--*****

NBAP-IEs
DEFINITIONS AUTOMATIC TAGS ::=
BEGIN

IMPORTS
    maxNrOfTFCS,
    maxNrOfErrors,
    maxCTFC,
    maxNrOfTTFs,
    maxTTI-count,
    maxRateMatching,
    maxCodeNrComp-1,
    maxNrOfCodeGroups,
    maxNrOfTFCIGroups,
    maxNrOfTFCI1Combs,
    maxNrOfTFCI2Combs,
    maxNrOfTFCI2Combs-1,
    maxNrOfSF,
    maxTGPS
FROM NBAP-Constants

    Criticality,
    ProcedureCode,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage
FROM NBAP-CommonDataTypes

    ProtocolExtensionContainer{},
    NBAP-PROTOCOL-EXTENSION
FROM NBAP-Containers;

-- =====
-- A
-- =====

Acknowledged-PCPCH-access-preambles ::= INTEGER (0..15)
-- According to mapping in [4]

Acknowledged-RA-Tries-Value ::= INTEGER(0..240,...)
-- The number of L1 acknowledged random access tries per every 20 ms period.

```

```
AddorDeleteIndicator ::= ENUMERATED {
    add,
    delete,
    ...
}
```

```
Active-Pattern-Sequence-Information ::= SEQUENCE {
    cMConfigurationChangeCFN          CFN,
    transmission-Gap-Pattern-Sequence-Status  Transmission-Gap-Pattern-Sequence-Status-List  OPTIONAL,
    iE-Extensions                      ProtocolExtensionContainer { {Active-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
    ...
}
```

```
Active-Pattern-Sequence-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
Transmission-Gap-Pattern-Sequence-Status-List ::= SEQUENCE (SIZE (0..maxTGPS)) OF
    SEQUENCE {
        tGPSI          TGPSI,
        tGPRC          TGPRC,
        tGCFN          CFN,
        iE-Extensions  ProtocolExtensionContainer { { Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs } } OPTIONAL,
        ...
    }
}
```

```
Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
AICH-TransmissionTiming ::= ENUMERATED {
    v0,
    v1
}
```

```
APPreambleSignature ::= INTEGER (0..15)
```

```
APSubChannelNumber ::= INTEGER (0..11)
```

```
AvailabilityStatus ::= ENUMERATED {
    empty,
    in-test,
    failed,
    power-off,
}
```

```
    off-line,
    off-duty,
    dependency,
    degraded,
    not-installed,
    log-full,
    ...
}

-- =====
-- B
-- =====

BCCH-ModificationTime ::= INTEGER (0..511)
-- Time = BCCH-ModificationTime * 8
-- Range 0 to 4088, step 8
-- All SFN values in which MIB may be mapped are allowed

BindingID ::= OCTET STRING (SIZE (1..4, ...))

BetaCD ::= INTEGER (0..15)

BlockingPriorityIndicator ::= ENUMERATED {
    high,
    normal,
    low,
    ...
}
-- High priority: Block resource immediately.
-- Normal priority: Block resource when idle or upon timer expiry.
-- Low priority: Block resource when idle.

BlockSTTD-Indicator ::= ENUMERATED {
    active,
    inactive
}

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,
    combining-resources-not-available,
    reconfiguration-not-allowed,
    requested-configuration-not-supported,
    synchronisation-failure,
    sIB-Origination-in-Node-B-not-Supported,
    unspecified,
    priority-transport-channel-established,
    bCCH-scheduling-error,
    measurement-temporarily-not-available,
    no-closed-loop-timing-adjustment-mode-configured,
    invalid-CM-settings,
    ...
}

CauseTransport ::= ENUMERATED {
    transport-link-failure,
```

```
    transmission-port-not-available,  
    transport-resource-unavailable,  
    unspecified,  
    ...  
}  
  
CCTrCH-ID ::= INTEGER (0..15)  
  
CDSubChannelNumbers ::= BIT STRING (SIZE (12))  
  
CellParameterID ::= INTEGER (0..127)  
  
CFN ::= INTEGER (0..255)  
  
Channel-Assignment-Indication ::= ENUMERATED {  
    cA-Active,  
    cA-Inactive  
}  
  
ChipOffset ::= INTEGER (0..38399)  
-- Unit Chip  
  
C-ID ::= INTEGER (0..65535)  
  
Closedlooptimingadjustmentmode ::= ENUMERATED {  
    adj-1-slot,  
    adj-2-slot,  
    ...  
}  
  
CommonChannelsCapacityConsumptionLaw ::= SEQUENCE (SIZE(1..maxNrOfSF)) OF  
    SEQUENCE {  
        dl-Cost      INTEGER (0..65535),  
        ul-Cost      INTEGER (0..65535)  
    }  
  
CommonMeasurementType ::= ENUMERATED {  
    rssi,  
    transmitted-carrier-power,  
    acknowledged-ra-tries,  
    time-slot-iscp,  
    acknowledged-PCPCH-access-preambles,  
    detected-PCPCH-access-preambles,  
    ...  
}  
  
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,  
}
```

```

    acknowledged-PCPCH-access-preambles    Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles        Detected-PCPCH-access-preambles,
    ...
}

```

```
CommonPhysicalChannelID ::= INTEGER (0..255)
```

```
CommonTransportChannelID ::= INTEGER (0..255)
```

```
CommunicationControlPortID ::= INTEGER (0..65535)
```

```
Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD ::= ENUMERATED {
    on,
    off
}
-- on=deactivate
```

```
ConfigurationGenerationID ::= INTEGER (0..255)
-- Value '0' means "No configuration"
```

```
ConstantValue ::= INTEGER (-10..10)
-- -10 dB - +10 dB
-- unit dB
-- step 1 dB
```

```
CPCH-Allowed-Total-Rate ::= ENUMERATED {
    v15,
    v30,
    v60,
    v120,
    v240,
    v480,
    v960,
    v1920,
    v2880,
    v3840,
    v4800,
    v5760,
    ...
}

```

```
CPCHScramblingCodeNumber ::= INTEGER (0..79)
```

```
| CPCH-UL-DPCCH-SlotFormat ::= INTEGER (0..2,...)
```

```
CriticalityDiagnostics ::= SEQUENCE {
    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-ID ::= INTEGER (0..255)

DedicatedChannelsCapacityConsumptionLaw ::= SEQUENCE ( SIZE(1..maxNrOfSF) ) OF
    SEQUENCE {
        dl-Cost    INTEGER (0..65535),
        ul-Cost    INTEGER (0..65535)
    }

DedicatedMeasurementType ::= ENUMERATED {
    sir,
    sir-error,
    transmitted-code-power,
    rscp,
    round-trip-time,
    rx-timing-deviation,
    ...
}

DedicatedMeasurementValue ::= CHOICE {
    sIR-Value          SIR-Value,
    sIR-ErrorValue    SIR-Error-Value,
    transmittedCodePowerValue    Transmitted-Code-Power-Value,
    rSCP              RSCP-Value,
}

```

```
    roundTripTime          Round-Trip-Time-Value,
    rxTimingDeviationValue Rx-Timing-Deviation-Value,
    ...
}
```

```
Detected-PCPCH-access-preambles ::= INTEGER (0..240)
-- According to mapping in [4]
```

```
D-FieldLength ::= ENUMERATED {
    v1,
    v2,
    ...
}
```

```
DeltaSIR ::= INTEGER (0..30)
-- Step 0.1 (Range 0..3).
```

```
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
```

```
DLPowerAveragingWindowSize ::= INTEGER (1..60)
```

```
DL-ScramblingCode ::= INTEGER (0..15)
```



```

-- 0= Primary scrambling code of the cell, 1..15= Secondary scrambling code --
DL-TimeslotISCP ::= INTEGER (0..91)

DL-TPC-Pattern01Count ::= INTEGER (0..30,...)

Downlink-Compressed-Mode-Method ::= ENUMERATED {
    puncturing,
    sFdiv2,
    higher-layer-scheduling,
    ...
}

DPCH-ID ::= INTEGER (0..239)

DSCH-ID ::= INTEGER (0..255)

-- 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 [7] --

FDD-TPC-DownlinkStepSize ::= ENUMERATED {
    step-size0-5,
    step-size1,
    step-size1-5,
    step-size2,
    ...
}

FirstRLS-Indicator ::= ENUMERATED {
    first-RLS,
    not-first-RLS,
    ...
}

```

```
FrameHandlingPriority ::= INTEGER (0..15)
-- 0=lower priority, 15=higher priority --

FrameOffset ::= INTEGER (0..255)

-- =====
-- G
-- =====

GapLength          ::= INTEGER (1..14)

| GapDuration      ::= INTEGER (1..144,...)

-- =====
-- H
-- =====

-- =====
-- I
-- =====

IB-SG-DATA ::= BIT STRING

IB-SG-POS ::= INTEGER (0..2046)
-- 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,
    ...
}

ITPPRM ::= ENUMERATED {
    mode-0,
    mode-1
}

-- =====
-- J
-- =====

-- =====
-- K
-- =====

-- =====
-- L
-- =====

Local-Cell-ID ::= INTEGER (0..268435455)

-- =====
-- M
-- =====

MaximumDL-PowerCapability ::= INTEGER(0..500)
-- Unit dBm, Range 0dBm .. 50dBm, Step +0.1dB

MaximumTransmissionPower ::= INTEGER(0..500)
-- Unit dBm, Range 0dBm .. 50dBm, Step +0.1dB

MaxNrOfUL-DPDCHs ::= INTEGER (1..6)

| Max-Number-of-PCPCHes ::= INTEGER (1..64, ...)

MaxPRACH-MidambleShifts ::= ENUMERATED {
    shift4,
    shift8,
    ...
}

MeasurementAvailabilityIndicator ::= ENUMERATED {
    measurementAvailable,
    measurementnotAvailable
}

```

}

MeasurementFilterCoefficient ::= ENUMERATED {k0, k1, k2, k3, k4, k5, k6, k7, k8, k9, k11, k13, k15, k17, k19}
 -- Measurement Filter Coefficient to be used for measurement

MeasurementID ::= INTEGER (0..1048575)

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
 -- =====

NEOT ::= INTEGER (0..8)

| NFmax ::= INTEGER (1..64,...)

N-INSYNC-IND ::= INTEGER (1..256)

N-OUTSYNC-IND ::= INTEGER (1..256)

NodeB-CommunicationContextID ::= INTEGER (0..1048575)

NStartMessage ::= INTEGER (1..8)

```
-- =====
-- 0
-- =====
```

```
-- =====
-- P
-- =====
```

PagingIndicatorLength ::= ENUMERATED {
 v2,
 v4,
 v8
 }

PayloadCRC-PresenceIndicator ::= ENUMERATED {
 cRC-Included,
 cRC-NotIncluded,
 ...
 }

PCCPCH-Power ::= INTEGER (-150..400)
 -- PCCPCH-power = power * 10
 -- If power <= -15 PCCPCH shall be set to -150
 -- If power >= 40 PCCPCH shall be set to 400
 -- Unit dBm, Range -15dBm .. +40 dBm, Step +0.1dBm

PCP-Length ::= ENUMERATED{
 v0,
 v8
 }

PDSCH-CodeMapping ::= SEQUENCE {
 dl-ScramblingCode DL-ScramblingCode,
 signallingMethod CHOICE {
 code-Range PDSCH-CodeMapping-PDSCH-CodeMappingInformationList,
 tFCI-Range PDSCH-CodeMapping-DSCH-MappingInformationList,
 explicit PDSCH-CodeMapping-PDSCH-CodeInformationList
 },
 iE-Extensions ProtocolExtensionContainer { { PDSCH-CodeMapping-ExtIEs } } OPTIONAL,
 ...
 }

PDSCH-CodeMapping-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
 ...
 }

PDSCH-CodeMapping-CodeNumberComp ::= INTEGER (0..maxCodeNrComp-1)

PDSCH-CodeMapping-SpreadingFactor ::= ENUMERATED {

```

v4,
v8,
v16,
v32,
v64,
v128,
v256,
...
}

PDSCH-CodeMapping-PDSCH-CodeMappingInformationList ::= SEQUENCE (SIZE (1..maxNrOfCodeGroups)) OF
SEQUENCE {
    spreadingFactor          PDSCH-CodeMapping-SpreadingFactor,
    multi-CodeInfo          PDSCH-Multi-CodeInfo,
    start-CodeNumber        PDSCH-CodeMapping-CodeNumberComp,
    stop-CodeNumber         PDSCH-CodeMapping-CodeNumberComp,
    iE-Extensions           ProtocolExtensionContainer { { PDSCH-CodeMapping-PDSCH-CodeMappingInformationList-ExtIEs} } OPTIONAL,
    ...
}

PDSCH-CodeMapping-PDSCH-CodeMappingInformationList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-CodeMapping-DSCH-MappingInformationList ::= SEQUENCE (SIZE (1..maxNrOfTFCIGroups)) OF
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  
}  
  
PowerOffset ::= INTEGER (0..24)  
-- PowerOffset = offset * 0.25  
-- Unit dB, Range 0dB .. +6dB, Step +0.25dB  
  
PowerRaiseLimit ::= INTEGER (0..10)  
  
PRACH-Midamble ::= ENUMERATED {  
    inverted,  
    direct,  
    ...  
}  
  
PreambleSignatures ::= BIT STRING (SIZE (16))  
-- Bit 0=P0, Bit 1=P1, .. ,Bit 15=P15 [9] --  
  
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,
    non-selected
}

-- =====
-- R
-- =====

RACH-SlotFormat ::= ENUMERATED {
    v0,
    v1,
    v2,
    v3,
    ...
}

RACH-SubChannelNumbers ::= BIT STRING (SIZE (12))
-- Bit 0=Sub Channel Number 0, Bit 1=Sub Channel Number 1, ..., Bit 11=Sub Channel Number 11

RepetitionLength ::= INTEGER (1..63)

RepetitionPeriod ::= ENUMERATED {
    v1,
    v2,
    v4,
    v8,
    v16,
    v32,
    v64,
    ...
}

RepetitionNumber ::= INTEGER (0..255)

RefTFCNumber ::= INTEGER (0..3)

ReportCharacteristics ::= CHOICE {
    onDemand          NULL,
    periodic          ReportCharacteristicsType-ReportPeriodicity,
```



```

event-a          ReportCharacteristicsType-EventA,
event-b          ReportCharacteristicsType-EventB,
event-c          ReportCharacteristicsType-EventC,
event-d          ReportCharacteristicsType-EventD,
event-e          ReportCharacteristicsType-EventE,
event-f          ReportCharacteristicsType-EventF,
...
}

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,
    round-trip-time            Round-Trip-Time-IncrDecrThres,
    acknowledged-PCPCH-access-preambles Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles   Detected-PCPCH-access-preambles,
    ...
}

ReportCharacteristicsType-MeasurementThreshold ::= CHOICE {
    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,
round-trip-time     Round-Trip-Time-Value,
rx-timing-deviation Rx-Timing-Deviation-Value,
acknowledged-PCPCH-access-preambles Acknowledged-PCPCH-access-preambles,
detected-PCPCH-access-preambles     Detected-PCPCH-access-preambles,
...
}

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)

RPM ::= ENUMERATED {
    mode-0,
    mode-1
}

Round-Trip-Time-IncrDecrThres ::= INTEGER(0..8190)
```

```
Round-Trip-Time-Value ::= INTEGER(0..8191)
-- According to mapping in 25.215

RSCP-Value ::= INTEGER (0..81)
-- According to mapping in [5]

RSCP-Value-IncrDecrThres ::= INTEGER (0..80)

RSSI-Value ::= INTEGER(0..621)
-- According to mapping in [4]/[5]

RSSI-Value-IncrDecrThres ::= INTEGER (0..620)

Rx-Timing-Deviation-Value ::= INTEGER (0..2047)

-- =====
-- S
-- =====

AdjustmentPeriod          ::= INTEGER(1..300)
-- Unit Frame

ScaledAdjustmentRatio     ::= INTEGER(0..100)
-- AdjustmentRatio = ScaledAdjustmentRatio / 100

MaxAdjustmentStep        ::= INTEGER(1..10)
-- Unit Slot

ScramblingCodeNumber ::= INTEGER (0..15)

| SecondaryCCPCH-SlotFormat ::= INTEGER(0..17,...)

S-FieldLength ::= ENUMERATED {
    v1,
    v2,
    ...
}

SFN ::= INTEGER (0..4095)

ShutdownTimer ::= INTEGER (1..3600)
-- Unit sec

SIB-Originator ::= ENUMERATED {
    nodeB,
    cRNC,
    ...
}

SIR-Error-Value ::= INTEGER (0..125)
```

```
SIR-Error-Value-IncrDecrThres ::= INTEGER (0..124)
```

```
SIR-Value ::= INTEGER (0..63)
-- According to mapping in [4]/[5]
```

```
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
}
```

```
| ----- ...  
| }  
  
T-RLFFAILURE ::= INTEGER (0..255)  
-- Unit seconds, Range 0s .. 25.5s, Step 0.1s  
  
TDD-ChannelisationCode ::= ENUMERATED {  
    chCode1div1,  
    chCode2div1,  
    chCode2div2,  
    chCode4div1,  
    chCode4div2,  
    chCode4div3,  
    chCode4div4,  
    chCode8div1,  
    chCode8div2,  
    chCode8div3,  
    chCode8div4,  
    chCode8div5,  
    chCode8div6,  
    chCode8div7,  
    chCode8div8,  
    chCode16div1,  
    chCode16div2,  
    chCode16div3,  
    chCode16div4,  
    chCode16div5,  
    chCode16div6,  
    chCode16div7,  
    chCode16div8,  
    chCode16div9,  
    chCode16div10,  
    chCode16div11,  
    chCode16div12,  
    chCode16div13,  
    chCode16div14,  
    chCode16div15,  
    chCode16div16,  
    ...  
}  
  
TDD-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|15..269)

```

-- 0 = Undefined, only one transmission gap in the transmission gap pattern sequence

TGPRC ::= INTEGER (0..63)

-- 0 = infinity

TGPSI ::= INTEGER (1.. maxTGPS)

TGSN ::= INTEGER (0..14)

TimeSlot ::= INTEGER (0..14)

TimeSlotDirection ::= ENUMERATED {
 ul,
 dl,
 ...
}

TimeSlot-ISCP-Value ::= INTEGER (0..81)

-- According to mapping in [5]

TimeSlot-ISCP-Value-IncrDecrThres ::= INTEGER (0..80)

TimeSlotStatus ::= ENUMERATED {
 active,
 not-active,
 ...
}

ToAWE ::= INTEGER (0..2559)

-- Unit ms

ToAWS ::= INTEGER (0..1279)

-- Unit ms

Transmission-Gap-Pattern-Sequence-Information ::= SEQUENCE (SIZE (1..maxTGPS)) OF

SEQUENCE {
 tGPSI TGPSI,
 tGSN TGSN,
 tGL1 GapLength,
 tGL2 GapLength OPTIONAL,
 tGD TGD,
 tGPL1 GapDuration,
 tGPL2 GapDuration OPTIONAL,
 rPM RPM,
 iTPPRM ITPPRM,
}


```

    uL-DL-mode          UL-DL-mode,
    downlink-Compressed-Mode-Method  Downlink-Compressed-Mode-Method  OPTIONAL,
    -- This IE is only present if the value of the UL/DL mode IE is "DL only" or "UL/DL"
    uplink-Compressed-Mode-Method    Uplink-Compressed-Mode-Method    OPTIONAL,
    -- This IE is only present if the value of the UL/DL mode IE is "UL only" or "UL/DL"
    dL-FrameType          DL-FrameType,
    delta-SIR1            DeltaSIR,
    delta-SIR-after1     DeltaSIR,
    delta-SIR2            DeltaSIR  OPTIONAL,
    delta-SIR-after2     DeltaSIR  OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {Transmission-Gap-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
    ...
}

Transmission-Gap-Pattern-Sequence-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransmissionGapPatternSequenceCodeInformation ::= ENUMERATED{
    code-change,
    nocode-change
}

Transmitted-Carrier-Power-Value ::= INTEGER(0..100)
-- According to mapping in [4]/[5]

Transmitted-Code-Power-Value ::= INTEGER (0..127)
-- According to mapping in [4]/[5]

Transmitted-Code-Power-Value-IncrDecrThres ::= INTEGER (0..112,...)

TransmissionDiversityApplied ::= BOOLEAN
-- true: applied, false: not applied

TransmitDiversityIndicator ::= ENUMERATED {
    active,
    inactive,
    ...
}

TFCS ::= SEQUENCE {
    tFCSvalues
    no-Split-in-TFCSI
    split-in-TFCSI
    CHOICE {
        TFCS-TFCSList,
        SEQUENCE {

```

```

        transportFormatCombination-DCH      TFCS-DCHList,
        signallingMethod                    CHOICE {
            tFCI-Range                       TFCS-MappingOnDSCHList,
            explicit                          TFCS-DSCHList
        }
    },
    iE-Extensions      ProtocolExtensionContainer { { TFCS-ExtIEs} }      OPTIONAL,
    ...
}

TFCS-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCS-TFCSList ::= SEQUENCE (SIZE (1..maxNrOfTFCSs)) 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 (0..maxCTFC)

TFCS-DCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCICombs)) OF
    SEQUENCE {
        cTFC                TFCS-CTFC,
        iE-Extensions      ProtocolExtensionContainer { { TFCS-DCHList-ExtIEs} }      OPTIONAL,
        ...
    }

TFCS-DCHList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCS-MappingOnDSCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCIGroups)) OF
    SEQUENCE {
        maxTFCI-field2-Value      TFCS-MaxTFCI-field2-Value,
        cTFC-DSCH                TFCS-CTFC,
        iE-Extensions            ProtocolExtensionContainer { { TFCS-MappingOnDSCHList-ExtIEs} }      OPTIONAL,
        ...
    }

TFCS-MappingOnDSCHList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

TFCS-MaxTFCI-field2-Value ::= INTEGER (1..maxNrOfTFCI2Combs-1)

TFCS-DSCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCI2Combs)) OF
  SEQUENCE {
    cTFC-DSCH          TFCS-CTFC,
    iE-Extensions      ProtocolExtensionContainer { { TFCS-DSCHList-ExtIEs } } OPTIONAL,
    ...
  }

TFCS-DSCHList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

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
    notApplicable      NULL,
    ...
}

TransportFormatSet-ModeSSP ::= CHOICE {
    tdd          TransportFormatSet-SecondInterleavingMode,
    notApplicable      NULL,
    ...
}

```

```
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 (0..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-mode ::= ENUMERATED {
    ul-only,
    dl-only,
    both-ul-and-dl
}

Uplink-Compressed-Mode-Method ::= ENUMERATED {
    sFdiv2,
    higher-layer-scheduling,
    ...
}
```

```

UL-DPCCH-SlotFormat ::= INTEGER (0..5,...)

UL-SIR ::= INTEGER (-82..173)
-- According to mapping in [16]

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-compressedModeCommand  INTEGER ::= 14
id-dedicatedMeasurementFailure  INTEGER ::= 16
id-dedicatedMeasurementInitiation  INTEGER ::= 17
id-dedicatedMeasurementReport   INTEGER ::= 18
id-dedicatedMeasurementTermination  INTEGER ::= 19
id-downlinkPowerControl  INTEGER ::= 20
id-errorIndicationForDedicated  INTEGER ::= 21
id-physicalSharedChannelReconfiguration  INTEGER ::= 37
id-privateMessageForDedicated  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
id-errorIndicationForCommon  INTEGER ::= 35
id-privateMessageForCommon  INTEGER ::= 36
```

```

-- *****
--
-- Extension constants
--
-- *****

maxPrivateIEs           INTEGER ::= 65535
maxProtocolExtensions   INTEGER ::= 65535
maxProtocolIEs         INTEGER ::= 65535

-- *****
--
-- Lists
--
-- *****

maxNrOfCodes           INTEGER ::= 10
maxNrOfDLTSS           INTEGER ::= 15
maxNrOfDLCodes         INTEGER ::= 8
maxNrOfErrors          INTEGER ::= 256
maxNrOfTFs             INTEGER ::= 32
maxNrOfTFcs            INTEGER ::= 1024
maxNrOfRFLs            INTEGER ::= 16
maxNrOfRFLSets         INTEGER ::= maxNrOfRFLs
maxNrOfDPCHs           INTEGER ::= 240
maxNrOfSCCPCHs         INTEGER ::= 8
maxNrOfCPCHs           INTEGER ::= 10 -- temporary value
maxNrOfPCPCHs          INTEGER ::= 64
maxNrOfDCHs            INTEGER ::= 128
maxNrOfDSCHs           INTEGER ::= 32
maxNrOfFACHs           INTEGER ::= 8
maxNrOfCCTrCHs         INTEGER ::= 16
maxNrOfPDSCHs          INTEGER ::= 256
maxNrOfPUSCHs          INTEGER ::= 256
maxNrOfPDSCHSets       INTEGER ::= 256
maxNrOfPUSCHSets       INTEGER ::= 256
maxNrOfULTSs           INTEGER ::= 15
maxNrOfUSCHs           INTEGER ::= 32
maxAPSigNum            INTEGER ::= 16
maxNrOfSlotFormatsPRACH INTEGER ::= 8
maxCellinNodeB         INTEGER ::= 256
maxCCPinNodeB          INTEGER ::= 256
maxCPCHCell            INTEGER ::= 64
maxCTFC                INTEGER ::= 16777215
maxLocalCellinNodeB    INTEGER ::= maxCellinNodeB
maxNoofLen             INTEGER ::= 7
maxRACHCell            INTEGER ::= maxPRACHCell
maxPRACHCell           INTEGER ::= 16
maxPCPCHCell           INTEGER ::= 64
maxSCCPCHCell          INTEGER ::= 32
maxSCPICHCell          INTEGER ::= 32

```

maxTTI-count	INTEGER ::= 4
maxIBSEG	INTEGER ::= 16
maxIB	INTEGER ::= 32
maxFACHCell	INTEGER ::= 256 -- maxNrOfFACHs * maxSCCPCHCell
maxRateMatching	INTEGER ::= 256
maxCodeNrComp-1	INTEGER ::= 256
maxNrOfCodeGroups	INTEGER ::= 256
maxNrOfTFCIGroups	INTEGER ::= 256
maxNrOfTFCI1Combs	INTEGER ::= 512
maxNrOfTFCI2Combs	INTEGER ::= 1024
maxNrOfTFCI2Combs-1	INTEGER ::= 1023
maxNrOfSF	INTEGER ::= 8
maxTGPS	INTEGER ::= 6

9.2.3 TDD specific Parameters

9.2.3.1 Block STTD Indicator

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

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

9.2.3.2 Void

9.2.3.3 CCTrCH ID

The CCTrCH ID identifies unambiguously a CCTrCH inside a Radio Link.

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

9.2.3.4 Cell Parameter ID

The Cell Parameter ID identifies unambiguously the Code Groups, Scrambling Codes, Midambles and Toffset (see [table 9 of \[20\]](#))

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

9.2.3.4A Constant Value

The Constant Value is the power margin used by a UE to set the proper uplink power for a DCH, USCH, or a RACH .

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Constant Value			INTEGER (-10...10, ...)	Unit dB Granularity 1 dB.

9.2.3.4B DL Timeslot ISCP

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL Timeslot ISCP			INTEGER (0..91)	According to mapping in [5].

9.2.3.5 DPCH ID

The DPCH ID identifies unambiguously a DPCH inside a Radio Link.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DPCH ID	M		INTEGER (0..239)	

9.2.3.6 Max PRACH Midamble shift

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

9.2.3.7 Midamble shift and burst type

This information element indicates burst type and midamble allocation.

Three different midamble allocation schemes exist:

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

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

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE <i>Burst Type</i>				
>"Type 1"				
>>Midamble Allocation Mode	M		Enumerated (Default midamble, Common midamble, UE specific midamble)	
>>Midamble Shift	C-UE		Integer(0..15)	
>"Type 2"				
>>Midamble Allocation Mode	M		Enumerated (Default midamble, Common midamble, UE specific midamble)	
>>Midamble Shift	C-UE		INTEGER (0..5)	
>"Type 3"				UL only
>>Midamble Allocation Mode	M		Enumerated (Default midamble, UE specific midamble)	
>>Midamble Shift	C-UE		Integer(0..15)	
>"..."				

Condition	Explanation
C-UE	This information element is only sent when the value of the "Midamble Allocation Mode" IE is "UE-specific midamble".

9.2.3.8 Paging Indicator Length

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Paging Indicator Length			ENUMERATED (2, 4, 8, ...)	number of symbols in the page indicator / see [19]

9.2.3.9 PCCPCH Power

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

9.2.3.10 PDSCH ID

The PDSCH ID identifies unambiguously a PDSCH inside a cell.

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

9.2.3.11 PDSCH Set Id

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PDSCH Set Id			INTEGER (0..255)	See [6]

9.2.3.12 PUSCH ID

The PUSCH ID identifies unambiguously a PUSCH inside a cell.

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

9.2.3.13 PUSCH Set Id

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PUSCH Set Id			INTEGER (0..255)	See [6]

9.2.3.14 PRACH Midamble

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

9.2.3.15 Repetition Length

The Repetition Length represents the number of consecutive Radio Frames inside a Repetition Period in which the same Time Slot is assigned to the same Physical Channel.

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

9.2.3.16 Repetition Period

The Repetition Period represents the number of consecutive Radio Frames after which the same assignment scheme of Time Slots to a Physical Channel is repeated. This means that if the Time Slot K is assigned to a physical channel in the Radio Frame J , it is assigned to the same physical channel also in all the Radio Frames $J+n*Repetition\ Period$ (where n is an integer).

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

9.2.3.17 SCH Time Slot

The SCH Time Slot 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)	

9.2.3.18 Sync case

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

- Case 1) SCH and PCCPCH allocated in a single TS#k
- Case 2) SCH allocated in two TS: TS#k and TS#k+8
PCCPCH allocated in TS#k

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

9.2.3.19 TDD Channelisation Code

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

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

9.2.3.20 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)	

9.2.3.21 TDD TPC DL step size

This parameter indicates step size for the DL power adjustment.

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

9.2.3.22 TFCI Coding

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

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

9.2.3.23 Time Slot

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Time Slot			INTEGER (0..14)	

9.2.3.24 Time Slot Direction

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

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

9.2.3.25 Time Slot Status

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

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

9.2.3.26 Transmission Diversity Applied

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

9.2.3.27 USCH ID

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

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

9.3.4 NBAP Information Elements

```

--*****
--
-- Information Element Definitions
--
--*****

NBAP-IEs
DEFINITIONS AUTOMATIC TAGS ::=
BEGIN

IMPORTS
    maxNrOfTFCS,
    maxNrOfErrors,
    maxCTFC,
    maxNrOfTFs,
    maxTTI-count,
    maxRateMatching,
    maxCodeNrComp-1,
    maxNrOfCodeGroups,
    maxNrOfTFCIGroups,
    maxNrOfTFCI1Combs,
    maxNrOfTFCI2Combs,
    maxNrOfTFCI2Combs-1,
    maxNrOfSF,
    maxTGPS
FROM NBAP-Constants

    Criticality,
    ProcedureCode,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage
FROM NBAP-CommonDataTypes

    ProtocolExtensionContainer{},
    NBAP-PROTOCOL-EXTENSION
FROM NBAP-Containers;

-- =====
-- A
-- =====

Acknowledged-PCPCH-access-preambles ::= INTEGER (0..15)
-- According to mapping in [4]

Acknowledged-RA-Tries-Value ::= INTEGER(0..240,...)
-- The number of L1 acknowledged random access tries per every 20 ms period.

```

```

AddorDeleteIndicator ::= ENUMERATED {
    add,
    delete,
    ...
}

Active-Pattern-Sequence-Information ::= SEQUENCE {
    cmConfigurationChangeCFN          CFN,
    transmission-Gap-Pattern-Sequence-Status  Transmission-Gap-Pattern-Sequence-Status-List  OPTIONAL,
    iE-Extensions                      ProtocolExtensionContainer { {Active-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
    ...
}

Active-Pattern-Sequence-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Transmission-Gap-Pattern-Sequence-Status-List ::= SEQUENCE (SIZE (0..maxTGPS)) OF
    SEQUENCE {
        tGPSI          TGPSI,
        tGPRC          TGPRC,
        tGCFN          CFN,
        iE-Extensions  ProtocolExtensionContainer { { Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs } } OPTIONAL,
        ...
    }

Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AICH-TransmissionTiming ::= ENUMERATED {
    v0,
    v1
}

APPreambleSignature ::= INTEGER (0..15)

APSubChannelNumber ::= INTEGER (0..11)

AvailabilityStatus ::= ENUMERATED {
    empty,
    in-test,
    failed,
    power-off,
    off-line,
}

```

```

    off-duty,
    dependency,
    degraded,
    not-installed,
    log-full,
    ...
}

-- =====
-- B
-- =====

BCCH-ModificationTime ::= INTEGER (0..511)
-- Time = BCCH-ModificationTime * 8
-- Range 0 to 4088, step 8
-- All SFN values in which MIB may be mapped are allowed

BindingID ::= OCTET STRING (SIZE (1..4, ...))

BetaCD ::= INTEGER (0..15)

BlockingPriorityIndicator ::= ENUMERATED {
    high,
    normal,
    low,
    ...
}
-- High priority: Block resource immediately.
-- Normal priority: Block resource when idle or upon timer expiry.
-- Low priority: Block resource when idle.

BlockSTTD-Indicator ::= ENUMERATED {
    active,
    inactive
}

-- =====
-- C
-- =====

Cause ::= CHOICE {
    radioNetwork      CauseRadioNetwork,
    transport         CauseTransport,
    protocol          CauseProtocol,
    misc              CauseMisc,
    ...
}

CauseMisc ::= ENUMERATED {
    control-processing-overload,

```



```
hardware-failure,  
oam-intervention,  
not-enough-user-plane-processing-resources,  
unspecified,  
...  
}  
  
CauseProtocol ::= ENUMERATED {  
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,  
combining-resources-not-available,  
reconfiguration-not-allowed,  
requested-configuration-not-supported,  
synchronisation-failure,  
sIB-Origination-in-Node-B-not-Supported,  
unspecified,  
priority-transport-channel-established,  
bCCH-scheduling-error,  
measurement-temporarily-not-available,  
no-closed-loop-timing-adjustment-mode-configured,  
invalid-CM-settings,  
...  
}  
  
CauseTransport ::= ENUMERATED {  
transport-link-failure,  
transmission-port-not-available,  
transport-resource-unavailable,  
unspecified,  
...  
}
```

```

CCTrCH-ID ::= INTEGER (0..15)

CDSubChannelNumbers ::= BIT STRING (SIZE (12))

CellParameterID ::= INTEGER (0..127, ...)

CFN ::= INTEGER (0..255)

Channel-Assignment-Indication ::= ENUMERATED {
    cA-Active,
    cA-Inactive
}

ChipOffset ::= INTEGER (0..38399)
-- Unit Chip

C-ID ::= INTEGER (0..65535)

ClosedloopTimingAdjustmentMode ::= ENUMERATED {
    adj-1-slot,
    adj-2-slot,
    ...
}

CommonChannelsCapacityConsumptionLaw ::= SEQUENCE (SIZE(1..maxNrOfSF)) OF
SEQUENCE {
    dl-Cost      INTEGER (0..65535),
    ul-Cost      INTEGER (0..65535)
}

CommonMeasurementType ::= ENUMERATED {
    rssi,
    transmitted-carrier-power,
    acknowledged-ra-tries,
    time-slot-iscp,
    acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles,
    ...
}

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,
    acknowledged-PCPCH-access-preambles  Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles      Detected-PCPCH-access-preambles,
    ...
}

CommonPhysicalChannelID ::= INTEGER (0..255)

```

```

CommonTransportChannelID ::= INTEGER (0..255)

CommunicationControlPortID ::= INTEGER (0..65535)

Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD ::= ENUMERATED {
    on,
    off
}
-- on=deactivate

ConfigurationGenerationID ::= INTEGER (0..255)
-- Value '0' means "No configuration"

| ConstantValue ::= INTEGER (-10..10, ...)
-- -10 dB - +10 dB
-- unit dB
-- step 1 dB

CPCH-Allowed-Total-Rate ::= ENUMERATED {
    v15,
    v30,
    v60,
    v120,
    v240,
    v480,
    v960,
    v1920,
    v2880,
    v3840,
    v4800,
    v5760,
    ...
}

CPCHScramblingCodeNumber ::= INTEGER (0..79)

CPCH-UL-DPCCH-SlotFormat ::= INTEGER (0..2)

CriticalityDiagnostics ::= SEQUENCE {
    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-ID ::= INTEGER (0..255)

DedicatedChannelsCapacityConsumptionLaw ::= SEQUENCE ( SIZE(1..maxNrOfSF) ) OF
SEQUENCE {
    dl-Cost    INTEGER (0..65535),
    ul-Cost    INTEGER (0..65535)
}

DedicatedMeasurementType ::= ENUMERATED {
    sir,
    sir-error,
    transmitted-code-power,
    rscp,
    round-trip-time,
    rx-timing-deviation,
    ...
}

DedicatedMeasurementValue ::= CHOICE {
    sIR-Value                SIR-Value,
    sIR-ErrorValue          SIR-Error-Value,
    transmittedCodePowerValue Transmitted-Code-Power-Value,
    rSCP                    RSCP-Value,
    roundTripTime           Round-Trip-Time-Value,
    rxTimingDeviationValue  Rx-Timing-Deviation-Value,
    ...
}

Detected-PCPCH-access-preambles ::= INTEGER (0..240)

```

```
-- According to mapping in [4]

D-FieldLength ::= ENUMERATED {
    v1,
    v2,
    ...
}

DeltaSIR ::= INTEGER (0..30)
-- Step 0.1 (Range 0..3).

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

DLPowerAveragingWindowSize ::= INTEGER (1..60)

DL-ScramblingCode ::= INTEGER (0..15)
-- 0= Primary scrambling code of the cell, 1..15= Secondary scrambling code --

DL-TimeslotISCP ::= INTEGER (0..91)

DL-TPC-Pattern01Count ::= INTEGER (0..30,...)
```

```
Downlink-Compressed-Mode-Method ::= ENUMERATED {
    puncturing,
    sFdiv2,
    higher-layer-scheduling
}

DPCH-ID ::= INTEGER (0..239)

DSCH-ID ::= INTEGER (0..255)

-- 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 [7] --

FDD-TPC-DownlinkStepSize ::= ENUMERATED {
    step-size0-5,
    step-size1,
    step-size1-5,
    step-size2,
    ...
}

FirstRLS-Indicator ::= ENUMERATED {
    first-RLS,
    not-first-RLS,
    ...
}

FrameHandlingPriority ::= INTEGER (0..15)
-- 0=lower priority, 15=higher priority --

FrameOffset ::= INTEGER (0..255)

-- =====
-- G
```

```
-- =====
GapLength          ::= INTEGER (1..14)

GapDuration        ::= INTEGER (1..144)

-- =====
-- H
-- =====

-- =====
-- I
-- =====

IB-SG-DATA ::= BIT STRING

IB-SG-POS ::= INTEGER (0..2046)
-- 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,
    ...
}
```

```
ITPPRM ::= ENUMERATED {
    mode-0,
    mode-1
}

-- =====
-- J
-- =====

-- =====
-- K
-- =====

-- =====
-- L
-- =====

Local-Cell-ID ::= INTEGER (0..268435455)

-- =====
-- M
-- =====

MaximumDL-PowerCapability ::= INTEGER(0..500)
-- Unit dBm, Range 0dBm .. 50dBm, Step +0.1dB

MaximumTransmissionPower ::= INTEGER(0..500)
-- Unit dBm, Range 0dBm .. 50dBm, Step +0.1dB

MaxNrOfUL-DPDCHs ::= INTEGER (1..6)

Max-Number-of-PCPCHes ::= INTEGER (1..64)

MaxPRACH-MidambleShifts ::= ENUMERATED {
    shift4,
    shift8,
    ...
}

MeasurementAvailabilityIndicator ::= ENUMERATED {
    measurementAvailable,
    measurementnotAvailable
}

MeasurementFilterCoefficient ::= ENUMERATED {k0, k1, k2, k3, k4, k5, k6, k7, k8, k9, k11, k13, k15, k17, k19}
-- Measurement Filter Coefficient to be used for measurement

MeasurementID ::= INTEGER (0..1048575)
```



```

MidambleShiftAndBurstType ::= CHOICE {
    type1 CHOICE {
        defaultMidamble NULL,
        commonMidamble NULL,
        ueSpecificMidamble MidambleShiftLong
    },
    type2 CHOICE {
        defaultMidamble NULL,
        commonMidamble NULL,
        ueSpecificMidamble MidambleShiftShort
    },
    type3 CHOICE {
        defaultMidamble NULL,
        ueSpecificMidamble MidambleShiftLong
    }
}

```

```

MidambleShiftLong ::= INTEGER (0..15)

```

```

MidambleShiftShort ::= INTEGER (0..5)

```

```

MinSpreadingFactor ::= ENUMERATED {
    v4,
    v16,
    v32,
    v64,
    v128,
    v256,
    v512,
    ...
}

```

```

MinUL-ChannelisationCodeLength ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32,
    v64,
    v128,
    v256,
    ...
}

```

```

MultiplexingPosition ::= ENUMERATED {
    fixed,
    flexible,
    ...
}

```

```

-- =====

```

```

-- N
-- =====

NEOT ::= INTEGER (0..8)

NFmax ::= INTEGER (1..64)

N-INSYNC-IND ::= INTEGER (1..256)

N-OUTSYNC-IND ::= INTEGER (1..256)

NodeB-CommunicationContextID ::= INTEGER (0..1048575)

NStartMessage ::= INTEGER (1..8)

-- =====
-- O
-- =====

-- =====
-- P
-- =====

PagingIndicatorLength ::= ENUMERATED {
    v2,
    v4,
    v8,
    ...
}

PayloadCRC-PresenceIndicator ::= ENUMERATED {
    cRC-Included,
    cRC-NotIncluded,
    ...
}

PCCPCH-Power ::= INTEGER (-150..400, ...)
-- PCCPCH-power = power * 10
-- If power <= -15 PCCPCH shall be set to -150
-- If power >= 40 PCCPCH shall be set to 400
-- Unit dBm, Range -15dBm .. +40 dBm, Step +0.1dBm

PCP-Length ::= ENUMERATED{
    v0,
    v8
}

PDSCH-CodeMapping ::= SEQUENCE {
    dl-ScramblingCode          DL-ScramblingCode,
    signallingMethod           CHOICE {
        code-Range             PDSCH-CodeMapping-PDSCH-CodeMappingInformationList,

```

```

        tFCI-Range                PDSCH-CodeMapping-DSCH-MappingInformationList,
        explicit                  PDSCH-CodeMapping-PDSCH-CodeInformationList
    },
    iE-Extensions                 ProtocolExtensionContainer { { PDSCH-CodeMapping-ExtIEs} }    OPTIONAL,
    ...
}

PDSCH-CodeMapping-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-CodeMapping-CodeNumberComp ::= INTEGER (0..maxCodeNrComp-1)

PDSCH-CodeMapping-SpreadingFactor ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32,
    v64,
    v128,
    v256,
    ...
}

PDSCH-CodeMapping-PDSCH-CodeMappingInformationList ::= SEQUENCE (SIZE (1..maxNrOfCodeGroups)) OF
SEQUENCE {
    spreadingFactor                PDSCH-CodeMapping-SpreadingFactor,
    multi-CodeInfo                PDSCH-Multi-CodeInfo,
    start-CodeNumber              PDSCH-CodeMapping-CodeNumberComp,
    stop-CodeNumber               PDSCH-CodeMapping-CodeNumberComp,
    iE-Extensions                 ProtocolExtensionContainer { { PDSCH-CodeMapping-PDSCH-CodeMappingInformationList-ExtIEs} }    OPTIONAL,
    ...
}

PDSCH-CodeMapping-PDSCH-CodeMappingInformationList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-CodeMapping-DSCH-MappingInformationList ::= SEQUENCE (SIZE (1..maxNrOfTFCIGroups)) OF
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
}

PowerOffset ::= INTEGER (0..24)
-- PowerOffset = offset * 0.25
-- Unit dB, Range 0dB .. +6dB, Step +0.25dB

PowerRaiseLimit ::= INTEGER (0..10)

PRACH-Midamble ::= ENUMERATED {
    inverted,
    direct,
    ...
}

PreambleSignatures ::= BIT STRING (SIZE (16))
-- Bit 0=P0, Bit 1=P1, .. ,Bit 15=P15 [9] --

```

```
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,
    non-selected
}

-- =====
-- R
-- =====

RACH-SlotFormat ::= ENUMERATED {
    v0,
    v1,
    v2,
    v3,
    ...
}

RACH-SubChannelNumbers ::= BIT STRING (SIZE (12))
-- Bit 0=Sub Channel Number 0, Bit 1=Sub Channel Number 1, .., Bit 11=Sub Channel Number 11

RepetitionLength ::= INTEGER (1..63)

RepetitionPeriod ::= ENUMERATED {
    v1,
    v2,
    v4,
```

```

    v8,
    v16,
    v32,
    v64,
    ...
}

RepetitionNumber ::= INTEGER (0..255)

RefTFCNumber ::= INTEGER (0..3)

ReportCharacteristics ::= CHOICE {
    onDemand          NULL,
    periodic          ReportCharacteristicsType-ReportPeriodicity,
    event-a           ReportCharacteristicsType-EventA,
    event-b           ReportCharacteristicsType-EventB,
    event-c           ReportCharacteristicsType-EventC,
    event-d           ReportCharacteristicsType-EventD,
    event-e           ReportCharacteristicsType-EventE,
    event-f           ReportCharacteristicsType-EventF,
    ...
}

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,
}

```

```

round-trip-time          Round-Trip-Time-IncrDecrThres,
acknowledged-PCPCH-access-preambles  Acknowledged-PCPCH-access-preambles,
detected-PCPCH-access-preambles      Detected-PCPCH-access-preambles,
...
}

ReportCharacteristicsType-MeasurementThreshold ::= CHOICE {
  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,
  round-trip-time    Round-Trip-Time-Value,
  rx-timing-deviation  Rx-Timing-Deviation-Value,
  acknowledged-PCPCH-access-preambles  Acknowledged-PCPCH-access-preambles,
  detected-PCPCH-access-preambles      Detected-PCPCH-access-preambles,
  ...
}

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)  
  
RPM      ::= ENUMERATED {  
    mode-0,  
    mode-1  
}  
  
Round-Trip-Time-IncrDecrThres ::= INTEGER(0..8190)  
  
Round-Trip-Time-Value ::= INTEGER(0..8191)  
-- According to mapping in 25.215  
  
RSCP-Value ::= INTEGER (0..81)  
-- According to mapping in [5]  
  
RSCP-Value-IncrDecrThres ::= INTEGER (0..80)  
  
RSSI-Value ::= INTEGER(0..621)  
-- According to mapping in [4]/[5]  
  
RSSI-Value-IncrDecrThres ::= INTEGER (0..620)  
  
Rx-Timing-Deviation-Value ::= INTEGER (0..2047)  
  
-- =====  
-- S  
-- =====  
  
AdjustmentPeriod          ::= INTEGER(1..300)  
-- Unit Frame  
  
ScaledAdjustmentRatio     ::= INTEGER(0..100)  
-- AdjustmentRatio = ScaledAdjustmentRatio / 100  
  
MaxAdjustmentStep        ::= INTEGER(1..10)  
-- Unit Slot  
  
ScramblingCodeNumber ::= INTEGER (0..15)  
  
SecondaryCCPCH-SlotFormat ::= INTEGER(0..17)  
  
S-FieldLength ::= ENUMERATED {  
    v1,  
    v2,  
    ...  
}
```

```
SFN ::= INTEGER (0..4095)

ShutdownTimer ::= INTEGER (1..3600)
-- Unit sec

SIB-Originator ::= ENUMERATED {
    nodeB,
    cRNC,
    ...
}

SIR-Error-Value ::= INTEGER (0..125)

SIR-Error-Value-IncrDecrThres ::= INTEGER (0..124)

SIR-Value ::= INTEGER (0..63)
-- According to mapping in [4]/[5]

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,
    ...
}
```

```
T-RLFFAILURE ::= INTEGER (0..255)
-- Unit seconds, Range 0s .. 25.5s, Step 0.1s
```

```
TDD-ChannelisationCode ::= ENUMERATED {
    chCode1div1,
    chCode2div1,
    chCode2div2,
    chCode4div1,
    chCode4div2,
    chCode4div3,
    chCode4div4,
    chCode8div1,
    chCode8div2,
    chCode8div3,
    chCode8div4,
    chCode8div5,
    chCode8div6,
    chCode8div7,
    chCode8div8,
    chCode16div1,
    chCode16div2,
    chCode16div3,
    chCode16div4,
    chCode16div5,
    chCode16div6,
    chCode16div7,
    chCode16div8,
    chCode16div9,
    chCode16div10,
    chCode16div11,
    chCode16div12,
    chCode16div13,
    chCode16div14,
    chCode16div15,
```

```

    chCode16div16,
    ...
}

TDD-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|15..269)
-- 0 = Undefined, only one transmission gap in the transmission gap pattern sequence

TGPRC ::= INTEGER (0..63)
-- 0 = infinity

TGPSI ::= INTEGER (1.. maxTGPS)

TGSN ::= INTEGER (0..14)

TimeSlot ::= INTEGER (0..14)

TimeSlotDirection ::= ENUMERATED {
    ul,
    dl,
    ...
}

TimeSlot-ISCP-Value ::= INTEGER (0..81)
-- According to mapping in [5]

TimeSlot-ISCP-Value-IncrDecrThres ::= INTEGER (0..80)

TimeSlotStatus ::= ENUMERATED {
    active,
    not-active,
    ...
}

ToAWE ::= INTEGER (0..2559)
-- Unit ms

ToAWS ::= INTEGER (0..1279)
-- Unit ms
```

```

Transmission-Gap-Pattern-Sequence-Information ::= SEQUENCE (SIZE (1..maxTGPS)) OF
SEQUENCE {
    tGPSI          TGPSI,
    tGSN          TGSN,
    tGL1          GapLength,
    tGL2          GapLength  OPTIONAL,
    tGD          TGD,
    tGPL1          GapDuration,
    tGPL2          GapDuration  OPTIONAL,
    rPM          RPM,
    iTPPRM        ITPPRM,
    uL-DL-mode    UL-DL-mode,
    downlink-Compressed-Mode-Method    Downlink-Compressed-Mode-Method    OPTIONAL,
    -- This IE is only present if the value of the UL/DL mode IE is "DL only" or "UL/DL"
    uplink-Compressed-Mode-Method      Uplink-Compressed-Mode-Method      OPTIONAL,
    -- This IE is only present if the value of the UL/DL mode IE is "UL only" or "UL/DL"
    dL-FrameType    DL-FrameType,
    delta-SIR1      DeltaSIR,
    delta-SIR-after1  DeltaSIR,
    delta-SIR2      DeltaSIR  OPTIONAL,
    delta-SIR-after2  DeltaSIR  OPTIONAL,
    iE-Extensions  ProtocolExtensionContainer { {Transmission-Gap-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
    ...
}

```

```

Transmission-Gap-Pattern-Sequence-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

TransmissionGapPatternSequenceCodeInformation ::= ENUMERATED{
    code-change,
    nocode-change
}

```

```

Transmitted-Carrier-Power-Value ::= INTEGER(0..100)
-- According to mapping in [4]/[5]

```

```

Transmitted-Code-Power-Value ::= INTEGER (0..127)
-- According to mapping in [4]/[5]

```

```

Transmitted-Code-Power-Value-IncrDecrThres ::= INTEGER (0..112,...)

```

```

TransmissionDiversityApplied ::= BOOLEAN
-- true: applied, false: not applied

TransmitDiversityIndicator ::= ENUMERATED {
    active,
    inactive,
    ...
}

TFCS ::= SEQUENCE {
    tFCSvalues
        CHOICE {
            no-Split-in-TFCI      TFCS-TFCSList,
            split-in-TFCI        SEQUENCE {
                transportFormatCombination-DCH      TFCS-DCHList,
                signallingMethod                     CHOICE {
                    tFCI-Range                       TFCS-MappingOnDSCHList,
                    explicit                           TFCS-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 (0..maxCTFC)

TFCS-DCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCI1Combs)) OF
    SEQUENCE {
        cTFC                TFCS-CTFC,
        iE-Extensions      ProtocolExtensionContainer { { TFCS-DCHList-ExtIEs} }      OPTIONAL,
        ...
    }

TFCS-DCHList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
TFCS-MappingOnDSCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCIGroups)) OF
  SEQUENCE {
    maxTFCI-field2-Value      TFCI-field2-Value,
    cTFC-DSCH                TFCI-CTFC,
    iE-Extensions            ProtocolExtensionContainer { { TFCS-MappingOnDSCHList-ExtIEs } } OPTIONAL,
    ...
  }
TFCS-MappingOnDSCHList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
TFCS-MaxTFCI-field2-Value ::= INTEGER (1..maxNrOfTFCI2Combs-1)
TFCS-DSCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCI2Combs)) OF
  SEQUENCE {
    cTFC-DSCH                TFCI-CTFC,
    iE-Extensions            ProtocolExtensionContainer { { TFCS-DSCHList-ExtIEs } } OPTIONAL,
    ...
  }
TFCS-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
    notApplicable     NULL,
    ...
}

TransportFormatSet-ModeSSP ::= CHOICE {
    tdd                TransportFormatSet-SecondInterleavingMode,
    notApplicable     NULL,
    ...
}

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 (0..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-mode ::= ENUMERATED {
    ul-only,
    dl-only,
    both-ul-and-dl
}

Uplink-Compressed-Mode-Method ::= ENUMERATED {
    sFdiv2,
    higher-layer-scheduling
}

UL-DPCCH-SlotFormat ::= INTEGER (0..5)

UL-SIR ::= INTEGER (-82..173)
-- According to mapping in [16]

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-compressedModeCommand	INTEGER ::= 14
id-dedicatedMeasurementFailure	INTEGER ::= 16
id-dedicatedMeasurementInitiation	INTEGER ::= 17
id-dedicatedMeasurementReport	INTEGER ::= 18
id-dedicatedMeasurementTermination	INTEGER ::= 19
id-downlinkPowerControl	INTEGER ::= 20
id-errorIndicationForDedicated	INTEGER ::= 21
id-physicalSharedChannelReconfiguration	INTEGER ::= 37
id-privateMessageForDedicated	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
id-errorIndicationForCommon         INTEGER ::= 35
id-privateMessageForCommon          INTEGER ::= 36

```

```
-- *****
```

```
--
```

```
-- Extension constants
```

```
--
```

```
-- *****
```

```

maxPrivateIEs                      INTEGER ::= 65535
maxProtocolExtensions               INTEGER ::= 65535
maxProtocolIEs                     INTEGER ::= 65535

```

```
-- *****
```

```
--
```

```
-- Lists
```

```
--
```

```
-- *****
```

```

maxNrOfCodes                       INTEGER ::= 10
maxNrOfDLTSS                       INTEGER ::= 15
maxNrOfDLCodes                     INTEGER ::= 8
maxNrOfErrors                       INTEGER ::= 256
maxNrOfTFs                          INTEGER ::= 32
maxNrOfTFCS                        INTEGER ::= 1024
maxNrOfRLs                          INTEGER ::= 16
maxNrOfRLSets                      INTEGER ::= maxNrOfRLs
maxNrOfDPCHs                       INTEGER ::= 240
maxNrOfSCCPCHs                     INTEGER ::= 8
maxNrOfCPCHs                       INTEGER ::= 10 -- temporary value
maxNrOfPCPCHs                      INTEGER ::= 64
maxNrOfDCHs                        INTEGER ::= 128
maxNrOfDSCHs                       INTEGER ::= 32
maxNrOfFACHs                       INTEGER ::= 8
maxNrOfCCTrCHs                    INTEGER ::= 16
maxNrOfPDSCHs                      INTEGER ::= 256
maxNrOfPUSCHs                      INTEGER ::= 256
maxNrOfPDSCHSets                   INTEGER ::= 256
maxNrOfPUSCHSets                   INTEGER ::= 256
maxNrOfULTSs                       INTEGER ::= 15
maxNrOfUSCHs                       INTEGER ::= 32

```

```

maxAPSigNum          INTEGER ::= 16
maxNrOfSlotFormatsPRACH  INTEGER ::= 8
maxCellInNodeB       INTEGER ::= 256
maxCCPinNodeB        INTEGER ::= 256
maxCPCHCell          INTEGER ::= 64
maxCTFC              INTEGER ::= 16777215
maxLocalCellInNodeB  INTEGER ::= maxCellInNodeB
maxNoofLen           INTEGER ::= 7
maxRACHCell          INTEGER ::= maxPRACHCell
maxPRACHCell         INTEGER ::= 16
maxPCPCHCell         INTEGER ::= 64
maxSCCPCHCell        INTEGER ::= 32
maxSPICHCell         INTEGER ::= 32
maxTTI-count         INTEGER ::= 4
maxIBSEG             INTEGER ::= 16
maxIB                INTEGER ::= 32
maxFACHCell          INTEGER ::= 256 -- maxNrOfFACHs * maxSCCPCHCell
maxRateMatching      INTEGER ::= 256
maxCodeNrComp-1     INTEGER ::= 256
maxNrOfCodeGroups    INTEGER ::= 256
maxNrOfTFICGroups    INTEGER ::= 256
maxNrOfTFIC1Combs    INTEGER ::= 512
maxNrOfTFIC2Combs    INTEGER ::= 1024
maxNrOfTFIC2Combs-1  INTEGER ::= 1023
maxNrOfSF            INTEGER ::= 8
maxTGPS              INTEGER ::= 6

-- *****
--
-- IEs
--
-- *****

id-AICH-InformationItem-AuditRsp          INTEGER ::= 0
id-AICH-InformationItem-ResourceStatusInd  INTEGER ::= 1
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-CommunicationControlPortID	INTEGER ::= 40
id-ConfigurationGenerationID	INTEGER ::= 43
id-CRNC-CommunicationContextID	INTEGER ::= 44
id-CriticalityDiagnostics	INTEGER ::= 45
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-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-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-SetupRqstTDD	INTEGER ::= 72
id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD	INTEGER ::= 73
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-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-ModifyList-RL-ReconfPrepFDD	INTEGER ::= 112
id-DSCH-ModifyList-RL-ReconfRqstFDD	INTEGER ::= 113
id-FACH-InformationItem-AuditRsp	INTEGER ::= 116
id-FACH-InformationItem-ResourceStatusInd	INTEGER ::= 117
id-FACHItem-CTCH-SetupRsp	INTEGER ::= 118
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-AdjustmentPeriod	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-NonCombiningOrFirstRLItem-RL-SetupFailureFDD	INTEGER ::= 141

id-NonCombiningOrFirstRLItem-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-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-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-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-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-SetupRqstTDD	INTEGER ::= 284
id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD	INTEGER ::= 285
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-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-ReconfRqstTDD	INTEGER ::= 307
id-USCH-InformationResponseListIE-RL-AdditionRspTDD	INTEGER ::= 308
id-USCH-InformationResponseListIE-RL-SetupRspTDD	INTEGER ::= 309
id-USCH-InformationList-RL-SetupRqstTDD	INTEGER ::= 310
id-Active-Pattern-Sequence-Information	INTEGER ::= 315
id-AICH-ParametersListIE-CTCH-ReconfRqstFDD	INTEGER ::= 316
id-AdjustmentRatio	INTEGER ::= 317
id-AllRLItem-DM-Rqst	INTEGER ::= 318
id-AllRLItem-Set-DM-Rqst	INTEGER ::= 319
id-AP-AICH-InformationItem-AuditRsp	INTEGER ::= 320
id-AP-AICH-InformationItem-ResourceStatusInd	INTEGER ::= 321
id-AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD	INTEGER ::= 322
id-FACH-ParametersListIE-CTCH-ReconfRqstFDD	INTEGER ::= 323
id-CauseLevel-PSCH-ReconfFailureTDD	INTEGER ::= 324
id-CauseLevel-RL-AdditionFailureFDD	INTEGER ::= 325
id-CauseLevel-RL-AdditionFailureTDD	INTEGER ::= 326
id-CauseLevel-RL-ReconfFailure	INTEGER ::= 327
id-CauseLevel-RL-SetupFailureFDD	INTEGER ::= 328
id-CauseLevel-RL-SetupFailureTDD	INTEGER ::= 329
id-CDCA-ICH-InformationItem-AuditRsp	INTEGER ::= 330
id-CDCA-ICH-InformationItem-ResourceStatusInd	INTEGER ::= 331
id-CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD	INTEGER ::= 332
id-Closed-Loop-Timing-Adjustment-Mode	INTEGER ::= 333
id-CommonPhysicalChannelType-CTCH-ReconfRqstFDD	INTEGER ::= 334
id-Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD	INTEGER ::= 335
id-CPCH-InformationItem-AuditRsp	INTEGER ::= 336
id-CPCH-InformationItem-ResourceStatusInd	INTEGER ::= 337
id-CPCHItem-CM-Rprt	INTEGER ::= 338
id-CPCHItem-CM-Rqst	INTEGER ::= 339
id-CPCHItem-CM-Rsp	INTEGER ::= 340
id-CPCHListItem-CTCH-ReconfRqstFDD	INTEGER ::= 341
id-CPCH-Parameters-CTCH-SetupRsp	INTEGER ::= 342
id-CPCH-ParametersListIE-CTCH-ReconfRqstFDD	INTEGER ::= 343
id-DCH-InformationResponseListIE-RL-ReconfReady	INTEGER ::= 344
id-DCH-InformationResponseListIE-RL-ReconfRsp	INTEGER ::= 345
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD	INTEGER ::= 346
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD	INTEGER ::= 347
id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD	INTEGER ::= 348
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD	INTEGER ::= 349
id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD	INTEGER ::= 350
id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD	INTEGER ::= 351
id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD	INTEGER ::= 352
id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD	INTEGER ::= 353
id-DL-DPCH-InformationDeleteListIE-RL-ReconfPrepTDD	INTEGER ::= 354
id-DL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD	INTEGER ::= 355
id-DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD	INTEGER ::= 356
id-DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD	INTEGER ::= 357

id-DL-TPC-Pattern01Count	INTEGER ::= 358
id-DPCHConstant	INTEGER ::= 359
id-DSCH-InformationResponseListIE-RL-ReconfReady	INTEGER ::= 360
id-DSCH-InformationResponseListIE-RL-ReconfRsp	INTEGER ::= 361
id-FACH-ParametersList-CTCH-SetupRsp	INTEGER ::= 362
id-GeneralCauseItem-PSCH-ReconfFailureTDD	INTEGER ::= 363
id-GeneralCauseItem-RL-AdditionFailureFDD	INTEGER ::= 364
id-GeneralCauseItem-RL-AdditionFailureTDD	INTEGER ::= 365
id-GeneralCauseItem-RL-ReconfFailure	INTEGER ::= 366
id-GeneralCauseItem-RL-SetupFailureFDD	INTEGER ::= 367
id-GeneralCauseItem-RL-SetupFailureTDD	INTEGER ::= 368
id-Limited-power-increase-information-Cell-SetupRqstFDD	INTEGER ::= 369
id-MeasurementAvailableItem-CommonMeasurementReport	INTEGER ::= 370
id-MeasurementnotAvailableItem-CommonMeasurementReport	INTEGER ::= 371
id-MeasurementAvailableItem-DedicatedMeasurementReport	INTEGER ::= 372
id-MeasurementnotAvailableItem-DedicatedMeasurementReport	INTEGER ::= 373
id-PCH-Parameters-CTCH-SetupRsp	INTEGER ::= 374
id-PCH-ParametersItem-CTCH-ReconfRqstFDD	INTEGER ::= 375
id-PCPCH-InformationItem-AuditRsp	INTEGER ::= 376
id-PCPCH-InformationItem-ResourceStatusInd	INTEGER ::= 377
id-PCPCHItem-CTCH-SetupRqstFDD	INTEGER ::= 378
id-PCPCH-ParametersList-CTCH-ReconfRqstFDD	INTEGER ::= 379
id-PICH-ParametersItem-CTCH-ReconfRqstFDD	INTEGER ::= 380
id-PRACHConstant	INTEGER ::= 381
id-PRACHListIE-CTCH-ReconfRqstFDD	INTEGER ::= 382
id-PRACH-ParametersListIE-CTCH-ReconfRqstFDD	INTEGER ::= 383
id-PUSCHConstant	INTEGER ::= 384
id-RACH-Parameters-CTCH-SetupRsp	INTEGER ::= 385
id-RLSpecificCauseItem-RL-AdditionFailureFDD	INTEGER ::= 386
id-RLSpecificCauseItem-RL-AdditionFailureTDD	INTEGER ::= 387
id-RLSpecificCauseItem-RL-ReconfFailure	INTEGER ::= 388
id-RLSpecificCauseItem-RL-SetupFailureFDD	INTEGER ::= 389
id-RLSpecificCauseItem-RL-SetupFailureTDD	INTEGER ::= 390
id-Secondary-CCPCHListIE-CTCH-ReconfRqstFDD	INTEGER ::= 391
id-SetSpecificCauseItem-PSCH-ReconfFailureTDD	INTEGER ::= 392
id-Synchronisation-Configuration-Cell-ReconfRqst	INTEGER ::= 393
id-Synchronisation-Configuration-Cell-SetupRqst	INTEGER ::= 394
id-Transmission-Gap-Pattern-Sequence-Information	INTEGER ::= 395
id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD	INTEGER ::= 396
id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD	INTEGER ::= 397
id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD	INTEGER ::= 398
id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD	INTEGER ::= 399
id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD	INTEGER ::= 400
id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD	INTEGER ::= 401
id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD	INTEGER ::= 402
id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD	INTEGER ::= 403
id-UL-DPCH-InformationDeleteListIE-RL-ReconfPrepTDD	INTEGER ::= 404
id-UL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD	INTEGER ::= 405
id-UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD	INTEGER ::= 406
id-UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD	INTEGER ::= 407

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id-Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD
id-Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD
id-USCH-InformationResponseListIE-RL-ReconfReady
id-USCH-InformationResponseListIE-RL-ReconfRsp

END

430

INTEGER ::= 408
INTEGER ::= 409
INTEGER ::= 410
INTEGER ::= 411

9.4 Message Transfer Syntax

NBAP shall use the ASN.1 Basic Packed Encoding Rules (BASIC-PER) Aligned Variant as transfer syntax as specified in ref. [11].

[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:

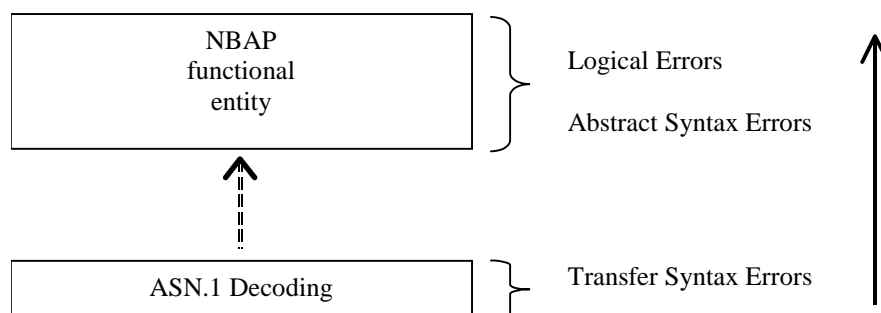


Figure 38: Protocol Errors in NBAP.

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

10.3.1 General

An Abstract Syntax Error occurs when the receiving functional NBAP entity:

1. receives IEs or IE groups that cannot be understood (unknown id);
2. receives IEs for which the logical range is violated (e.g.: ASN.1 definition: 0 to 15, the logical range is 0 to 10 (values 11 to 15 are undefined), and 12 will be received; this case will be handled as an abstract syntax error using criticality information sent by the originator of the message);
3. does not receive IEs or IE groups but according to the specified presence of the concerning object, the IEs or IE groups should have been present in the received message.

Cases 1 and 2 (not comprehended IE/IE group) are handled based on received Criticality information. Case 3 (missing IE/IE group) is handled based on Criticality information and Presence information for the missing IE/IE group specified in the version of the specification used by the receiver.

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 and Presence Information for the IE/IE group due to which Abstract Syntax Error occurred in accordance with subclauses 10.3.4 and 10.3.5.

10.3.2 Criticality Information

In the NBAP messages there is criticality information set for individual IEs and/or IE groups. This criticality information instructs the receiver how to act when receiving an IE or an IE group that is not comprehended, i.e. the entire item (IE or IE group) which is not (fully or partially) comprehended shall be treated in accordance with its own criticality information as specified in chapter 10.3.4.

In addition, the criticality information is used in case of the missing IE/IE group abstract syntax error (see subclause 10.3.5).

The receiving node shall take different actions depending on the value of the Criticality Information. The three possible values of the Criticality Information for an IE/IE group are:

- Reject IE
- Ignore IE and Notify Sender
- Ignore IE

10.3.3 Presence Information

For many IEs/IE groups which are optional according to the ASN.1 transfer syntax, NBAP specifies separately if the presence of these IEs/IE groups is optional or mandatory with respect to RNS application by means of the presence field of the concerning object of class NBAP-PROTOCOL-IES, NBAP-PROTOCOL-IES-PAIR, NBAP-PROTOCOL-EXTENSION or NBAP-PRIVATE-IES.

The presence field of the indicated classes supports three values:

1. Optional;
2. Conditional;
3. Mandatory.

If an IE/IE group is not included in a received message and the presence of the IE/IE group is mandatory or the presence is conditional and the condition is true according to the version of the specification used by the receiver, an abstract syntax error occurs due to a missing IE/IE group.

10.3.4 Not comprehended IE/IE group

10.3.4.1 Procedure Code

The receiving node shall treat the different types of received 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.

10.3.4.2 IEs other than the Procedure Code

The receiving node shall treat the different types of received 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 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 the understood IEs/IE groups.

10.3.5 Missing IE or IE group

The receiving node shall treat the missing IE/IE group according to the criticality information for the missing IE/IE group in the received message specified in the version of this specification used by the receiver:

Reject IE:

- if a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Reject IE*"; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the missing IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure.
- if a received message *initiating* a procedure that does not have a message to report unsuccessful outcome is missing one or more IEs/IE groups with specified criticality "*Reject IE*", the receiving node shall initiate the Error Indication procedure.
- if a received *response* message is missing one or more IEs/IE groups with specified criticality "*Reject IE*", the receiving node shall initiate local error handling.

Ignore IE and Notify Sender:

- if a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message and report in the response message of the procedure that one or more IEs/IE groups were missing.
- if a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall initiate the Error Indication procedure.

Ignore IE:

- if a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message.

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
RAN_08	3.1.0	-	RP-000250	3.2.0	Approved at TSG RAN #8
RAN_08	3.1.0	-	RP-000251	3.2.0	Approved at TSG RAN #8
RAN_08	3.1.0	-	RP-000252	3.2.0	Approved at TSG RAN #8
RAN_08	3.1.0	-	RP-000253	3.2.0	Approved at TSG RAN #8

Rapporteur for TS25.433 is:

Nobutaka Ishikawa
NTT DoCoMo

Tel.: +81 468 40 3220
Fax : +81 468 40 3840
Email : nobu@wsp.yrp.nttdocomo.co.jp

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

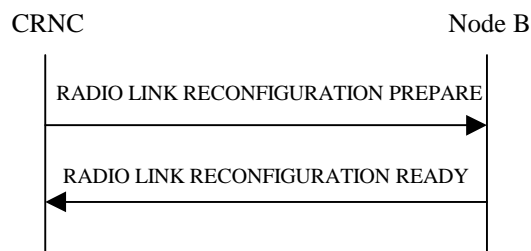


Figure 30: Synchronised Radio Link Reconfiguration procedure, Successful Operation

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 any *DCHs to Modify* IEs then the Node B shall treat them each as follows:

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

- If the *DCHs to Modify* IE includes the *ToAWE* IE for a DCH or a DCH which belongs to a set of co-ordinated DCHs, the Node B shall apply the new *ToAWE* in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- [TDD – If the *DCHs to Modify* IE includes the *CCTrCH Id* IE for the DL of a DCH to be modified, the Node B shall apply the new *CCTrCH Id* in the Downlink of this DCH in the new configuration.]
- [TDD - If the *DCHs to Modify* IE includes the *CCTrCH Id* IE for the UL of a DCH to be modified, the Node B shall apply the new *CCTrCH Id* in the Uplink of this DCH in the new configuration.]

DCH Addition:

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

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

DCH Deletion:

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

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

Physical Channel Modification:

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

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

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

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

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transmission Gap Pattern Sequence Information IE* the Node B shall store the new information about the Transmission Gap Pattern Sequences, and the Transmission Gap Pattern Sequence Codes to be used in the new Compressed Mode Configuration.]

[TDD - UL/DL CCTrCH Modification]

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

- [TDD - If the IE includes any of *TFCS IE*, *TFCI coding IE* or *Puncture limit IE* the Node B shall apply these as the new values, otherwise the old values specified for this CCTrCH are still applicable.]
- [TDD – If the IE includes any *UL DPCH to add* or *DL DPCH to add* IEs , the Node B shall include this DPCH in the new configuration.]
- [TDD – If the IE includes any *UL DPCH to delete* or *DL DPCH to delete* IEs, the Node B shall remove this DPCH in the new configuration.]
- [TDD – If the IE includes any *UL DPCH to modify* or *DL DPCH to modify* IEs, and includes any of *TDD Channelisation Code IE*, *Burst Type IE*, *Midamble shift IE*, *Time Slot IE*, *TDD Physical Channel Offset IE*, *Repetition Period IE*, *Repetition Length IE*, or *TFCI presence IE* the Node B shall apply these as the new values, otherwise the old values specified for this DPCH are still applicable.]

[TDD – UL/DL CCTrCH Addition]

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

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

[TDD – UL/DL CCTrCH Deletion]

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

DSCH Addition/Modification/Deletion:

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

[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.
- [TDD - For USCHs with the *QE-Selector IE* set to “selected”, the Transport channel BER from that USCH shall be the base for the QE in the UL data frames. If no Transport channel BER is available for the selected USCH the Physical channel BER shall be used for the QE, ref. [24]. If the QE-Selector is set to ”non-selected”, the Physical channel BER shall be used for the QE in the UL data frames, ref. [24].]

RL Information:

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

- [FDD - If the *RL Information IE* includes the *SSDT Indication IE* set to "SSDT Active in the UE", the Node B may activate SSDT using the *SSDT Cell Identity IE* in the new configuration.]
- [FDD - If the *RL Information IE* includes the *SSDT Indication IE* set to "SSDT not Active in the UE", the Node B shall deactivate SSDT in the new configuration.]
-
- [FDD – If the *RL Information IE* includes a *DL Code Information IE* containing a *DL Scrambling Code IE*, the Node B shall apply the scrambling code in the new configuration.]

- [FDD - If the *RL Information IE* includes the *UL Scrambling Code IE*, the Node B shall apply this Uplink Scrambling Code to the new configuration.]
- [FDD – If the *RL Information IE* includes the *DL Code Information IE* containing a *DL Channelisation Code Number IE*, the Node B shall apply the channelisation code in the new configuration.]
- [FDD- If the *RL Information IE* contains the *Transmission Gap Pattern Sequence Code Information IE* for any of the allocated DL Channelisation code, the Node B shall apply the alternate scrambling code as indicated whenever the downlink compressed mode method SF/2 is active in the new configuration.]
- If the *RL Information IE* includes the *Maximum DL Power* and/or the *Minimum DL Power IEs*, the Node B shall apply the values in the new configuration.

General

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

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

The Node B shall include in the RADIO LINK RECONFIGURATION READY message the Transport Layer Address and the Binding ID of any Transport Channels being added or modified. In case of a set of coordinated DCHs requiring a new transport bearer on Iub, the *DCH Information Response IE* shall be included only for one of the DCH in the set of coordinated DCHs.

In case of a Radio Link being combined with another Radio Link within the Node B, the *RL Information Response IE* group shall be included only for one of the combined RLs.

8.3.2.3 Unsuccessful Operation

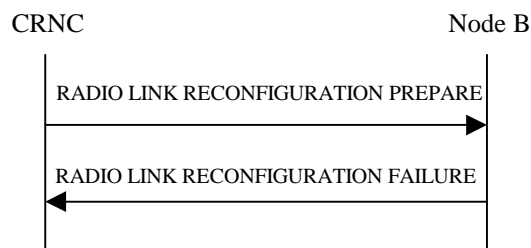


Figure 31: Synchronised Radio Link Reconfiguration procedure, Unsuccessful Operation

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.

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

[FDD – If the Node B cannot provide the requested CM pattern sequences, the Node B shall regard the Radio Link Reconfiguration Procedure as failed and shall respond with a RADIO LINK RECONFIGURATION FAILURE message with the cause value "Invalid CM settings".]

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

Typical cause values are as follows:

Radio Network Layer Cause

- RL Already Activated/allocated
- Invalid CM Settings.

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.

CHANGE REQUEST

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

25.433 CR 244

Current Version: **3.2.0**

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

↑ CR number as allocated by MCC support team

For submission to: **TSG RAN #9**

list expected approval meeting # here



for approval
 for information

strategic
 non-strategic (for SMG use only)

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

Proposed change affects:

(at least one should be marked with an X)

(U)SIM ME UTRAN / Radio Core Network

Source: R-WG3

Date: August 2000

Subject: Procedure Rejection in NBAP due to Unknown Procedure ID

Work item:

Category:

(only one category shall be marked with an X)

- F Correction
- A Corresponds to a correction in an earlier release
- B Addition of feature
- C Functional modification of feature
- D Editorial modification

Release:

Phase 2	<input type="checkbox"/>
Release 96	<input type="checkbox"/>
Release 97	<input type="checkbox"/>
Release 98	<input type="checkbox"/>
Release 99	<input checked="" type="checkbox"/>
Release 00	<input type="checkbox"/>

Reason for change:

In chapter 10 of version 3.2.0 of RNSAP specification the error handling on procedure level is based on the *Procedure Code*. However, the procedure code does not uniquely define a procedure. A procedure in RNSAP is uniquely defined by its *Procedure ID*. The *Procedure ID* consists of the *Procedure Code* and the *DDMode*. This means that in the current handling a receiving node supporting *Procedure Code* X for one mode also have to support the procedure for the other mode. For example, this means that a single mode nodes supporting only TDD have to support the same procedure for the FDD.

This CR changes the handling in chapter 10 to be based on the *Procedure ID* rather than the *Procedure Code* in order to avoid the above-described problem.

Consequences if this CR is not accepted:

FDD only nodes will have to support all the TDD procedures corresponding to the ones intended to support for FDD. TDD only nodes will have to support all the FDD procedures corresponding to the ones intended to support for TDD.

Clauses affected: 9.2.1.17, 9.3.4, and 10.3.4.

Other specs affected:

- | | | |
|-------------------------------|--------------------------|----------------|
| Other 3G core specifications | <input type="checkbox"/> | → List of CRs: |
| Other GSM core specifications | <input type="checkbox"/> | → List of CRs: |
| MS test specifications | <input type="checkbox"/> | → List of CRs: |
| BSS test specifications | <input type="checkbox"/> | → List of CRs: |
| O&M specifications | <input type="checkbox"/> | → List of CRs: |

Other comments:

9.2.1.17 Criticality diagnostics

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Criticality Diagnostics				
>Procedure ID		0..1		
>>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
>>Ddmode	M		ENUMERATED (FDD, TDD, Common)	Common = common to FDD and TDD.
>Triggering Message	O		ENUMERATED (initiating message, successful outcome, unsuccessful outcome, outcome)	The Triggering Message is used only if the Criticality diagnostics is part of Error Indication 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 or missing 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.

9.3.4 NBAP Information Elements

```
--*****
--
-- Information Element Definitions
--
--*****

NBAP-IEs
DEFINITIONS AUTOMATIC TAGS ::=
BEGIN

IMPORTS
    maxNrOfTFCS,
    maxNrOfErrors,
    maxCTFC,
    maxNrOfTFs,
    maxTTI-count,
    maxRateMatching,
    maxCodeNrComp-1,
    maxNrOfCodeGroups,
    maxNrOfTFCIGroups,
    maxNrOfTFCI1Combs,
    maxNrOfTFCI2Combs,
    maxNrOfTFCI2Combs-1,
    maxNrOfSF,
    maxTGPS
FROM NBAP-Constants

    Criticality,
    ProcedureCode,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage
FROM NBAP-CommonDataTypes

    ProtocolExtensionContainer{},
    NBAP-PROTOCOL-EXTENSION
FROM NBAP-Containers;

-- =====
-- A
-- =====

Acknowledged-PCPCH-access-preambles ::= INTEGER (0..15)
-- According to mapping in [4]

Acknowledged-RA-Tries-Value ::= INTEGER(0..240,...)
-- The number of L1 acknowledged random access tries per every 20 ms period.
```

```
AddorDeleteIndicator ::= ENUMERATED {
    add,
    delete,
    ...
}

Active-Pattern-Sequence-Information ::= SEQUENCE {
    cmConfigurationChangeCFN          CFN,
    transmission-Gap-Pattern-Sequence-Status  Transmission-Gap-Pattern-Sequence-Status-List  OPTIONAL,
    iE-Extensions                      ProtocolExtensionContainer { {Active-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
    ...
}

Active-Pattern-Sequence-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Transmission-Gap-Pattern-Sequence-Status-List ::= SEQUENCE (SIZE (0..maxTGPS)) OF
    SEQUENCE {
        tGPSI          TGPSI,
        tGPRC          TGPRC,
        tGCFN          CFN,
        iE-Extensions  ProtocolExtensionContainer { { Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs } } OPTIONAL,
        ...
    }

Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AICH-TransmissionTiming ::= ENUMERATED {
    v0,
    v1
}

APPreambleSignature ::= INTEGER (0..15)

APSubChannelNumber ::= INTEGER (0..11)

AvailabilityStatus ::= ENUMERATED {
    empty,
    in-test,
    failed,
    power-off,
    off-line,
}
```

```
    off-duty,
    dependency,
    degraded,
    not-installed,
    log-full,
    ...
}

-- =====
-- B
-- =====

BCCH-ModificationTime ::= INTEGER (0..511)
-- Time = BCCH-ModificationTime * 8
-- Range 0 to 4088, step 8
-- All SFN values in which MIB may be mapped are allowed

BindingID ::= OCTET STRING (SIZE (1..4, ...))

BetaCD ::= INTEGER (0..15)

BlockingPriorityIndicator ::= ENUMERATED {
    high,
    normal,
    low,
    ...
}
-- High priority: Block resource immediately.
-- Normal priority: Block resource when idle or upon timer expiry.
-- Low priority: Block resource when idle.

BlockSTTD-Indicator ::= ENUMERATED {
    active,
    inactive
}

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-ActivatedOrAllocated,
    nodeB-Resources-unavailable,
    insufficient-physical-channel-resources,
    measurement-not-supported-for-the-object,
    combining-resources-not-available,
    reconfiguration-not-allowed,
    requested-configuration-not-supported,
    synchronisation-failure,
    sIB-Origination-in-Node-B-not-Supported,
    unspecified,
    priority-transport-channel-established,
    bCCH-scheduling-error,
    measurement-temporarily-not-available,
    no-closed-loop-timing-adjustment-mode-configured,
    invalid-CM-settings,
    ...
}

CauseTransport ::= ENUMERATED {
    transport-link-failure,
    transmission-port-not-available,
```

```
    transport-resource-unavailable,
    unspecified,
    ...
}

CCTrCH-ID ::= INTEGER (0..15)

CDSubChannelNumbers ::= BIT STRING (SIZE (12))

CellParameterID ::= INTEGER (0..127)

CFN ::= INTEGER (0..255)

Channel-Assignment-Indication ::= ENUMERATED {
    cA-Active,
    cA-Inactive
}

ChipOffset ::= INTEGER (0..38399)
-- Unit Chip

C-ID ::= INTEGER (0..65535)

Closedlooptimingadjustmentmode ::= ENUMERATED {
    adj-1-slot,
    adj-2-slot,
    ...
}

CommonChannelsCapacityConsumptionLaw ::= SEQUENCE (SIZE(1..maxNrOfSF)) OF
    SEQUENCE {
        dl-Cost      INTEGER (0..65535),
        ul-Cost      INTEGER (0..65535)
    }

CommonMeasurementType ::= ENUMERATED {
    rssi,
    transmitted-carrier-power,
    acknowledged-ra-tries,
    time-slot-iscp,
    acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles,
    ...
}

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,
    acknowledged-PCPCH-access-preambles  Acknowledged-PCPCH-access-preambles,
```

```

    detected-PCPCH-access-preambles      Detected-PCPCH-access-preambles,
    ...
}

CommonPhysicalChannelID ::= INTEGER (0..255)

CommonTransportChannelID ::= INTEGER (0..255)

CommunicationControlPortID ::= INTEGER (0..65535)

Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD ::= ENUMERATED {
    on,
    off
}
-- on=deactivate

ConfigurationGenerationID ::= INTEGER (0..255)
-- Value '0' means "No configuration"

ConstantValue ::= INTEGER (-10..10)
-- -10 dB - +10 dB
-- unit dB
-- step 1 dB

CPCH-Allowed-Total-Rate ::= ENUMERATED {
    v15,
    v30,
    v60,
    v120,
    v240,
    v480,
    v960,
    v1920,
    v2880,
    v3840,
    v4800,
    v5760,
    ...
}

CPCHScramblingCodeNumber ::= INTEGER (0..79)

CPCH-UL-DPCCH-SlotFormat ::= INTEGER (0..2)

CriticalityDiagnostics ::= SEQUENCE {
    procedureIdCode      ProcedureIdCode      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
-- =====

.
.
.
<The rest of the ASN.1 module is omitted.>
.
.
.
```


10.3.4 Not comprehended IE/IE group

10.3.4.1 Procedure *CodeID*

The receiving node shall treat the different types of received criticality information of the *Procedure CodeID* according to the following:

Reject IE:

- If a message is received with a *Procedure CodeID* 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 CodeID* 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 CodeID* marked with "Ignore IE" which the receiving node does not comprehend, the receiving node shall ignore the procedure.

10.3.4.2 IEs other than the Procedure *CodeID*

The receiving node shall treat the different types of received criticality information of an IE/IE group other than the *Procedure CodeID* 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 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 the understood IEs/IE groups.

MS test specifications
BSS test specifications
O&M specifications

→ List of CRs:
→ List of CRs:
→ List of CRs:

**Other
comments:**

--



help.doc

<----- [double-click here for help and instructions on how to create a CR.](#)

9.2.1.17 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)	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 or missing IE
>Repetition Number	O		INTEGER (10..2565)	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.

9.3.4 NBAP Information Elements

```

--*****
--
-- Information Element Definitions
--
--*****

```

NBAP-IEs

```

DEFINITIONS AUTOMATIC TAGS ::=
BEGIN

```

IMPORTS

```

    maxNrOfTFCS,
    maxNrOfErrors,
    maxCTFC,
    maxNrOfTFs,
    maxTTI-count,
    maxRateMatching,
    maxCodeNrComp-1,
    maxNrOfCodeGroups,
    maxNrOfTFCIGroups,
    maxNrOfTFCI1Combs,
    maxNrOfTFCI2Combs,
    maxNrOfTFCI2Combs-1,
    maxNrOfSF,
    maxTGPS

```

FROM NBAP-Constants

```

    Criticality,
    ProcedureCode,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage

```

FROM NBAP-CommonDataTypes

```

    ProtocolExtensionContainer{},
    NBAP-PROTOCOL-EXTENSION

```

FROM NBAP-Containers;

```

--*****
-- SOME ASN.1 MISSING --
--*****

```

RepetitionNumber ::= INTEGER (10..2565)

```

--*****
-- SOME ASN.1 MISSING --
--*****

```

END