

TSG RAN Meeting #19
Birmingham, UK, 11 - 14 March 2003

RP-030059

Title CRs (Rel-4 and Rel-5 Category A) to TS 25.433 on Correction of PRACH Midamble for 1.28Mcps TDD
Source TSG RAN WG3
Agenda Item 8.3.4

RAN3 Tdoc	Spec	curr. Vers.	new Vers.	REL	CR	Rev	Cat	Title	Work item
R3-030172	25.433	4.7.0	4.8.0	REL-4	822		F	Correction of PRACH Midamble for 1.28Mcps TDD	LCRTDD-lublur
R3-030173	25.433	5.3.0	5.4.0	REL-5	823		A	Correction of PRACH Midamble for 1.28Mcps TDD	LCRTDD-lublur

CHANGE REQUEST

25.433 CR 822 # rev - # Current version: 4.7.0

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	# Correction of PRACH Midamble for 1.28Mcps TDD		
Source:	# RAN WG3		
Work item code:	# LCRTDD-lublur	Date:	# 10/01/2003
Category:	# F	Release:	# Rel-4
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	# In RAN1, the decision of PRACH Midamble for 3.84Mcps TDD and 1.28Mcps TDD are different. For 3.84Mcps TDD, there exists a fixed association between the training sequence and the channelisation code for PRACH. But for 1.28Mcps TDD, there doesn't have this relation. So the <i>Max PRACH Midamble Shifts</i> IE and <i>PRACH Midamble</i> IE are only used for 3.84Mcps TDD, and not applicable for 1.28Mcps TDD.
Summary of change:	# <i>Max PRACH Midamble Shifts</i> IE and <i>PRACH Midamble</i> IE are deleted in <i>PRACH LCR</i> IE in COMMON TRANSPORT CHANNEL SETUP REQUEST message, and <i>Midamble Shift LCR</i> IE is added for the midamble of the PRACH for 1.28Mcps TDD. The corresponding changes in ASN.1 are also made. Impact Analysis: Impact assessment towards the previous version of the specification (same release): The impact can be considered isolated because the change only affects PRACH Midamble for 1.28Mcps TDD. The change is backward incompatible because it fixes an error in the specification.
Consequences if not approved:	# If this CR is not approved, the midamble of PRACH would not be obtained when PRACH setup for 1.28Mcps TDD.

Clauses affected:	# 9.1.3.2, 9.3.3		
	# <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="padding: 2px 5px;">Y</td><td style="padding: 2px 5px;">N</td></tr></table>	Y	N
Y	N		

Other specs affected:	⌘	<input checked="" type="checkbox"/>	Other core specifications	⌘	CR823 25.433 Rel-5
		<input checked="" type="checkbox"/>	Test specifications		
		<input checked="" type="checkbox"/>	O&M Specifications		
Other comments:	⌘				

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>.

Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

9.1.3 COMMON TRANSPORT CHANNEL SETUP REQUEST

9.1.3.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject
CHOICE <i>Common Physical Channel To Be Configured</i>	M				YES	ignore
>Secondary CCPCHs					–	
>>SCCPCH CcTrCH ID	M		CcTrCH ID 9.2.3.3	For DL CcTrCH supporting one or several Secondary CCPCHs	–	
>>TFCS	M		9.2.1.58	For DL CcTrCH supporting one or several Secondary CCPCHs	–	
>>TFCI Coding	M		9.2.3.22		–	
>>Puncture Limit	M		9.2.1.50		–	
>>Secondary CCPCH		0..<maxno ofSCCPCHs>		Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps TDD.	GLOBAL	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>TDD Channelisation Code	M		9.2.3.19		–	
>>>Time Slot	M		9.2.3.23		–	
>>>Midamble Shift And Burst Type	M		9.2.3.7		–	
>>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>>Repetition Period	M		9.2.3.16		–	
>>>Repetition Length	M		9.2.3.15		–	
>>>SCCPCH Power	M		DL Power 9.2.1.21		–	
>>FACH Parameters		0..<maxno ofFACHs>			GLOBAL	reject
>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>FACH CcTrCH ID	M		CcTrCH ID 9.2.3.3		–	
>>>Transport Format Set	M		9.2.1.59	For the DL.	–	
>>>ToAWS	M		9.2.1.61		–	
>>>ToAWE	M		9.2.1.60		–	

>>>Max FACH Power	O		DL Power 9.2.1.21	Applicable to 1.28Mcps TDD only	YES	reject
>>PCH Parameters		<i>0..1</i>			YES	reject
>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>PCH CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	
>>>Transport Format Set	M		9.2.1.59	For the DL.	–	
>>>ToAWS	M		9.2.1.61		–	
>>>ToAWE	M		9.2.1.60		–	
>>>PICH Parameters		<i>0..1</i>		Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps TDD.	YES	reject
>>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>>TDD Channelisation Code	M		9.2.3.19		–	
>>>>Time Slot	M		9.2.3.23		–	
>>>>Midamble Shift And Burst Type	M		9.2.3.7		–	
>>>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>>>Repetition Period	M		9.2.3.16		–	
>>>>Repetition Length	M		9.2.3.15		–	
>>>>Paging Indicator Length	M		9.2.3.8		–	
>>>>PICH Power	M		9.2.1.49A		–	
>>>PCH Power	O		DL Power 9.2.1.21	Applicable to 1.28Mcps TDD only	YES	reject
>>>PICH Parameters LCR		<i>0..1</i>		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	reject
>>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>>TDD Channelisation Code LCR	M		9.2.3.19a		–	
>>>>Time Slot LCR	M		9.2.3.24A		–	
>>>>Midamble Shift LCR	M		9.2.3.7A		–	
>>>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>>>Repetition Period	M		9.2.3.16		–	
>>>>Repetition Length	M		9.2.3.15		–	
>>>>Paging Indicator Length	M		9.2.3.8		–	
>>>>PICH Power	M		9.2.1.49A		–	
>>>>Second TDD Channelisation Code	M		TDD Channelisat		YES	reject

LCR			ion Code LCR 9.2.3.19A			
>>Secondary CCPCH LCR		<i>0..<maxno ofSCCPC HsLCR></i>		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	GLOBAL	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>TDD Channelisation Code LCR	M		9.2.3.19a		–	
>>>Time Slot LCR	M		9.2.3.24A		–	
>>>Midamble Shift LCR	M		9.2.3.7A		–	
>>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>>Repetition Period	M		9.2.3.16		–	
>>>Repetition Length	M		9.2.3.15		–	
>>>SCCPCH Power	M		DL Power 9.2.1.21		–	
>>> SCCPCH Time Slot Format LCR	M		TDD DL DPCH Time Slot Format LCR 9.2.3.19D		–	
<i>>PRACH</i>					–	
>>PRACH	M	<i>0..1</i>		Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps TDD.	YES	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>TFCS	M		9.2.1.58		–	
>>>Time Slot	M		9.2.3.23		–	
>>>TDD Channelisation Code	M		9.2.3.19		–	
>>>Max PRACH Midamble Shifts	M		9.2.3.6		–	
>>>PRACH Midamble	M		9.2.3.14		–	
>>>RACH		<i>1</i>			YES	reject
>>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>>Transport Format Set	M		9.2.1.59	For the UL	–	
>>PRACH LCR		<i>0..<maxno ofPRACHL CRs></i>		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	GLOBAL	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>TFCS	M		9.2.1.58		–	
>>>Time Slot LCR	M		9.2.3.24A		–	
>>>TDD Channelisation Code LCR	M		9.2.3.19a		–	
>>>Max PRACH Midamble Shifts	M		9.2.3.6		–	

>>>PRACH Midamble	M		9.2.3.14		-	
>>>Midamble Shift LCR	M		9.2.3.7A		-	
>>>RACH		1			YES	reject
>>>>Common Transport Channel ID	M		9.2.1.14		-	
>>>>Transport Format Set	M		9.2.1.59	For the UL	-	
>>FPACH		0..1		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	reject
>>>Common Physical Channel ID	M		9.2.1.13		-	
>>>TDD Channelisation Code LCR	M		9.2.3.19a		-	
>>>Time Slot LCR	M		9.2.3.24A		-	
>>>Midamble Shift LCR	M		9.2.3.7A		-	
>>>Max FPACH Power	M		9.2.3.5E		-	

Range Bound	Explanation
<i>maxnoofSCCPCHs</i>	Maximum number of Secondary CCPCHs per CCTrCH for 3.84Mcps TDD
<i>maxnoofSCCPCHsLCR</i>	Maximum number of Secondary CCPCHs per CCTrCH for 1.28Mcps TDD
<i>maxnoofCCTrCHs</i>	Maximum number of CCTrCHs that can be defined in a cell
<i>maxnoofFACHs</i>	Maximum number of FACHs that can be defined on a Secondary CCPCH
<i>maxnoofPRACHLCRs</i>	Maximum number of PRACHs LCR that can be defined on a RACH for 1.28Mcps TDD

9.3.3 PDU Definitions

```

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

NBAP-PDU-Contents {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-PDU-Contents (1) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

/*partly omitted*/
-- *****
--
-- 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      id-ConfigurationGenerationID PRESENCE      mandatory    }|          CRITICALITY reject          TYPE          ConfigurationGenerationID
    { ID      id-CommonPhysicalChannelType-CTCH-SetupRqstTDD PRESENCE      mandatory    },          CRITICALITY ignore          TYPE          CommonPhysicalChannelType-CTCH-
SetupRqstTDD
    ...
}

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

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

Secondary-CCPCH-CTCH-SetupRqstTDD ::= SEQUENCE {
    sCCPCH-CCTrCH-ID                    CCTrCH-ID,

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tFCS                                TFCS,
tFCI-Coding                          TFCI-Coding,
punctureLimit                        PunctureLimit,
secondaryCCPCH-parameterList         Secondary-CCPCH-parameterList-CTCH-SetupRqstTDD,
fACH-ParametersList                  FACH-ParametersList-CTCH-SetupRqstTDD    OPTIONAL,
pCH-Parameters                       PCH-Parameters-CTCH-SetupRqstTDD    OPTIONAL,
iE-Extensions                        ProtocolExtensionContainer {{Secondary-CCPCHItem-CTCH-SetupRqstTDD-ExtIEs}}  OPTIONAL,
...
}

Secondary-CCPCHItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  { ID id-Secondary-CCPCH-LCR-parameterList-CTCH-SetupRqstTDD    CRITICALITY reject          EXTENSION Secondary-CCPCH-LCR-
parameterList-CTCH-SetupRqstTDD    PRESENCE optional    }, -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
  ...
}

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 } -- Mandatory for 3.84Mcps TDD, Not Applicable to 1.28Mcps TDD
}

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

Secondary-CCPCH-parameterItem-CTCH-SetupRqstTDD ::= SEQUENCE {
  commonPhysicalChannelID           CommonPhysicalChannelID,
  tdd-ChannelisationCode            TDD-ChannelisationCode,
  timeslot                          Timeslot,
  midambleShiftandBurstType         MidambleShiftAndBurstType,
  tdd-PhysicalChannelOffset          TDD-PhysicalChannelOffset,
  repetitionPeriod                  RepetitionPeriod,
  repetitionLength                  RepetitionLength,
  s-CCPCH-Power                     DL-Power,
  iE-Extensions                     ProtocolExtensionContainer { { Secondary-CCPCH-parameterItem-CTCH-SetupRqstTDD-ExtIEs } }  OPTIONAL,
  ...
}

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

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

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

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

FACH-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
  commonTransportChannelID          CommonTransportChannelID,
  fACH-CCTrCH-ID                    CCTrCH-ID,

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

FACH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  { ID id-maxFACH-Power-LCR-CTCH-SetupRqstTDD CRITICALITY reject EXTENSION DL-Power PRESENCE optional },
  -- Applicable to 1.28Mcps TDD only
  ...
}

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

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

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

PCH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  { ID id-PCH-Power-LCR-CTCH-SetupRqstTDD CRITICALITY reject EXTENSION DL-Power PRESENCE optional } |
  { ID id-PICH-LCR-Parameters-CTCH-SetupRqstTDD CRITICALITY reject EXTENSION PICH-LCR-Parameters-CTCH-SetupRqstTDD PRESENCE optional }, -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
  ...
}

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

PICH-ParametersIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-PICH-ParametersItem-CTCH-SetupRqstTDD CRITICALITY reject TYPE PICH-ParametersItem-CTCH-SetupRqstTDD PRESENCE optional }
} -- Mandatory for 3.84Mcps TDD, Not Applicable to 1.28Mcps TDD

PICH-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
  commonPhysicalChannelID CommonPhysicalChannelID,
  tdd-ChannelisationCode  TDD-ChannelisationCode,
  timeSlot                TimeSlot,
  midambleShiftAndBurstType MidambleShiftAndBurstType,
  tdd-PhysicalChannelOffset TDD-PhysicalChannelOffset,
  repetitionPeriod        RepetitionPeriod,
  repetitionLength         RepetitionLength,
  pagingIndicatorLength    PagingIndicatorLength,
}

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    pICH-Power          PICH-Power,
    iE-Extensions       ProtocolExtensionContainer { { PICH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs } } OPTIONAL,
    ...
}

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

PICH-LCR-Parameters-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    tdd-ChannelisationCodeLCR    TDD-ChannelisationCodeLCR,
    timeSlotLCR                  TimeSlotLCR,
    midambleShiftLCR             MidambleShiftLCR,
    tdd-PhysicalChannelOffset    TDD-PhysicalChannelOffset,
    repetitionPeriod              RepetitionPeriod,
    repetitionLength              RepetitionLength,
    pagingIndicatorLength         PagingIndicatorLength,
    pICH-Power                    PICH-Power,
    second-TDD-ChannelisationCodeLCR TDD-ChannelisationCodeLCR,
    iE-Extensions                 ProtocolExtensionContainer { { PICH-LCR-ParametersItem-CTCH-SetupRqstTDD-ExtIEs } } OPTIONAL,
    ...
}

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

Secondary-CCPCH-LCR-parameterList-CTCH-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfSCCPCHLCRs)) OF Secondary-CCPCH-LCR-parameterItem-CTCH-SetupRqstTDD

Secondary-CCPCH-LCR-parameterItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    tdd-ChannelisationCodeLCR    TDD-ChannelisationCodeLCR,
    timeslotLCR                  TimeSlotLCR,
    midambleShiftLCR             MidambleShiftLCR,
    tdd-PhysicalChannelOffset    TDD-PhysicalChannelOffset,
    repetitionPeriod              RepetitionPeriod,
    repetitionLength              RepetitionLength,
    s-CCPCH-Power                DL-Power,
    s-CCPCH-TimeSlotFormat-LCR   TDD-DL-DPCH-TimeSlotFormat-LCR,
    iE-Extensions                 ProtocolExtensionContainer { { Secondary-CCPCH-LCR-parameterItem-CTCH-SetupRqstTDD-ExtIEs } } OPTIONAL,
    ...
}

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

PRACH-CTCH-SetupRqstTDD ::= SEQUENCE {
    pRACH-Parameters-CTCH-SetupRqstTDD,
    iE-Extensions                 ProtocolExtensionContainer { { PRACH-CTCH-SetupRqstTDD-ExtIEs } } OPTIONAL,
}

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}
...
}
PRACH-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  { ID id-PRACH-LCR-ParametersList-CTCH-SetupRqstTDD CRITICALITY reject EXTENSION PRACH-LCR-ParametersList-CTCH-
  SetupRqstTDD PRESENCE optional } | -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
  { ID id-FPACH-LCR-Parameters-CTCH-SetupRqstTDD CRITICALITY reject EXTENSION FPACH-LCR-Parameters-CTCH-
  SetupRqstTDD PRESENCE optional }, -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
  ...
}
PRACH-Parameters-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ PRACH-ParametersIE-CTCH-SetupRqstTDD }}
PRACH-ParametersIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-PRACH-ParametersItem-CTCH-SetupRqstTDD CRITICALITY reject TYPE PRACH-ParametersItem-CTCH-SetupRqstTDD PRESENCE optional }
  } -- Mandatory for 3.84Mcps TDD, Not Applicable to 1.28Mcps TDD
PRACH-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
  commonPhysicalChannelID CommonPhysicalChannelID,
  tFCS TFCS,
  timeslot TimeSlot,
  tdd-ChannelisationCode TDD-ChannelisationCode,
  maxPRACH-MidambleShifts MaxPRACH-MidambleShifts,
  pRACH-Midamble PRACH-Midamble,
  rACH RACH-Parameter-CTCH-SetupRqstTDD,
  iE-Extensions ProtocolExtensionContainer { { PRACH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs } } OPTIONAL,
  ...
}
PRACH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
RACH-Parameter-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ RACH-ParameterIE-CTCH-SetupRqstTDD }}
RACH-ParameterIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-RACH-ParameterItem-CTCH-SetupRqstTDD CRITICALITY reject TYPE RACH-ParameterItem-CTCH-SetupRqstTDD PRESENCE mandatory }
  }
RACH-ParameterItem-CTCH-SetupRqstTDD ::= SEQUENCE {
  commonTransportChannelID CommonTransportChannelID,
  uL-TransportFormatSet TransportFormatSet,
  iE-Extensions ProtocolExtensionContainer { { RACH-ParameterItem-CTCH-SetupRqstTDD-ExtIEs } } OPTIONAL,
  ...
}
RACH-ParameterItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
PRACH-LCR-ParametersList-CTCH-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfPRACHLCRs)) OF PRACH-LCR-ParametersItem-CTCH-SetupRqstTDD
PRACH-LCR-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {

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```

    commonPhysicalChannelID          CommonPhysicalChannelID,
    tFCS                             TFCS,
    timeslotLCR                      TimeSlotLCR,
    tdd-ChannelisationCodeLCR        TDD-ChannelisationCodeLCR,
maxPRACH-MidambleShifts         MaxPRACH-MidambleShifts,
prACH-Midamble                 PRACH-Midamble,
midambleShiftLCR                 MidambleShiftLCR,
    rACH                             RACH-Parameter-CTCH-SetupRqstTDD,
    iE-Extensions                    ProtocolExtensionContainer { { PRACH-LCR-ParametersItem-CTCH-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

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

FPACH-LCR-Parameters-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    tdd-ChannelisationCodeLCR        TDD-ChannelisationCodeLCR,
    timeslotLCR                      TimeSlotLCR,
    midambleShiftLCR                 MidambleShiftLCR,
    fPACH-Power                      FPACH-Power,
    iE-Extensions                    ProtocolExtensionContainer { { FPACH-LCR-ParametersItem-CTCH-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

FPACH-LCR-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
/*partly omitted*/

```

CHANGE REQUEST

25.433 CR 823 # rev - # Current version: 5.3.0

For [HELP](#) on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	# Correction of PRACH Midamble for 1.28Mcps TDD		
Source:	# RAN WG3		
Work item code:	# LCRTDD-lublur	Date:	# 10/01/2003
Category:	# A	Release:	# Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	# In RAN1, the decision of PRACH Midamble for 3.84Mcps TDD and 1.28Mcps TDD are different. For 3.84Mcps TDD, there exists a fixed association between the training sequence and the channelisation code for PRACH. But for 1.28Mcps TDD, there doesn't have this relation. So the <i>Max PRACH Midamble Shifts</i> IE and <i>PRACH Midamble</i> IE are only used for 3.84Mcps TDD, and not applicable for 1.28Mcps TDD.
Summary of change:	# <i>Max PRACH Midamble Shifts</i> IE and <i>PRACH Midamble</i> IE are deleted in <i>PRACH LCR</i> IE in COMMON TRANSPORT CHANNEL SETUP REQUEST message, and <i>Midamble Shift LCR</i> IE is added for the midamble of the PRACH for 1.28Mcps TDD. The corresponding changes in ASN.1 are also made. Impact Analysis: Impact assessment towards the previous version of the specification (same release): The impact can be considered isolated because the change only affects PRACH Midamble for 1.28Mcps TDD. The change is backward incompatible because it fixes an error in the specification.
Consequences if not approved:	# If this CR is not approved, the midamble of PRACH would not be obtained when PRACH setup for 1.28Mcps TDD.

Clauses affected:	# 9.1.3.2, 9.3.3		
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px 5px;">Y</td> <td style="padding: 2px 5px;">N</td> </tr> </table>	Y	N
Y	N		

Other specs affected:	⌘	<input checked="" type="checkbox"/>	Other core specifications	⌘	CR822 25.433 Rel-4
		<input checked="" type="checkbox"/>	Test specifications		
		<input checked="" type="checkbox"/>	O&M Specifications		
Other comments:	⌘				

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>.

Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

9.1.3 COMMON TRANSPORT CHANNEL SETUP REQUEST

9.1.3.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject
CHOICE <i>Common Physical Channel To Be Configured</i>	M				YES	ignore
>Secondary CCPCHs					–	
>>SCCPCH CCTrCH ID	M		CCTrCH ID 9.2.3.3	For DL CCTrCH supporting one or several Secondary CCPCHs	–	
>>TFCS	M		9.2.1.58	For DL CCTrCH supporting one or several Secondary CCPCHs	–	
>>TFCI Coding	M		9.2.3.22		–	
>>Puncture Limit	M		9.2.1.50		–	
>>Secondary CCPCH		0..<maxno ofSCCPCHs>		Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps TDD.	GLOBAL	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>TDD Channelisation Code	M		9.2.3.19		–	
>>>Time Slot	M		9.2.3.23		–	
>>>Midamble Shift And Burst Type	M		9.2.3.7		–	
>>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>>Repetition Period	M		9.2.3.16		–	
>>>Repetition Length	M		9.2.3.15		–	
>>>SCCPCH Power	M		DL Power 9.2.1.21		–	
>>FACH Parameters		0..<maxno ofFACHs>			GLOBAL	reject
>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>FACH CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	
>>>Transport Format Set	M		9.2.1.59	For the DL.	–	
>>>ToAWS	M		9.2.1.61		–	
>>>ToAWE	M		9.2.1.60		–	

>>>Max FACH Power	O		DL Power 9.2.1.21	Applicable to 1.28Mcps TDD only	YES	reject
>>>Binding ID	O		9.2.1.4	Shall be ignored if bearer establishment with ALCAP.	YES	ignore
>>>Transport Layer Address	O		9.2.1.63	Shall be ignored if bearer establishment with ALCAP.	YES	ignore
>>PCH Parameters		<i>0..1</i>			YES	reject
>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>PCH CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	
>>>Transport Format Set	M		9.2.1.59	For the DL.	–	
>>>ToAWS	M		9.2.1.61		–	
>>>ToAWE	M		9.2.1.60		–	
>>>PICH Parameters		<i>0..1</i>		Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps TDD.	YES	reject
>>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>>TDD Channelisation Code	M		9.2.3.19		–	
>>>>Time Slot	M		9.2.3.23		–	
>>>>Midamble Shift And Burst Type	M		9.2.3.7		–	
>>>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>>>Repetition Period	M		9.2.3.16		–	
>>>>Repetition Length	M		9.2.3.15		–	
>>>>Paging Indicator Length	M		9.2.3.8		–	
>>>>PICH Power	M		9.2.1.49A		–	
>>>PCH Power	O		DL Power 9.2.1.21	Applicable to 1.28Mcps TDD only	YES	reject
>>>PICH Parameters LCR		<i>0..1</i>		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	reject
>>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>>TDD Channelisation Code LCR	M		9.2.3.19a		–	
>>>>Time Slot LCR	M		9.2.3.24A		–	
>>>>Midamble Shift LCR	M		9.2.3.7A		–	

>>>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>>>Repetition Period	M		9.2.3.16		–	
>>>>Repetition Length	M		9.2.3.15		–	
>>>>Paging Indicator Length	M		9.2.3.8		–	
>>>>PICH Power	M		9.2.1.49A		–	
>>>>Second TDD Channelisation Code LCR	M		TDD Channelisation Code LCR 9.2.3.19A		YES	reject
>>>Binding ID	O		9.2.1.4	Shall be ignored if bearer establishment with ALCAP.	YES	ignore
>>>Transport Layer Address	O		9.2.1.63	Shall be ignored if bearer establishment with ALCAP.	YES	ignore
>>Secondary CCPCH LCR		<i>0..<maxno ofSCCPC HsLCR></i>		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	GLOBAL	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>TDD Channelisation Code LCR	M		9.2.3.19a		–	
>>>Time Slot LCR	M		9.2.3.24A		–	
>>>Midamble Shift LCR	M		9.2.3.7A		–	
>>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>>Repetition Period	M		9.2.3.16		–	
>>>Repetition Length	M		9.2.3.15		–	
>>>SCCPCH Power	M		DL Power 9.2.1.21		–	
>>> SCCPCH Time Slot Format LCR	M		TDD DL DPCH Time Slot Format LCR 9.2.3.19D		–	
>PRACH					–	
>>PRACH	M	<i>0..1</i>		Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps TDD.	YES	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>TFCS	M		9.2.1.58		–	
>>>Time Slot	M		9.2.3.23		–	
>>>TDD Channelisation Code	M		9.2.3.19		–	
>>>Max PRACH	M		9.2.3.6		–	

Midamble Shifts						
>>>PRACH Midamble	M		9.2.3.14		–	
>>>RACH		1			YES	reject
>>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>>Transport Format Set	M		9.2.1.59	For the UL	–	
>>>>Binding ID	O		9.2.1.4	Shall be ignored if bearer establishment with ALCAP.	YES	ignore
>>>>Transport Layer Address	O		9.2.1.63	Shall be ignored if bearer establishment with ALCAP.	YES	ignore
>>PRACH LCR		0..<maxno ofPRACHLCRs>		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	GLOBAL	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>TFCS	M		9.2.1.58		–	
>>>Time Slot LCR	M		9.2.3.24A		–	
>>>TDD Channelisation Code LCR	M		9.2.3.19a		–	
>>>Max PRACH Midamble Shifts	M		9.2.3.6		–	
>>>PRACH Midamble	M		9.2.3.14		–	
>>>Midamble Shift LCR	M		9.2.3.7A		–	
>>>RACH		1			YES	reject
>>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>>Transport Format Set	M		9.2.1.59	For the UL	–	
>>>>Binding ID	O		9.2.1.4	Shall be ignored if bearer establishment with ALCAP.	YES	ignore
>>>>Transport Layer Address	O		9.2.1.63	Shall be ignored if bearer establishment with ALCAP.	YES	ignore
>>FPACH		0..1		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>TDD Channelisation Code LCR	M		9.2.3.19a		–	
>>>Time Slot LCR	M		9.2.3.24A		–	
>>>Midamble Shift LCR	M		9.2.3.7A		–	
>>>Max FPACH Power	M		9.2.3.5E		–	

Range Bound	Explanation
<i>maxnoofSCCPCHs</i>	Maximum number of Secondary CCPCHs per CCTrCH for 3.84Mcps TDD
<i>maxnoofSCCPCHsLCR</i>	Maximum number of Secondary CCPCHs per CCTrCH for 1.28Mcps TDD
<i>maxnoofCCTrCHs</i>	Maximum number of CCTrCHs that can be defined in a cell
<i>maxnoofFACHs</i>	Maximum number of FACHs that can be defined on a Secondary CCPCH
<i>maxnoofPRACHLCRs</i>	Maximum number of PRACHs LCR that can be defined on a RACH for 1.28Mcps TDD

9.3.3 PDU Definitions

```

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

NBAP-PDU-Contents {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-PDU-Contents (1) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

/*partly omitted*/
-- *****
--
-- 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      id-ConfigurationGenerationID PRESENCE      mandatory    }|          CRITICALITY reject          TYPE          ConfigurationGenerationID
    { ID      id-CommonPhysicalChannelType-CTCH-SetupRqstTDD PRESENCE      mandatory    },          CRITICALITY ignore          TYPE          CommonPhysicalChannelType-CTCH-
SetupRqstTDD
    ...
}

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

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

Secondary-CCPCH-CTCH-SetupRqstTDD ::= SEQUENCE {
    sCCPCH-CCTrCH-ID                    CCTrCH-ID,

```

```

tFCS                                TFCS,
tFCI-Coding                          TFCI-Coding,
punctureLimit                        PunctureLimit,
secondaryCCPCH-parameterList        Secondary-CCPCH-parameterList-CTCH-SetupRqstTDD,
fACH-ParametersList                 FACH-ParametersList-CTCH-SetupRqstTDD    OPTIONAL,
pCH-Parameters                      PCH-Parameters-CTCH-SetupRqstTDD    OPTIONAL,
iE-Extensions                       ProtocolExtensionContainer {{Secondary-CCPCHItem-CTCH-SetupRqstTDD-ExtIEs}}  OPTIONAL,
...
}

Secondary-CCPCHItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  { ID id-Secondary-CCPCH-LCR-parameterList-CTCH-SetupRqstTDD    CRITICALITY reject          EXTENSION Secondary-CCPCH-LCR-
parameterList-CTCH-SetupRqstTDD    PRESENCE optional    }, -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
  ...
}

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 } -- Mandatory for 3.84Mcps TDD, Not Applicable to 1.28Mcps TDD
}

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

Secondary-CCPCH-parameterItem-CTCH-SetupRqstTDD ::= SEQUENCE {
  commonPhysicalChannelID          CommonPhysicalChannelID,
  tdd-ChannelisationCode           TDD-ChannelisationCode,
  timeslot                         Timeslot,
  midambleShiftandBurstType        MidambleShiftAndBurstType,
  tdd-PhysicalChannelOffset        TDD-PhysicalChannelOffset,
  repetitionPeriod                 RepetitionPeriod,
  repetitionLength                 RepetitionLength,
  s-CCPCH-Power                   DL-Power,
  iE-Extensions                   ProtocolExtensionContainer { { Secondary-CCPCH-parameterItem-CTCH-SetupRqstTDD-ExtIEs } }  OPTIONAL,
  ...
}

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

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

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

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

FACH-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
  commonTransportChannelID        CommonTransportChannelID,
  fACH-CCTrCH-ID                  CCTrCH-ID,

```

```

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

FACH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  { ID id-maxFACH-Power-LCR-CTCH-SetupRqstTDD CRITICALITY reject EXTENSION DL-Power PRESENCE optional }|
  -- Applicable to 1.28Mcps TDD only
  { ID id-bindingID CRITICALITY ignore EXTENSION BindingID PRESENCE optional }|
  { ID id-transportlayeraddress CRITICALITY ignore EXTENSION TransportLayerAddress PRESENCE optional },
  ...
}

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

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

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

PCH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  { ID id-PCH-Power-LCR-CTCH-SetupRqstTDD CRITICALITY reject EXTENSION DL-Power PRESENCE optional }|
  -- Applicable to 1.28Mcps TDD only
  { ID id-PICH-LCR-Parameters-CTCH-SetupRqstTDD CRITICALITY reject EXTENSION PICH-LCR-Parameters-CTCH-
SetupRqstTDD PRESENCE optional }| -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
  { ID id-bindingID CRITICALITY ignore EXTENSION BindingID PRESENCE optional }|
  { ID id-transportlayeraddress CRITICALITY ignore EXTENSION TransportLayerAddress PRESENCE optional },
  ...
}

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

PICH-ParametersIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-PICH-ParametersItem-CTCH-SetupRqstTDD CRITICALITY reject TYPE PICH-ParametersItem-CTCH-SetupRqstTDD PRESENCE optional }
} -- Mandatory for 3.84Mcps TDD, Not Applicable to 1.28Mcps TDD

PICH-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
  commonPhysicalChannelID CommonPhysicalChannelID,
  tdd-ChannelisationCode TDD-ChannelisationCode,
  timeSlot TimeSlot,
  midambleShiftAndBurstType MidambleShiftAndBurstType,
}

```

```

    tdd-PhysicalChannelOffset      TDD-PhysicalChannelOffset,
    repetitionPeriod               RepetitionPeriod,
    repetitionLength               RepetitionLength,
    pagingIndicatorLength          PagingIndicatorLength,
    pICH-Power                    PICH-Power,
    iE-Extensions                  ProtocolExtensionContainer { { PICH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

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

PICH-LCR-Parameters-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID        CommonPhysicalChannelID,
    tdd-ChannelisationCodeLCR      TDD-ChannelisationCodeLCR,
    timeSlotLCR                   TimeSlotLCR,
    midambleShiftLCR              MidambleShiftLCR,
    tdd-PhysicalChannelOffset      TDD-PhysicalChannelOffset,
    repetitionPeriod               RepetitionPeriod,
    repetitionLength               RepetitionLength,
    pagingIndicatorLength          PagingIndicatorLength,
    pICH-Power                    PICH-Power,
    second-TDD-ChannelisationCodeLCR TDD-ChannelisationCodeLCR,
    iE-Extensions                  ProtocolExtensionContainer { { PICH-LCR-ParametersItem-CTCH-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

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

Secondary-CCPCH-LCR-parameterList-CTCH-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfSCCPCHLCRs)) OF Secondary-CCPCH-LCR-parameterItem-CTCH-SetupRqstTDD

Secondary-CCPCH-LCR-parameterItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID        CommonPhysicalChannelID,
    tdd-ChannelisationCodeLCR      TDD-ChannelisationCodeLCR,
    timeslotLCR                   TimeSlotLCR,
    midambleShiftLCR              MidambleShiftLCR,
    tdd-PhysicalChannelOffset      TDD-PhysicalChannelOffset,
    repetitionPeriod               RepetitionPeriod,
    repetitionLength               RepetitionLength,
    s-CCPCH-Power                 DL-Power,
    s-CCPCH-TimeSlotFormat-LCR     TDD-DL-DPCH-TimeSlotFormat-LCR,
    iE-Extensions                  ProtocolExtensionContainer { { Secondary-CCPCH-LCR-parameterItem-CTCH-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

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

```

```

PRACH-CTCH-SetupRqstTDD ::= SEQUENCE {
    pRACH-Parameters-CTCH-SetupRqstTDD PRACH-Parameters-CTCH-SetupRqstTDD,
    iE-Extensions                        ProtocolExtensionContainer { { PRACH-CTCH-SetupRqstTDD-ExtIEs } } OPTIONAL,
    ...
}

PRACH-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-PRACH-LCR-ParametersList-CTCH-SetupRqstTDD CRITICALITY reject EXTENSION PRACH-LCR-ParametersList-CTCH-
SetupRqstTDD PRESENCE optional } | -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    { ID id-FPACH-LCR-Parameters-CTCH-SetupRqstTDD CRITICALITY reject EXTENSION FPACH-LCR-Parameters-CTCH-
SetupRqstTDD PRESENCE optional }, -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    ...
}

PRACH-Parameters-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ PRACH-ParametersIE-CTCH-SetupRqstTDD }}

PRACH-ParametersIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-PRACH-ParametersItem-CTCH-SetupRqstTDD CRITICALITY reject TYPE PRACH-ParametersItem-CTCH-SetupRqstTDD PRESENCE optional }
} -- Mandatory for 3.84Mcps TDD, Not Applicable to 1.28Mcps TDD

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

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

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

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

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

RACH-ParameterItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-bindingID CRITICALITY ignore EXTENSION BindingID PRESENCE optional } |

```

```

    { ID      id-transportlayeraddress          CRITICALITY ignore      EXTENSION  TransportLayerAddress          PRESENCE  optional },
    ...
}

PRACH-LCR-ParametersList-CTCH-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfPRACHLCRs)) OF PRACH-LCR-ParametersItem-CTCH-SetupRqstTDD

PRACH-LCR-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    tFCS                          TFCS,
    timeslotLCR                  TimeSlotLCR,
    tdd-ChannelisationCodeLCR    TDD-ChannelisationCodeLCR,
maxPRACH-MidambleShifts      MaxPRACH-MidambleShifts,
prACH-Midamble                PRACH-Midamble,
midambleShiftLCR              MidambleShiftLCR,
    rACH                          RACH-Parameter-CTCH-SetupRqstTDD,
    iE-Extensions                ProtocolExtensionContainer { { PRACH-LCR-ParametersItem-CTCH-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

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

FPACH-LCR-Parameters-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    tdd-ChannelisationCodeLCR    TDD-ChannelisationCodeLCR,
    timeslotLCR                  TimeSlotLCR,
    midambleShiftLCR            MidambleShiftLCR,
    fPACH-Power                  FPACH-Power,
    iE-Extensions                ProtocolExtensionContainer { { FPACH-LCR-ParametersItem-CTCH-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

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

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

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

CommonTransportChannelSetupResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-FACH-ParametersList-CTCH-SetupRsp    CRITICALITY ignore      TYPE      FACH-CommonTransportChannel-InformationResponse          PRESENCE
      optional  }|

```

```

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

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

FACH-CommonTransportChannel-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfFACHs)) OF CommonTransportChannel-InformationResponse

/*partly omitted*/

```