

TSG-RAN Meeting #20
Hämeenlinna, Finland, 03-06 June 2003

RP-030288

Title: TR 25.993 version 6.1.0 affecting earlier releases (R99, Rel-4 and Rel-5)

Source: TSG-RAN WG2

Agenda item: 7.2.2

Spec	CR	Rev	Phase	Subject	Cat	Version-Current	Version-New	Doc-2nd-Level	Workitem
25.993	004	-	Rel-6	Corrections to the UE capabilities and editorial changes	F	6.1.0	6.2.0	R2-031352	TEI6
25.993	005	-	Rel-6	New configuration for CBS: CTCH, PCCH, 32kbps RAB and SRBs on 1 S-CCPCH	F	6.1.0	6.2.0	R2-031375	TEI6
25.993	006	-	Rel-6	New SCCPCH Configurations	F	6.1.0	6.2.0	R2-031376	TEI6
25.993	008	-	Rel-6	PS streaming and CS speech RAB combinations	F	6.1.0	6.2.0	R2-031421	TEI6
25.993	009	-	Rel-6	RB configuration for the support of wideband AMR speech telephony services	F	6.1.0	6.2.0	R2-031428	TEI6
25.993	010	-	Rel-6	Corrections on TDD RAB's	F	6.1.0	6.2.0	R2-031432	TEI6

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CHANGE REQUEST

⌘ **25.993 CR 005** ⌘ rev ⌘ Current version: **6.1.0** ⌘

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

Title:	⌘ New configuration for CBS: CTCH, PCCH, 32kbps RAB and SRBs on 1 S-CCPCH		
Source:	⌘ RAN WG2		
Work item code:	⌘ TEI6	Date:	⌘ 19/05/2003
Category:	⌘ F	Release:	⌘ REL-6
	<i>Use one of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ Currently, no configuration exists for CTCH mapped onto the same S-CCPCH as the PCCH, DTCH and CCCH/DCCH/BCCH.
Summary of change:	⌘ A new configuration for RB for CTCH + Interactive/Background 32 kbps RAB + SRB for PCCH + SRB for CCCH + SRB for DCCH + SRB for BCCH is added in clause 7.2.
Consequences if not approved:	⌘ Support of the proposed reference configuration is currently not included in the conformance and test specifications. Inclusion is needed to ensure functionality.

Clauses affected:	⌘ 6, 7.2.6 (new)								
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications ⌘ Test specifications ⌘ O&M Specifications ⌘ 	Y	N		X		X		X
Y	N								
	X								
	X								
	X								
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.

6 Combinations of RABs

[...]

Combinations on SCCPCH

- 1) Stand-alone 24 kbps SRB for PCCH.
- 2) Interactive or background / DL:32 kbps / PS RAB
+ SRB for CCCH
+ SRBs for DCCH
+ SRB for BCCH.
- 3) Interactive or background / DL:32 kbps / PS RAB
+ SRB for PCCH
+ SRB for CCCH
+ SRBs for DCCH
+ SRB for BCCH.
- 4) RB for CTCH (FDD)
+ SRB for CCCH
+SRB for BCCH
- 5) RB for CTCH (FDD)
+ Interactive or background / DL: 32 kbps / PS RAB
+ SRB for PCCH
+ SRB for CCCH
+ SRBs for DCCH
+ SRB for BCCH

7.2.6. RB for CTCH + Interactive/Background 32 kbps PS RAB + SRB for PCCH + SRB for CCCH + SRB for DCCH + SRB for BCCH

The minimum UE class supporting this combination is DL: 32 kbps.

This is supported in Release '99.

7.2.6.1 Transport channel parameters

7.2.6.1.1 Transport channel parameters of RB for CTCH

<u>Higher layer</u>	<u>RAB/signalling RB</u>	<u>N/A</u>	
	<u>User of Radio Bearer</u>	<u>BMC</u>	
<u>RLC</u>	<u>Logical channel type</u>	<u>CTCH</u>	
	<u>RLC mode</u>	<u>UM</u>	
	<u>Payload sizes, bit</u>	<u>152</u>	
	<u>Max data rate, bps</u>	<u>15200</u>	
	<u>UMD PDU header, bit</u>	<u>8</u>	
<u>MAC</u>	<u>MAC header, bit</u>	<u>8</u>	
	<u>MAC multiplexing</u>	<u>N/A</u>	
<u>Layer 1</u>	<u>TrCH type</u>	<u>FACH</u>	
	<u>TB sizes, bit</u>	<u>168</u>	
	<u>TFS</u>	<u>TF0, bits</u>	<u>0x168</u>
		<u>TF1, bits</u>	<u>1x168</u>
	<u>TTI, ms</u>	<u>10</u>	
	<u>Coding type</u>	<u>CC ½</u>	
	<u>CRC, bit</u>	<u>16</u>	
	<u>Max number of bits/TTI before rate matching</u>	<u>384</u>	
<u>RM attribute</u>	<u>200-240</u>		

7.2.6.1.2 Transport channel parameters of SRB for Interactive/Background 32 kbps PS RAB

See subclause 6.10.2.4.3.2.1.1 of [1].

7.2.6.1.3 Transport channel parameter of SRB for PCCH

See subclause 6.10.2.4.3.1.1.1 of [1].

7.2.6.1.4 Transport channel parameters of SRBs for CCCH, SRB for DCCH, and SRB for BCCH

See subclause 6.10.2.4.3.2.1.2 of [1].

7.2.6.1.5 TFCS

<u>TFCS size</u>	<u>14</u>
<u>TFCS</u>	<u>(SRB for PCCH, SRBs for CCCH/DCCH/BCCH, 32kbps RAB, RB for CTCH) = (TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0), (TF0, TF1, TF0, TF0), (TF1, TF1, TF0, TF0), (TF0, TF2, TF0, TF0), (TF1, TF2, TF0, TF0), (TF0, TF0, TF1, TF0), (TF0, TF1, TF1, TF0), (TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF1), (TF0, TF1, TF0, TF1), (TF1, TF1, TF0, TF1), (TF0, TF2, TF0, TF1), (TF0, TF0, TF1, TF1)</u>

7.2.6.2 Physical channel parameters

<u>SCCPCH</u>	<u>DTX position</u>	<u>Flexible</u>
	<u>Spreading factor</u>	<u>64</u>
	<u>Number of TFCI bits/slot</u>	<u>8</u>
	<u>Number of Pilot bits/slot</u>	<u>0</u>
	<u>Number of data bits/slot</u>	<u>72</u>
	<u>Number of data bits/frame</u>	<u>1080</u>

CHANGE REQUEST

25.993 CR 006 # - # Current version: **6.1.0**

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:	# New SCCPCH Configurations		
Source:	# RAN WG2		
Work item code:	# TEI6	Date:	# 08/05/2003
Category:	# F	Release:	# Rel-6
	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:	# The amount of the control messages and user data transmitted on FACHs may vary a lot, but regardless of the network parameters, traffic type and distribution, still both control and user plane data together are not expected to fill up the FACHs easily if the configurations in chapter 7.2.2 and 7.2.5 are used. In order to optimise the FACH utilisation in case the amount of FACH traffic is low, this CR introduces two new FACH/SCCPCH configurations with roughly 50% smaller capacity allocation compared with the existing configurations.
Summary of change:	# The new FACH/SCCPCH configurations can be realised by increasing the Transmission Time Interval from 10ms to 20 ms for control plane FACH carrying BCCH, DCCH and CCCH and user plane FACH carrying DTCH. Meanwhile, the spreading factor of SCCPCH, which user plane FACH and control plane FACH are mapped onto, is doubled. For service area broadcast FACH carrying CTCH and control plane FACH for idle mode UEs carrying BCCH and CCCH, the TTI is increased from 10 ms to 20 ms and the spreading factor of the corresponding SCCPCH is doubled. The proposed SCCPCH configurations are as follows: 1. Interactive/Background 16 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH 2. 8 kbps RB for CTCH + SRB for CCCH + SRB for BCCH

Consequences if not approved:	⌘	There are no examples on SCCPCH configurations for the described combinations.
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Clauses affected:	⌘	6, 7.2.5, 7.2.6(new), 7.2.7(new)
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Other specs affected:	⌘	Y N	Other core specifications	⌘	
		X			Test specifications
		X			O&M Specifications

Other comments:	⌘	
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- 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.

6 Combinations of RABs

The present document contains examples of Radio configuration for following combinations of RABs.

NOTE: It is understood that for speech service the AMR mode may be operated asymmetrically for the uplink and downlink.

List of RAB combinations:

...

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Combinations on SCCPCH

- 1) Stand-alone 24 kbps SRB for PCCH.
- 2) Interactive or background / DL:32 kbps / PS RAB
+ SRB for CCCH
+ SRBs for DCCH
+ SRB for BCCH.
- 3) Interactive or background / DL:32 kbps / PS RAB
+ SRB for PCCH
+ SRB for CCCH
+ SRBs for DCCH
+ SRB for BCCH.
- 4) [16 kbps](#) RB for CTCH (FDD)
+ SRB for CCCH
+ SRB for BCCH
- 5) [Interactive or background / DL:16 kbps / PS RAB](#)
[+ SRB for CCCH](#)
[+ SRBs for DCCH](#)
[+ SRB for BCCH.](#)
- 6) [8 kbps](#) RB for CTCH (FDD)
[+ SRB for CCCH](#)
[+ SRB for BCCH](#)

...

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7.2 Combinations on S-CCPCH

7.2.1 Stand-alone signalling RB for PCCH

See subclause 6.10.2.4.3.1 of [1].

The minimum UE class supporting this combination is DL: 32 kbps.

This is supported in Release '99.

7.2.2 Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH

See subclause 6.10.2.4.3.2 of [1].

The minimum UE class supporting this combination is DL: 64 kbps.

This is supported in Release '99.

7.2.3 Interactive/Background 32 kbps PS RAB + Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH

See subclause 6.10.2.4.3.2a of [1].

The minimum UE class supporting this combination is DL: 64 kbps.

This is supported in Release '99.

7.2.4 Interactive/Background 32 kbps RAB + SRB for PCCH + SRB for CCCH + SRB for DCCH + SRB for BCCH

See subclause 6.10.2.4.3.3 of [1].

The minimum UE class supporting this combination is DL: 64 kbps.

This is supported in Release '99.

7.2.5 [16 kbps](#) RB for CTCH + SRB for CCCH + SRB for BCCH

See subclause 6.10.2.4.3.4 of [1].

The minimum UE class supporting this combination is DL: 32 kbps.

This is supported in Release '99.

7.2.6 Interactive/Background 16 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH

7.2.6.1 Transport channel parameters

7.2.6.1.1 Transport channel parameters for Interactive/Background 16 kbps PS RAB

<u>Higher layer</u>	<u>RAB/signalling RB</u> <u>User of Radio Bearer</u>	<u>RAB</u> <u>Interactive/ Background RAB</u>	
<u>RLC</u>	<u>Logical channel type</u>	<u>DTCH</u>	
	<u>RLC mode</u>	<u>AM</u>	
	<u>Payload sizes, bit</u>	<u>320</u>	
	<u>Max data rate, bps</u>	<u>16000</u>	
	<u>AMD PDU header, bit</u>	<u>16</u>	
<u>MAC</u>	<u>MAC header, bit</u>	<u>24</u>	
	<u>MAC multiplexing</u>	<u>N/A</u>	
<u>Layer 1</u>	<u>TrCH type</u>	<u>FACH</u>	
	<u>TB sizes, bit</u>	<u>360</u>	
	<u>TFS</u>	<u>TF0, bits</u>	<u>0x360</u>
		<u>TF1, bits</u>	<u>1x360</u>
	<u>TTI, ms</u>	<u>20</u>	
	<u>Coding type</u>	<u>TC</u>	
	<u>CRC, bit</u>	<u>16</u>	
	<u>Max number of bits/TTI before rate matching</u>	<u>1140</u>	
	<u>RM attribute</u>	<u>110-150</u>	

7.2.6.1.2 Transport channel parameters of SRBs for CCCH, SRB for DCCH, and SRB for BCCH

<u>Higher layer</u>	<u>RAB/signalling RB</u> <u>User of Radio Bearer</u>	<u>SRB#0</u>	<u>SRB#1</u>	<u>SRB#2</u>	<u>SRB#3</u>	<u>SRB#4</u>	<u>SRB#5</u>	
		<u>RRC</u>	<u>RRC</u>	<u>RRC</u>	<u>NAS_DT</u> <u>High prio</u>	<u>NAS_DT</u> <u>Low prio</u>	<u>RRC</u>	
<u>RLC</u>	<u>Logical channel type</u>	<u>CCCH</u>	<u>DCCH</u>	<u>DCCH</u>	<u>DCCH</u>	<u>DCCH</u>	<u>BCCH</u>	
	<u>RLC mode</u>	<u>UM</u>	<u>UM</u>	<u>AM</u>	<u>AM</u>	<u>AM</u>	<u>TM</u>	
	<u>Payload sizes, bit</u>	<u>152</u>	<u>136 or 120</u> <u>(note)</u>	<u>128</u>	<u>128</u>	<u>128</u>	<u>166</u>	
	<u>Max data rate, bps</u>	<u>15200</u>	<u>13600 or</u> <u>12000</u>	<u>12800</u>	<u>12800</u>	<u>12800</u>	<u>16600</u>	
	<u>AMD/UMD/TrD PDU header, bit</u>	<u>8</u>	<u>8</u>	<u>16</u>	<u>16</u>	<u>16</u>	<u>0</u>	
<u>MAC</u>	<u>MAC header, bit</u>	<u>8</u>	<u>24 or 40</u>	<u>24</u>	<u>24</u>	<u>24</u>	<u>2</u>	
	<u>MAC multiplexing</u>	<u>6 logical channel multiplexing</u>						
<u>Layer 1</u>	<u>TrCH type</u>	<u>FACH</u>						
	<u>TB sizes, bit</u>	<u>168</u>						
	<u>TFS</u>	<u>TF0, bits</u>	<u>0x168</u>					
		<u>TF1, bits</u>	<u>1x168</u>					
		<u>TF2, bits</u>	<u>2x168</u>					
	<u>TTI, ms</u>	<u>20</u>						
	<u>Coding type</u>	<u>CC 1/2</u>						
	<u>CRC, bit</u>	<u>16</u>						
	<u>Max number of bits/TTI before rate matching</u>	<u>752</u>						
<u>RM attribute</u>	<u>200-240</u>							

NOTE: MAC header size and PLC payload size depend on use of U-RNTI or C-RNTI.

7.2.6.1.3 TFCS

<u>TFCS size</u>	<u>4</u>
<u>TFCS</u>	<u>(SRBs for CCCH/DCCH/BCCH, 16 kbps RAB) = (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1)</u>

7.2.6.2 Physical channel parameters

<u>SCCPCH</u>	<u>DTX position</u>	<u>Flexible</u>
	<u>Spreading factor</u>	<u>128</u>
	<u>Number of TFCI bits/slot</u>	<u>2</u>
	<u>Number of Pilot bits/slot</u>	<u>0</u>
	<u>Number of data bits/slot</u>	<u>38</u>
	<u>Number of data bits/frame</u>	<u>570</u>

The minimum UE class supporting this combination is DL: 32 kbps.

This is supported in Release '99.

7.2.7 8 kbps RB for CTCH + SRB for CCCH + SRB for BCCH

7.2.7.1 Transport channel parameters

7.2.7.1.1 Transport channel parameters of 8 kbps RB for CTCH

<u>Higher layer</u>	<u>RAB/signalling RB</u>	<u>N/A</u>	
	<u>User of Radio Bearer</u>	<u>BMC</u>	
<u>RLC</u>	<u>Logical channel type</u>	<u>CTCH</u>	
	<u>RLC mode</u>	<u>UM</u>	
	<u>Payload sizes, bit</u>	<u>152</u>	
	<u>Max data rate, bps</u>	<u>7600</u>	
	<u>UMD PDU header, bit</u>	<u>8</u>	
<u>MAC</u>	<u>MAC header, bit</u>	<u>8</u>	
	<u>MAC multiplexing</u>	<u>N/A</u>	
<u>Layer 1</u>	<u>TrCH type</u>	<u>FACH</u>	
	<u>TB sizes, bit</u>	<u>168</u>	
	<u>TFS</u>	<u>TF0, bts</u>	<u>0x168</u>
		<u>TF1, bits</u>	<u>1x168</u>
	<u>TTI, ms</u>	<u>20</u>	
	<u>Coding type</u>	<u>CC 1/3</u>	
	<u>CRC, bit</u>	<u>16</u>	
	<u>Max number of bits/TTI before rate matching</u>	<u>576</u>	
	<u>RM attribute</u>	<u>200-240</u>	

7.2.7.1.2 Transport channel parameters of SRB for CCCH and SRB for BCCH

Higher layer	RAB/signalling RB	SRB#0	SRB#5
	User of Radio Bearer	RRC	RRC
RLC	Logical channel type	CCCH	BCCH
	RLC mode	UM	TM
	Payload sizes, bit	152	166
	Max data rate, bps	7600	8300
	AMD/UMD/TrD PDU header, bit	8	0
MAC	MAC header, bit	8	2
	MAC multiplexing	2 logical channel multiplexing	
Layer 1	TrCH type	FACH	
	TB sizes, bit	168	
	TFS	TF0, bits	0x168
		TF1, bits	1x168
	TTI, ms	20	
	Coding type	CC 1/3	
	CRC, bit	16	
	Max number of bits/TTI before rate matching	576	
	RM attribute	200-240	

7.2.7.1.3 TFCS

TFCS size	3
TFCS	(SRBs for CCCH/ BCCH, RB for CTCH) = (TF0, TF0), (TF1, TF0), (TF0, TF1)

7.2.7.2 Physical channel parameters

SCCPCH	DTX position	Flexible
	Spreading factor	256
	Number of TFCI bits/slot	2
	Number of Pilot bits/slot	0
	Number of data bits/slot	18
	Number of data bits/frame	270

The minimum UE class supporting this combination is DL: 32 kbps.

This is supported in Release '99.

CHANGE REQUEST

25.993 CR 008 # rev - # Current version: 6.1.0

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:	# PS streaming and CS speech RAB combinations		
Source:	# RAN WG2		
Work item code:	# TEI6	Date:	# 31/03/2003
Category:	# F	Release:	# Rel-6
	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 the future, there will be a lot of different use cases, where video content created by a mobile user is sent to another mobile user. An important case is the asymmetric video transmission/reception: The mobile subscriber in the other end wants only to view the video contents created by the other user, hence there is no need for bidirectional video connection. In such cases it would be optimal to use end-to-end unidirectional video connection, with a low bandwidth "return channel" for RTCP.

In these situations, there is also need for speech connection between the users before and during the video session. A user plane control signalling channel (e.g., for RTSP, HTTP, or SIP) is often needed, too.

This kind of video sessions can be implemented over conversational or streaming traffic class PDP context. In this CR, only the streaming alternative is proposed.

In contrast to normal streaming services, a "main channel" RAB for uplink streaming is needed (by the user presenting the video contents).

Highest video codec rates are typically in order of 56 ... 64 kbps. Because of overhead due to IP headers and RLC retransmissions, the nominal maximum data rate on RLC may be up to 128 kbps.

Summary of change: # The following combinations are presented for approval:

1. Streaming / unknown / UL: 16 DL:128 kbps / PS RAB
 - + Interactive or background / UL:8 DL:8 kbps / PS RAB
 - + Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 - + UL:3.4 DL:3.4 kbps SRBs for DCCH

- 2. Streaming / unknown / UL: 128 DL:16 kbps / PS RAB
 - + Interactive or background / UL:8 DL:8 kbps / PS RAB
 - + Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 - + UL:3.4 DL:3.4 kbps SRBs for DCCH

Consequences if not approved: ⌘ There are no examples on RAB combinations for the described services.

Clauses affected: ⌘ 5, 6, 7.1

	Y	N		⌘
Other specs affected:		X	Other core specifications	
		X	Test specifications	
		X	O&M Specifications	

Other comments: ⌘ The L1 parameters in this CR have been reviewed and approved in RAN1#31 (R1-030223).

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.

5 List of RABs and SRBs

The following table provides examples of Radio Access Bearers (RABs) which can be realised by Radio Bearers (RBs) as defined in clauses 7 and 8. The data rate given for each RAB is the maximum data rate that can be supported by that RAB.

The mapping between Radio Access Bearer and Radio Bearer is internal to UTRAN Radio Resource Management and not standardised. Based on certain Radio Access Bearer attributes, resource utilisation or radio conditions, different Radio Bearers can fulfill the Radio Access Bearer requirements.

Table 5.1: Examples of Radio Access Bearers (RABs).

#	Traffic class [2]	SSD	Max. rate, kbps	CS/PS
1	Conversational	Speech	UL:12.2 DL:12.2	CS
2	Conversational	Speech	UL:10.2 DL:10.2	CS
3	Conversational	Speech	UL:7.95 DL:7.95	CS
4	Conversational	Speech	UL:7.4 DL:7.4	CS
5	Conversational	Speech	UL:6.7 DL:6.7	CS
6	Conversational	Speech	UL:5.9 DL:5.9	CS
7	Conversational	Speech	UL:5.15 DL:5.15	CS
8	Conversational	Speech	UL:4.75 DL:4.75	CS
9	Conversational	Unknown	UL:28.8 DL:28.8	CS
10	Conversational	Unknown	UL:64 DL:64	CS
11	Conversational	Unknown	UL:32 DL:32	CS
12	Conversational	Unknown	UL:8 DL:8	PS
13	Conversational	Unknown	UL:16 DL:16	PS
14	Streaming	Unknown	UL:14.4 DL:14.4	CS
15	Streaming	Unknown	UL:28.8 DL:28.8	CS
16	Streaming	Unknown	UL:57.6 DL:57.6	CS
17	Streaming	Unknown	UL:0 DL:64	CS
18	Streaming	Unknown	UL:16 DL:64	PS
19	Streaming	Unknown	UL:64 DL:0	CS
20	Streaming	Unknown	UL:8 DL:16	PS
21	Streaming	Unknown	UL:8 DL:32	PS
22	Streaming	Unknown	UL:16 DL:64	PS
23	Streaming	Unknown	UL:32 DL:256	PS
24	Void			
25	Streaming	Unknown	UL:16 DL:128	PS
26	Void			
27	Void			
28	Interactive or Background	N/A	UL:32 DL:8	PS
29	Interactive or Background	N/A	UL:8 DL:8	PS
30	Interactive or Background	N/A	UL:16 DL:16	PS
31	Interactive or Background	N/A	UL:32 DL:32	PS
32	Interactive or Background	N/A	UL:64 DL:8	PS
33	Interactive or Background	N/A	UL:32 DL:64	PS
34	Interactive or Background	N/A	UL:64 DL:64	PS
35	Interactive or Background	N/A	UL:64 DL:128	PS
36	Interactive or Background	N/A	UL:128 DL:128	PS
37	Interactive or Background	N/A	UL:64 DL:384	PS
38	Interactive or Background	N/A	UL:128 DL:384	PS
39	Interactive or Background	N/A	UL:384 DL:384	PS
40	Interactive or Background	N/A	UL:64 DL:2048	PS
41	Interactive or Background	N/A	UL:128 DL:2048	PS
42	Interactive or Background	N/A	UL:384 DL:2048	PS
43	Interactive or Background	N/A	UL:64 DL:256	PS
44	Interactive or Background	N/A	UL:0 DL:32	PS
45	Interactive or Background	N/A	UL:32 DL: 0	PS
46	Interactive or Background	N/A	UL:0 DL:0	PS
47	Interactive or Background	N/A	UL:64 DL:144	PS
48	Interactive or Background	N/A	UL:144 DL:144	PS
49	Interactive or Background	N/A	UL:128 DL:32	PS
50	Streaming	Unknown	UL:16 DL:16	PS
51	Streaming	Unknown	UL:16 DL:32	PS
52	Interactive or Background	N/A	UL:16 DL:32	PS
53	Interactive or Background	N/A	UL:16 DL:64	PS
54	Interactive or Background	N/A	UL:16 DL:128	PS
55	Streaming	Unknown	UL:128 DL:16	PS

Table 5.2 provides examples of Signalling Radio Bearers (SRBs) which can use configurations as defined in clauses 7 and 8.

Table 5.2: Signalling Radio Bearers (SRBs)

#	Maximum rate, kbps	Logical channel	PhyCh onto which SRBs are mapped
1	UL:1.7 DL:1.7	DCCH	DPCH
2	UL:3.4 DL:3.4	DCCH	DPCH
3	UL:13.6 DL:13.6	DCCH	DPCH
4	DL:27.2 (alt. 40.8)	DCCH	SCCPCH
5	UL:16.6	CCCH	PRACH
6	DL:30.4 (alt. 45.6)	CCCH	SCCPCH
7	DL:33.2 (alt. 49.8)	BCCH:	SCCPCH
8	DL:24 (alt. 6.4)	PCCH	SCCPCH
9	UL:16.8 (TDD)	SHCCH	PRACH
10	UL:16.8 (TDD)	SHCCH	PRACH or PUSCH
11	DL:16 (TDD)	SHCCH	SCCPCH
12	DL:16 (TDD)	SHCCH	SCCPCH or PUSCH

6 Combinations of RABs

The present document contains examples of Radio configuration for following combinations of RABs.

NOTE: It is understood that for speech service the AMR mode may be operated asymmetrically for the uplink and downlink.

List of RAB combinations:

Combinations on DPCH

- 1) Stand-alone UL:1.7 DL:1.7 kbps SRBs for DCCH.
- 2) Stand-alone UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 3) Stand-alone UL:13.6 DL:13.6 kbps SRBs for DCCH.
- 4) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 5) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 6) Conversational / speech / UL:10.2 DL:10.2 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 7) Conversational / speech / UL:(10.2, 6.7, 5.9, 4.75) DL:(10.2, 6.7, 5.9, 4.75) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 8) Conversational / speech / UL:7.95 DL:7.95 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 9) Conversational / speech / UL:7.4 DL:7.4 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 10) Conversational / speech / UL:(7.4, 6.7, 5.9, 4.75) DL:(7.4, 6.7, 5.9, 4.75) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 11) Conversational / speech / UL:6.7 DL:6.7 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 12) Conversational / speech / UL:5.9 DL:5.9 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

- 13) Conversational / speech / UL:5.15 DL:5.15 kbps / CS RAB
+ UL:1.7 DL:1.7 kbps SRBs for DCCH.
- 14) Conversational / speech / UL:4.75 DL:4.75 kbps / CS RAB
+ UL:1.7 DL:1.7 kbps SRBs for DCCH.
- 15) Conversational / unknown / UL:28.8 DL:28.8 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 16) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 17) Conversational / unknown / UL:32 DL:32 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 18) Streaming / unknown / UL:14.4/DL:14.4 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 19) Streaming / unknown / UL:28.8/DL:28.8 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 20) Streaming / unknown / UL:57.6/DL:57.6 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 21) Streaming / unknown / UL:0 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 22) Streaming / unknown / UL:64 DL:0 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 23) Interactive or background / UL:32 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 24) Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 25) Interactive or background / UL:16 DL:16 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 26) Interactive or background / UL:32 DL:32 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 27) Interactive or background / UL:32 DL:32 kbps / PS RAB (20 ms TTI)
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 28) Interactive or background / UL:64 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 29) Interactive or background / UL:32 DL: 64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 30) Interactive or background / UL:64 DL: 64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 31) Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 32) Interactive or background / UL:128 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 33) Interactive or background / UL:64 DL:144 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 34) Interactive or background / UL:144 DL:144 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

- 35) Interactive or background / UL:64 DL:256 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH.
- 36) Interactive or background / UL:64 DL:384 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH.
- 37) Interactive or background / UL:128 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 38) Interactive or background / UL:384 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 39) Interactive or background / UL:64 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 40) Interactive or background / UL:128 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 41) Interactive or background / UL:384 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 42) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:32 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 43) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:0 DL:0 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH (FDD)
- 44) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH (FDD)
- 45) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:32 DL:32 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH (FDD)
- 46) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH (FDD)
- 47) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:0 DL:0 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 48) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 49) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:16 DL:16 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 50) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:32 DL:32 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 51) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 52) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)

- 53) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:32 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 54) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH.
- 55) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 56) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:256 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 57) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 58) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 59) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:128 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 60) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:57.6 DL:57.6 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 61) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:0 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 62) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 63) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 64) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 65) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 66) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or Background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 67) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or Background / UL:16 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 68) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

- 69) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
 + Interactive or background / UL:128 DL:128 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 70) Interactive or /background / UL:64 kbps DL:128 kbps / PS RAB
 + Streaming / unknown / UL:0 DL:64 kbps / CS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 71) Interactive or background / UL:8 DL:8 kbps / PS RAB
 + Interactive or background / UL:8 DL:8 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 72) Interactive or background / UL:64 DL:64 kbps / PS RAB
 + Interactive or background / UL:64 DL:64 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 73) Streaming / unknown / UL:16 DL:64 kbps / PS RAB
 + Interactive or background / UL:8 DL:8 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 74) Streaming / unknown / UL:16 DL:128 kbps / PS RAB
 + Interactive or background / UL:8 DL:8 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 75) Conversational / unknown / UL:8 DL:8 kbps / PS RAB
 + Interactive or Background / UL:8 DL:8 kbps / PS RAB +
 + UL:3.4 DL:3.4 kbps SRBs for DCCH

NOTE: Conversational / unknown / UL:8 DL:8 kbps / PS RAB – TF0 contains zero Transport Blocks

- 76) Conversational / unknown / UL:8 DL:8 kbps / PS RAB
 + Interactive or Background / UL:8 DL:8 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH

NOTE: Conversational / unknown / UL:8 DL:8 kbps / PS RAB – TF0 contains one Transport Block of zero size

- 77) Conversational / unknown / UL:16 DL:16 kbps / PS RAB +
 Interactive or Background / UL:8 DL:8 kbps / PS RAB +
 UL:3.4 DL:3.4 kbps SRBs for DCCH

NOTE: Conversational / unknown / UL:16 DL:16 kbps / PS RAB – TF0 contains zero Transport Blocks

- 78) Conversational / unknown / UL:16 DL:16 kbps / PS RAB +
 Interactive or Background / UL:8 DL:8 kbps / PS RAB +
 UL:3.4 DL:3.4 kbps SRBs for DCCH

NOTE: Conversational / unknown / UL:16 DL:16 kbps / PS RAB – TF0 contains one Transport Block of zero size

- 79) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + Interactive or Background / UL:0 DL:0 kbps / PS RAB
 + Interactive or Background / UL:0 DL:0 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH
- 80) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
 + Interactive or Background / UL:8 DL:8 kbps / PS RAB
 + Interactive or Background / UL:8 DL:8 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH
- 81) Streaming / unknown / UL:8 DL:16 kbps / PS RAB
 + Interactive or Background / UL:8 DL:8 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH
- 82) Streaming / unknown / UL:8 DL:32 kbps / PS RAB +
 Interactive or Background / UL:8 DL:8 kbps / PS RAB +
 UL:3.4 DL:3.4 kbps SRBs for DCCH

- 83) Streaming / unknown / UL:32 DL:256 kbps / PS RAB +
Interactive or Background / UL:8 DL:8 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH
- 84) Interactive or background / UL:16 DL:16 kbps / PS RAB +
Interactive or Background / UL:16 DL:16 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH
- 85) Interactive or background / UL:64 DL:8 kbps / PS RAB +
Interactive or Background / UL:64 DL:8 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH
- 86) Interactive or Background / UL:64 DL:128 kbps / PS RAB
+ Interactive or Background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 87) Interactive or Background / UL:64 DL:384 kbps / PS RAB
+ Interactive or Background / UL:64 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 88) Interactive or background / UL:128 DL:128 kbps / PS RAB +
Interactive or Background / UL:128 DL:128 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH
- 89) Interactive or background / UL:128 DL:32 kbps / PS RAB +
Interactive or Background / UL:128 DL:32 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH
- 90) Streaming / unknown / UL: 16 DL:16 kbps / PS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 91) Streaming / unknown / UL: 16 DL:32 kbps / PS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 92) Interactive or background / UL: 16 DL:32 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 93) Interactive or background / UL: 16 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 94) Interactive or background / UL: 16 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 95) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL: 16 DL:128 kbps / PS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 96) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL: 128 DL:16 kbps / PS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

Combinations on SCCPCH

- 1) Stand-alone 24 kbps SRB for PCCH.
- 2) Interactive or background / DL:32 kbps / PS RAB
+ SRB for CCCH
+ SRBs for DCCH
+ SRB for BCCH.

- 3) Interactive or background / DL:32 kbps / PS RAB
 - + SRB for PCCH
 - + SRB for CCCH
 - + SRBs for DCCH
 - + SRB for BCCH.
- 4) RB for CTCH (FDD)
 - + SRB for CCCH
 - +SRB for BCCH

Combinations on PRACH

- 1) Interactive or background / UL:32 kbps / PS RAB
 - + SRB for CCCH
 - + SRBs for DCCH.

Combinations on PDSCH, SCCPCH, PUSCH and PRACH (TDD)

- 1) Interactive or background / UL:64 DL:256 kbps / PS RAB
 - + UL:16.8 DL:33.6 kbps SRBs for DCCH, CCCH and BCCH
 - + UL:16.8 DL:16 kbps for SHCCH.
- 2) Interactive or background / UL:64 DL:384 kbps / PS RAB
 - + UL:16.8 DL:33.6 kbps SRBs for DCCH, CCCH and BCCH
 - + UL:16.8 DL:16 kbps for SHCCH.
- 3) Interactive or background / UL:64 DL:2048 kbps / PS RAB
 - + UL:3.4 DL:33.6 kbps SRBs for DCCH, CCCH and BCCH
 - + UL:16.8 DL:16 kbps for SHCCH.

Combinations on PDSCH, SCCPCH, DPCH, PUSCH and PRACH (TDD)

- 1) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 - + UL:3.4 DL:3.4 kbps SRBs for DCCH
 - + Interactive or background / UL:64 DL:256 kbps / PS RAB
 - + UL:16.8 kbps SRBs for CCCH and SHCCH
 - + DL:33.6 kbps SRBs for CCCH, SHCCH and BCCH
- 2) Conversationnal / speech / UL:12.2 DL:12.2 kbps / CS RAB
 - + UL:3.4 DL:3.4 kbps SRBs for DCCH
 - + Interactive or background / UL:64 DL:384 kbps / PS RAB
 - + UL:16.8 kbps SRBs for CCCH and SHCCH
 - + DL:33.6 kbps SRBs for CCCH, SHCCH and BCCH

Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH
 + Interactive or background / UL:64 DL:2048 kbps / PS RAB
 + UL:16.8 kbps SRBs for CCCH and SHCCH
 + DL:33.6 kbps SRBs for CCCH, SHCCH and BCCH

7 Examples of Radio Bearers and Signalling Radio Bearers for FDD

7.1 Combinations on DPCH

7.1.95 Conversational / speech / UL:12.2 DL:12.2 kbps + Streaming / unknown / UL:16 DL:128 kbps / PS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

The minimum UE classes supporting this combination are UL: 64 kbps, DL: 128 kbps. This is supported in release 99.

7.1.95.1 Uplink

7.1.95.1.1 Transport channel parameters

7.1.95.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See subclause 6.10.2.4.1.4.1.1.1 of [1]

7.1.95.1.1.2 Transport channel parameters for Streaming / unknown / UL:16 kbps

See subclause 6.10.2.4.1.58.1.1.1 of [1]

7.1.95.1.1.3 Transport channel parameters for Interactive or background / UL:8 kbps / PS RAB

See subclause 6.10.2.4.1.38b.1.1.2 of [1].

7.1.95.1.1.4 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See subclause 6.10.2.4.1.2.1.1.1 of [1]

7.1.95.1.1.5 TFCS

<u>TFCS size</u>	<u>24</u>
<u>TFCS</u>	<u>(RAB subflow#1, RAB subflow#2, RAB subflow#3, 16 kbps RAB, 8 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0,TF0), (TF2,TF1,TF1,TF0,TF0,TF0), (TF0,TF0,TF0,TF1,TF0,TF0), (TF1,TF0,TF0,TF1,TF0,TF0), (TF2,TF1,TF1,TF1,TF0,TF0), (TF0,TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF0,TF1,TF0), (TF2,TF1,TF1,TF0,TF1,TF0), (TF0,TF0,TF0,TF1,TF1,TF0), (TF1,TF0,TF0,TF1,TF1,TF0), (TF2,TF1,TF1,TF1,TF1,TF0), (TF0,TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF0,TF1), (TF2,TF1,TF1,TF0,TF0,TF1), (TF0,TF0,TF0,TF1,TF0,TF1), (TF1,TF0,TF0,TF1,TF0,TF1), (TF2,TF1,TF1,TF1,TF0,TF1), (TF0,TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF0,TF1,TF1), (TF2,TF1,TF1,TF0,TF1,TF1), (TF0,TF0,TF0,TF1,TF1,TF1), (TF1,TF0,TF0,TF1,TF1,TF1), (TF2,TF1,TF1,TF1,TF1,TF1)</u>

7.1.95.1.2 Physical channel parameters

<u>DPCH</u>	<u>Min spreading factor</u>	<u>16</u>
<u>Uplink</u>	<u>Max number of DPDCH data bits/radio frame</u>	<u>2400</u>
	<u>Puncturing Limit</u>	<u>1.0</u>

7.1.95.2 Downlink

7.1.95.2.1 Transport channel parameters

7.1.95.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See subclause 6.10.2.4.1.4.2.1.1 of [1]

7.1.95.2.1.2 Transport channel parameters for Streaming / unknown / DL:128 kbps / PS RAB

See subclause 7.1.74.2.1.1.

7.1.95.2.1.3 Transport channel parameters for Interactive or background / DL:8 kbps / PS RAB

See subclause 6.10.2.4.1.38b.2.1.2 of [1]

7.1.95.2.1.4 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See subclause 6.10.2.4.1.2.2.1.1 of [1]

7.1.95.2.1.5 TFCS

<u>TFCS size</u>	<u>48</u>
<u>TFCS</u>	<u>(RAB subflow#1, RAB subflow#2, RAB subflow#3, 128 kbps RAB, 8 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0,TF0), (TF2,TF1,TF1,TF0,TF0,TF0), (TF0,TF0,TF0,TF1,TF0,TF0), (TF1,TF0,TF0,TF1,TF0,TF0), (TF2,TF1,TF1,TF1,TF0,TF0), (TF0,TF0,TF0,TF2,TF0,TF0), (TF1,TF0,TF0,TF2,TF0,TF0), (TF2,TF1,TF1,TF2,TF0,TF0), (TF0,TF0,TF0,TF3,TF0,TF0), (TF1,TF0,TF0,TF3,TF0,TF0), (TF2,TF1,TF1,TF3,TF0,TF0), (TF0,TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF0,TF1,TF0), (TF2,TF1,TF1,TF0,TF1,TF0), (TF0,TF0,TF0,TF1,TF1,TF0), (TF1,TF0,TF0,TF1,TF1,TF0), (TF2,TF1,TF1,TF1,TF1,TF0), (TF0,TF0,TF0,TF2,TF1,TF0), (TF1,TF0,TF0,TF2,TF1,TF0), (TF2,TF1,TF1,TF2,TF1,TF0), (TF0,TF0,TF0,TF3,TF1,TF0), (TF1,TF0,TF0,TF3,TF1,TF0), (TF2,TF1,TF1,TF3,TF1,TF0), (TF0,TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF0,TF1), (TF2,TF1,TF1,TF0,TF0,TF1), (TF0,TF0,TF0,TF1,TF0,TF1), (TF1,TF0,TF0,TF1,TF0,TF1), (TF2,TF1,TF1,TF1,TF0,TF1), (TF0,TF0,TF0,TF2,TF0,TF1), (TF1,TF0,TF0,TF2,TF0,TF1), (TF2,TF1,TF1,TF2,TF0,TF1), (TF0,TF0,TF0,TF3,TF0,TF1), (TF1,TF0,TF0,TF3,TF0,TF1), (TF2,TF1,TF1,TF3,TF0,TF1), (TF0,TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF0,TF1,TF1), (TF2,TF1,TF1,TF0,TF1,TF1), (TF0,TF0,TF0,TF1,TF1,TF1), (TF1,TF0,TF0,TF1,TF1,TF1), (TF2,TF1,TF1,TF1,TF1,TF1), (TF0,TF0,TF0,TF2,TF1,TF1), (TF1,TF0,TF0,TF2,TF1,TF1), (TF2,TF1,TF1,TF2,TF1,TF1), (TF0,TF0,TF0,TF3,TF1,TF1), (TF1,TF0,TF0,TF3,TF1,TF1), (TF2,TF1,TF1,TF3,TF1,TF1)</u>

7.1.95.2.2 Physical channel parameters

<u>DPCH Downlink</u>	<u>DTX position</u>	<u>Flexible</u>	
	<u>Spreading factor</u>	<u>16</u>	
	<u>DPCCH</u>	<u>Number of TFCI bits/slot</u>	<u>8</u>
		<u>Number of TPC bits/slot</u>	<u>8</u>
		<u>Number of Pilot bits/slot</u>	<u>16</u>
	<u>DPDCH</u>	<u>Number of data bits/slot</u>	<u>288</u>
		<u>Number of data bits/frame</u>	<u>4320</u>

7.1.96 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming / unknown / UL:128 DL:16 kbps / PS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

The minimum UE classes supporting this combination are UL: 128 kbps, DL: 64 kbps. This is supported in release 99.

[7.1.96.1 Uplink](#)

[7.1.96.1.1 Transport channel parameters](#)

[7.1.96.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB](#)

See subclause 6.10.2.4.1.4.1.1.1 of [1]

[7.1.96.1.1.2 Transport channel parameters for Streaming / unknown / UL:128 kbps / PS RAB](#)

Higher Layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	AM	
	Payload sizes, bit	640	
	Max data rate, bps	128000	
	AM PDU header, bit	16	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	656	
	TFS	TF0, bits	0x656
		TF1, bits	1x656
		TF2, bits	2x656
		TF3, bits	4x656
	TTI, ms	20	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	8076	
	Uplink: Max number of bits/radio frame before rate matching	4038	
RM attribute	125-165		

[7.1.96.1.1.3 Transport channel parameters for Interactive or background / UL:8 kbps / PS RAB](#)

See subclause 6.10.2.4.1.38b.1.1.2 of [1].

[7.1.96.1.1.4 Transport channel parameters for UL:3.4 kbps SRBs for DCCH](#)

See subclause 6.10.2.4.1.2.1.1.1 of [1]

7.1.96.1.1.5 TFCS

<u>TFCS size</u>	<u>48</u>
<u>TFCS</u>	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 128 kbps RAB, 8 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0,TF0), (TF2,TF1,TF1,TF0,TF0,TF0), (TF0,TF0,TF0,TF1,TF0,TF0), (TF1,TF0,TF0,TF1,TF0,TF0), (TF2,TF1,TF1,TF1,TF0,TF0), (TF0,TF0,TF0,TF2,TF0,TF0), (TF1,TF0,TF0,TF2,TF0,TF0), (TF2,TF1,TF1,TF2,TF0,TF0), (TF0,TF0,TF0,TF3,TF0,TF0), (TF1,TF0,TF0,TF3,TF0,TF0), (TF2,TF1,TF1,TF3,TF0,TF0), (TF0,TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF0,TF1,TF0), (TF2,TF1,TF1,TF0,TF1,TF0), (TF0,TF0,TF0,TF1,TF1,TF0), (TF1,TF0,TF0,TF1,TF1,TF0), (TF2,TF1,TF1,TF1,TF1,TF0), (TF0,TF0,TF0,TF2,TF1,TF0), (TF1,TF0,TF0,TF2,TF1,TF0), (TF2,TF1,TF1,TF2,TF1,TF0), (TF0,TF0,TF0,TF3,TF1,TF0), (TF1,TF0,TF0,TF3,TF1,TF0), (TF2,TF1,TF1,TF3,TF1,TF0), (TF0,TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF0,TF1), (TF2,TF1,TF1,TF0,TF0,TF1), (TF0,TF0,TF0,TF1,TF0,TF1), (TF1,TF0,TF0,TF1,TF0,TF1), (TF2,TF1,TF1,TF1,TF0,TF1), (TF0,TF0,TF0,TF2,TF0,TF1), (TF1,TF0,TF0,TF2,TF0,TF1), (TF2,TF1,TF1,TF2,TF0,TF1), (TF0,TF0,TF0,TF3,TF0,TF1), (TF1,TF0,TF0,TF3,TF0,TF1), (TF2,TF1,TF1,TF3,TF0,TF1), (TF0,TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF0,TF1,TF1), (TF2,TF1,TF1,TF0,TF1,TF1), (TF0,TF0,TF0,TF1,TF1,TF1), (TF1,TF0,TF0,TF1,TF1,TF1), (TF2,TF1,TF1,TF1,TF1,TF1), (TF0,TF0,TF0,TF2,TF1,TF1), (TF1,TF0,TF0,TF2,TF1,TF1), (TF2,TF1,TF1,TF2,TF1,TF1), (TF0,TF0,TF0,TF3,TF1,TF1), (TF1,TF0,TF0,TF3,TF1,TF1), (TF2,TF1,TF1,TF3,TF1,TF1)

7.1.96.1.2 Physical channel parameters

<u>DPCH Uplink</u>	<u>Min spreading factor</u>	<u>8</u>
	<u>Max number of DPDCH data bits/radio frame</u>	<u>4800</u>
	<u>Puncturing Limit</u>	<u>0.92</u>

7.1.96.2 Downlink

7.1.96.2.1 Transport channel parameters

7.1.96.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See subclause 6.10.2.4.1.4.2.1.1 of [1]

7.1.96.2.1.2 Transport channel parameters for Streaming / unknown / DL:16 kbps / PS RAB

See subclause 7.1.81.2.1.1

7.1.96.2.1.3 Transport channel parameters for Interactive or background / DL:8 kbps / PS RAB

See subclause 6.10.2.4.1.38b.2.1.2 of [1].

7.1.96.2.1.4 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See subclause 6.10.2.4.1.2.2.1.1 of [1]

7.1.96.2.1.5 TFCS

<u>TFCS size</u>	<u>24</u>
<u>TFCS</u>	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 16 kbps RAB, 8 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0,TF0), (TF2,TF1,TF1,TF0,TF0,TF0), (TF0,TF0,TF0,TF1,TF0,TF0), (TF1,TF0,TF0,TF1,TF0,TF0), (TF2,TF1,TF1,TF1,TF0,TF0), (TF0,TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF0,TF1,TF0), (TF2,TF1,TF1,TF0,TF1,TF0), (TF0,TF0,TF0,TF1,TF1,TF0), (TF1,TF0,TF0,TF1,TF1,TF0), (TF2,TF1,TF1,TF1,TF1,TF0), (TF0,TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF0,TF1), (TF2,TF1,TF1,TF0,TF0,TF1), (TF0,TF0,TF0,TF1,TF0,TF1), (TF1,TF0,TF0,TF1,TF0,TF1), (TF2,TF1,TF1,TF1,TF0,TF1), (TF0,TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF0,TF1,TF1), (TF2,TF1,TF1,TF0,TF1,TF1), (TF0,TF0,TF0,TF1,TF1,TF1), (TF1,TF0,TF0,TF1,TF1,TF1), (TF2,TF1,TF1,TF1,TF1,TF1)

7.1.96.2.2 Physical channel parameters

<u>DPCH</u> <u>Downlink</u>	<u>DTX position</u>		<u>Flexible</u>
	<u>Spreading factor</u>		<u>64</u>
	<u>DPCCH</u>	<u>Number of TFCI bits/slot</u>	<u>8</u>
		<u>Number of TPC bits/slot</u>	<u>4</u>
		<u>Number of Pilot bits/slot</u>	<u>8</u>
	<u>DPDCH</u>	<u>Number of data bits/slot</u>	<u>60</u>
		<u>Number of data bits/frame</u>	<u>900</u>

3GPP TSG RAN WG2 meeting #36
Paris, France, 19-23 May 2003

Tdoc R2-031428

CR-Form-v7	CHANGE REQUEST
⌘ 25.993 CR 009 ⌘ rev ⌘ Current version: 6.1.0 ⌘	

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:	⌘ RB configuration for the support of wideband AMR speech telephony services		
Source:	⌘ RAN WG2		
Work item code:	⌘ TEI6	Date:	⌘ 21 st May 2003
Category:	⌘ F	Release:	⌘ REL-6
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ As per now, there is no test case defined to allow the support of AMR wideband telephony services.
Summary of change:	⌘ The following Release 5 radio bearer combination is included: - Conversational / speech / UL:(12.65 8.85 6.6) DL:(12.65 8.85 6.6) kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH + DL:0.15 kbps SRB#5 for DCCH.
Consequences if not approved:	⌘ UE interoperability testing would not contain any radio bearer configuration for the provision of AMR wideband services..

Clauses affected:	⌘ 5, 6, 7.1										
Other specs affected:	<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> <tr> <td style="padding: 2px 5px;"><input checked="" type="checkbox"/></td> <td style="padding: 2px 5px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 2px 5px;"><input checked="" type="checkbox"/></td> <td style="padding: 2px 5px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 2px 5px;"><input checked="" type="checkbox"/></td> <td style="padding: 2px 5px;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
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.

5 List of RABs and SRBs

The following table provides examples of Radio Access Bearers (RABs) which can be realised by Radio Bearers (RBs) as defined in clauses 7 and 8. The data rate given for each RAB is the maximum data rate that can be supported by that RAB.

The mapping between Radio Access Bearer and Radio Bearer is internal to UTRAN Radio Resource Management and not standardised. Based on certain Radio Access Bearer attributes, resource utilisation or radio conditions, different Radio Bearers can fulfill the Radio Access Bearer requirements.

Table 5.1: Examples of Radio Access Bearers (RABs).

#	Traffic class [2]	SSD	Max. rate, kbps	CS/PS
1	Conversational	Speech	UL:12.2 DL:12.2	CS
2	Conversational	Speech	UL:10.2 DL:10.2	CS
3	Conversational	Speech	UL:7.95 DL:7.95	CS
4	Conversational	Speech	UL:7.4 DL:7.4	CS
5	Conversational	Speech	UL:6.7 DL:6.7	CS
6	Conversational	Speech	UL:5.9 DL:5.9	CS
7	Conversational	Speech	UL:5.15 DL:5.15	CS
8	Conversational	Speech	UL:4.75 DL:4.75	CS
9	Conversational	Unknown	UL:28.8 DL:28.8	CS
10	Conversational	Unknown	UL:64 DL:64	CS
11	Conversational	Unknown	UL:32 DL:32	CS
12	Conversational	Unknown	UL:8 DL:8	PS
13	Conversational	Unknown	UL:16 DL:16	PS
14	Streaming	Unknown	UL:14.4 DL:14.4	CS
15	Streaming	Unknown	UL:28.8 DL:28.8	CS
16	Streaming	Unknown	UL:57.6 DL:57.6	CS
17	Streaming	Unknown	UL:0 DL:64	CS
18	Streaming	Unknown	UL:16 DL:64	PS
19	Streaming	Unknown	UL:64 DL:0	CS
20	Streaming	Unknown	UL:8 DL:16	PS
21	Streaming	Unknown	UL:8 DL:32	PS
22	Streaming	Unknown	UL:16 DL:64	PS
23	Streaming	Unknown	UL:32 DL:256	PS
24	Void			
25	Streaming	Unknown	UL:16 DL:128	PS
26	Void			
27	Void			
28	Interactive or Background	N/A	UL:32 DL:8	PS
29	Interactive or Background	N/A	UL:8 DL:8	PS
30	Interactive or Background	N/A	UL:16 DL:16	PS
31	Interactive or Background	N/A	UL:32 DL:32	PS
32	Interactive or Background	N/A	UL:64 DL:8	PS
33	Interactive or Background	N/A	UL:32 DL:64	PS
34	Interactive or Background	N/A	UL:64 DL:64	PS
35	Interactive or Background	N/A	UL:64 DL:128	PS
36	Interactive or Background	N/A	UL:128 DL:128	PS
37	Interactive or Background	N/A	UL:64 DL:384	PS
38	Interactive or Background	N/A	UL:128 DL:384	PS
39	Interactive or Background	N/A	UL:384 DL:384	PS
40	Interactive or Background	N/A	UL:64 DL:2048	PS
41	Interactive or Background	N/A	UL:128 DL:2048	PS
42	Interactive or Background	N/A	UL:384 DL:2048	PS
43	Interactive or Background	N/A	UL:64 DL:256	PS
44	Interactive or Background	N/A	UL:0 DL:32	PS
45	Interactive or Background	N/A	UL:32 DL: 0	PS
46	Interactive or Background	N/A	UL:0 DL:0	PS
47	Interactive or Background	N/A	UL:64 DL:144	PS
48	Interactive or Background	N/A	UL:144 DL:144	PS
49	Interactive or Background	N/A	UL:128 DL:32	PS
50	Streaming	Unknown	UL:16 DL:16	PS
51	Streaming	Unknown	UL:16 DL:32	PS
52	Interactive or Background	N/A	UL:16 DL:32	PS
53	Interactive or Background	N/A	UL:16 DL:64	PS
54	Interactive or Background	N/A	UL:16 DL:128	PS
55	Conversational	Speech	UL:(12.65 8.85 6.6) DL:(12.65 8.85 6.6)	CS

Table 5.2 provides examples of Signalling Radio Bearers (SRBs) which can use configurations as defined in clauses 7 and 8.

Table 5.2: Signalling Radio Bearers (SRBs)

#	Maximum rate, kbps	Logical channel	PhyCh onto which SRBs are mapped
1	UL:1.7 DL:1.7	DCCH	DPCH
2	UL:3.4 DL:3.4	DCCH	DPCH
3	UL:13.6 DL:13.6	DCCH	DPCH
4	DL:27.2 (alt. 40.8)	DCCH	SCCPCH
5	UL:16.6	CCCH	PRACH
6	DL:30.4 (alt. 45.6)	CCCH	SCCPCH
7	DL:33.2 (alt. 49.8)	BCCH:	SCCPCH
8	DL:24 (alt. 6.4)	PCCH	SCCPCH
9	UL:16.8 (TDD)	SHCCH	PRACH
10	UL:16.8 (TDD)	SHCCH	PRACH or PUSCH
11	DL:16 (TDD)	SHCCH	SCCPCH
12	DL:16 (TDD)	SHCCH	SCCPCH or PUSCH
13	DL: 0.15	DCCH	DPCH

6 Combinations of RABs

The present document contains examples of Radio configuration for following combinations of RABs.

NOTE: It is understood that for speech service the AMR mode may be operated asymmetrically for the uplink and downlink.

List of RAB combinations:

Combinations on DPCH

- 1) Stand-alone UL:1.7 DL:1.7 kbps SRBs for DCCH.
- 2) Stand-alone UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 3) Stand-alone UL:13.6 DL:13.6 kbps SRBs for DCCH.
- 4) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 5) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 6) Conversational / speech / UL:10.2 DL:10.2 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 7) Conversational / speech / UL:(10.2, 6.7, 5.9, 4.75) DL:(10.2, 6.7, 5.9, 4.75) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 8) Conversational / speech / UL:7.95 DL:7.95 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 9) Conversational / speech / UL:7.4 DL:7.4 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 10) Conversational / speech / UL:(7.4, 6.7, 5.9, 4.75) DL:(7.4, 6.7, 5.9, 4.75) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 11) Conversational / speech / UL:6.7 DL:6.7 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

- 12) Conversational / speech / UL:5.9 DL:5.9 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 13) Conversational / speech / UL:5.15 DL:5.15 kbps / CS RAB
+ UL:1.7 DL:1.7 kbps SRBs for DCCH.
- 14) Conversational / speech / UL:4.75 DL:4.75 kbps / CS RAB
+ UL:1.7 DL:1.7 kbps SRBs for DCCH.
- 15) Conversational / unknown / UL:28.8 DL:28.8 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 16) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 17) Conversational / unknown / UL:32 DL:32 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 18) Streaming / unknown / UL:14.4/DL:14.4 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 19) Streaming / unknown / UL:28.8/DL:28.8 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 20) Streaming / unknown / UL:57.6/DL:57.6 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 21) Streaming / unknown / UL:0 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 22) Streaming / unknown / UL:64 DL:0 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 23) Interactive or background / UL:32 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 24) Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 25) Interactive or background / UL:16 DL:16 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 26) Interactive or background / UL:32 DL:32 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 27) Interactive or background / UL:32 DL:32 kbps / PS RAB (20 ms TTI)
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 28) Interactive or background / UL:64 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 29) Interactive or background / UL:32 DL: 64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 30) Interactive or background / UL:64 DL: 64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 31) Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 32) Interactive or background / UL:128 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 33) Interactive or background / UL:64 DL:144 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

- 34) Interactive or background / UL:144 DL:144 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 35) Interactive or background / UL:64 DL:256 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH.
- 36) Interactive or background / UL:64 DL:384 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH.
- 37) Interactive or background / UL:128 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 38) Interactive or background / UL:384 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 39) Interactive or background / UL:64 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 40) Interactive or background / UL:128 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 41) Interactive or background / UL:384 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 42) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:32 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 43) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:0 DL:0 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH (FDD)
- 44) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH (FDD)
- 45) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:32 DL:32 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH (FDD)
- 46) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH (FDD)
- 47) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:0 DL:0 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 48) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 49) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:16 DL:16 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 50) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:32 DL:32 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 51) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)

- 52) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 53) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:32 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 54) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH.
- 55) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 56) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:256 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 57) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 58) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 59) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:128 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 60) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:57.6 DL:57.6 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 61) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:0 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 62) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 63) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 64) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 65) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 66) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or Background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 67) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or Background / UL:16 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)

- 68) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 69) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or background / UL:128 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 70) Interactive or /background / UL:64 kbps DL:128 kbps / PS RAB
+ Streaming / unknown / UL:0 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 71) Interactive or background / UL:8 DL:8 kbps / PS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 72) Interactive or background / UL:64 DL:64 kbps / PS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 73) Streaming / unknown / UL:16 DL:64 kbps / PS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH. (FDD)
- 74) Streaming / unknown / UL:16 DL:128 kbps / PS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 75) Conversational / unknown / UL:8 DL:8 kbps / PS RAB
+ Interactive or Background / UL:8 DL:8 kbps / PS RAB +
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

NOTE: Conversational / unknown / UL:8 DL:8 kbps / PS RAB – TF0 contains zero Transport Blocks

- 76) Conversational / unknown / UL:8 DL:8 kbps / PS RAB
+ Interactive or Background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

NOTE: Conversational / unknown / UL:8 DL:8 kbps / PS RAB – TF0 contains one Transport Block of zero size

- 77) Conversational / unknown / UL:16 DL:16 kbps / PS RAB +
Interactive or Background / UL:8 DL:8 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH

NOTE: Conversational / unknown / UL:16 DL:16 kbps / PS RAB – TF0 contains zero Transport Blocks

- 78) Conversational / unknown / UL:16 DL:16 kbps / PS RAB +
Interactive or Background / UL:8 DL:8 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH

NOTE: Conversational / unknown / UL:16 DL:16 kbps / PS RAB – TF0 contains one Transport Block of zero size

- 79) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or Background / UL:0 DL:0 kbps / PS RAB
+ Interactive or Background / UL:0 DL:0 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

- 80) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or Background / UL:8 DL:8 kbps / PS RAB
+ Interactive or Background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

- 81) Streaming / unknown / UL:8 DL:16 kbps / PS RAB
+ Interactive or Background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

- 82) Streaming / unknown / UL:8 DL:32 kbps / PS RAB +
Interactive or Background / UL:8 DL:8 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH
- 83) Streaming / unknown / UL:32 DL:256 kbps / PS RAB +
Interactive or Background / UL:8 DL:8 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH
- 84) Interactive or background / UL:16 DL:16 kbps / PS RAB +
Interactive or Background / UL:16 DL:16 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH
- 85) Interactive or background / UL:64 DL:8 kbps / PS RAB +
Interactive or Background / UL:64 DL:8 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH
- 86) Interactive or Background / UL:64 DL:128 kbps / PS RAB
+ Interactive or Background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 87) Interactive or Background / UL:64 DL:384 kbps / PS RAB
+ Interactive or Background / UL:64 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 88) Interactive or background / UL:128 DL:128 kbps / PS RAB +
Interactive or Background / UL:128 DL:128 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH
- 89) Interactive or background / UL:128 DL:32 kbps / PS RAB +
Interactive or Background / UL:128 DL:32 kbps / PS RAB +
UL:3.4 DL:3.4 kbps SRBs for DCCH
- 90) Streaming / unknown / UL: 16 DL:16 kbps / PS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 91) Streaming / unknown / UL: 16 DL:32 kbps / PS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 92) Interactive or background / UL: 16 DL:32 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 93) Interactive or background / UL: 16 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 94) Interactive or background / UL: 16 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 95) Conversational / speech / UL:(12.65 8.85 6.6) DL:(12.65 8.85 6.6) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH + DL:0.15 kbps SRB#5 for DCCH

7.1.95 Conversational / speech / UL:(12.65 8.85 6.6) DL:(12.65 8.85 6.6) kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH + DL:0.15 kbps SRB#5 for DCCH

See subclause 6.10.2.4.1.62 of [1].

The minimum UE classes supporting this combination are UL: 32 kbps, DL: 32 kbps.

This is supported in Release '5.

CHANGE REQUEST

25.993 CR 010 # rev - # Current version: 6.1.0

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:	# Corrections on TDD RAB's		
Source:	# RAN WG2		
Work item code:	# TE16	Date:	# 19 May1 2003
Category:	# F	Release:	# Rel-6
	<i>Use one of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	# Redundent duplications of "for 3.84 Mcps TDD" from and "for 1.28 Mcps TDD" from the subsections inside section 8 and section 9, respectively. Descriptions of some notes are missing from the text.
Summary of change:	# Remove "for 3.84 Mcps TDD" from and "for 1.28 Mcps TDD" from the subsections of section 8 and section 9, respectively. Missed notes on Combinations on PDSCH, SCCH, PUSCH and PRACH are added. Editorial changes including erase of parathensis, etc in order to clarify the text.
Consequences if not approved:	# Descriptions of UE classes for TDD RAB are not complete.

Clauses affected:	# 8, 9										
Other specs Affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications Test specifications O&M Specifications	Y	N	#	X	#	X	#	X	#	
Y	N										
#	X										
#	X										
#	X										

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.

8 Examples of Radio Bearers and Signalling Radio Bearers for 3.84 Mcps TDD

8.1 Combinations on DPCH

8.1.1 Stand-alone UL:1.7 DL:1.7 kbps SRBs for DCCH

See subclause 6.10.3.4.1.1 of [1] ~~for 3.84 Mcps TDD~~.

The minimum UE classes supporting this combination are UL: 32kbps, DL: 32kbps.

This is supported in Release '99.

8.1.2 Stand-alone UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.2 of [1] ~~for 3.84 Mcps TDD~~.

The minimum UE classes supporting this combination are UL: 32kbps, DL: 32kbps.

This is supported in Release '99.

8.1.3 Stand-alone UL:13.6 DL:13.6 kbps SRBs for DCCH

See subclause 6.10.3.4.1.3 of [1] ~~for 3.84 Mcps TDD~~.

The minimum UE classes supporting this combination are UL: 32kbps, DL: 32kbps.

This is supported in Release '99.

8.1.4 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.4 of [1] ~~for 3.84 Mcps TDD~~.

The minimum UE classes supporting this combination are UL: 32kbps, DL: 32kbps.

This is supported in Release '99.

8.1.5 Conversational / speech / UL:10.2 DL:10.2 kbps / CS RAB + UL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.5 of [1] ~~for 3.84 Mcps TDD~~.

The minimum UE classes supporting this combination are UL: 32kbps, DL: 32kbps.

This is supported in Release '99.

8.1.6 Conversational / speech / UL:7.95 DL:7.95 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.6 of [1] ~~for 3.84 Mcps TDD~~.

The minimum UE classes supporting this combination are UL: 32kbps, DL: 32kbps.

This is supported in Release '99.

8.1.7 Conversational / speech / UL:7.4 DL:7.4 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.7 of [1], ~~for 3.84 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps, DL: 32kbps.

This is supported in Release '99.

8.1.8 Conversational / speech / UL:6.7 DL: 6.7 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.8 of [1], ~~for 3.84 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps, DL: 32kbps.

This is supported in Release '99.

8.1.9 Conversational / speech / UL:5.9 DL:5.9 kbps / CS rab + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.9 of [1], ~~for 3.84 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps, DL: 32kbps.

This is supported in Release '99.

8.1.10 Conversational / speech / UL:5.15 DL:5.15 kbps / CS RAB + UL:1.7 DL:1.7 kbps SRBs for DCCH

See subclause 6.10.3.4.1.10 of [1], ~~for 3.84 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps, DL: 32kbps.

This is supported in Release '99.

8.1.11 Conversational / speech / UL:4.75 DL:4.75 kbps / CS RAB + UL:1.7 DL:1.7 kbps SRBs for DCCH

See subclause 6.10.3.4.1.11 of [1], ~~for 3.84 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps, DL: 32kbps.

This is supported in Release '99.

8.1.12 Conversational / unknown / UL:28.8 DL:28.8kbps / CS RAB + UL:3.4 DL:3.4kbps SRBs for DCCH

See subclause 6.10.3.4.1.12 of [1], ~~for 3.84 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps plus support for turbo coding, maximum TB bits 2560 and TB TC bits 1280, DL: 32kbps plus support for turbo coding, maximum TB bits 2560 and TB TC bits 1280.

This is supported in Release '99.

8.1.13 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.13 of [1]. ~~for 3.84 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps, DL: 32kbps plus support for turbo coding, maximum TB bits 2560 (Alt. 3840), and TB TC bits 1280 (Alt. 2560).

This is supported in Release '99.

8.1.14 Conversational / unknown / UL:32 DL: 32 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.14 of [1]. ~~for 3.84 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps plus support for minimum SF 4, turbo coding, maximum TB bits 1280 (Alt. 2560) and TB TC bits 640 (Alt. 1280), DL: 32kbps plus support for turbo coding, maximum TB bits 1280 (Alt. 2560) and TB TC bits 640 (Alt. 1280).

This is supported in Release '99.

8.1.15 Streaming / unknown / UL:14.4 DL:14.4 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.15 of [1]. ~~for 3.84 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps plus support for turbo coding, maximum TB bits 1280 and TB TC bits 640, DL: 32kbps plus support for turbo coding, maximum TB bits 1280 and TB TC bits 640.

This is supported in Release '99.

8.1.16 Streaming / unknown / UL:28.8 DL:28.8 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.16 of [1]. ~~for 3.84 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps plus support for turbo coding, maximum TB bits 2560 and TB TC bits 1280, DL: 32kbps plus support for turbo coding, maximum TB bits 2560 and TB TC bits 1280.

This is supported in Release '99.

8.1.17 Streaming / unknown / UL: 57.6 DL: 57.6 kbps / CS RAB + UL: 3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.17 of [1]. ~~for 3.84 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps, DL: 64kbps plus support for turbo coding, maximum TB bits 2560, and maximum TC TB bits 2560.

This is supported in Release '99.

8.1.18 Streaming / unknown / UL:0 DL: 64 kbps / CS or PS RAB + UL: 3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.18 of [1], ~~for 3.84 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps; DL: 32kbps plus support for turbo coding, maximum TB bits 3840, maximum TC TB bits 2560, and maximum 16 TBs per TTI.

This is supported in Release '99.

8.1.19 Streaming / unknown / UL: 64 DL:0 kbps / CS or PS RAB + UL: 3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.19 of [1], ~~for 3.84 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps plus support for maximum 16 TBs per TTI, and 2 physical channels per TS, DL: 32kbps.

This is supported in Release '99.

8.1.20 Interactive or background / UL: 32 DL:8 kbps / PS RAB + UL: 3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.23 of [1], ~~for 3.84 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps, or alternatively plus support for maximum CC TB bits 1280 if turbo coding is not used; DL: 32kbps plus support for turbo coding plus maximum TC TB bits 640, or alternatively, not support for turbo coding if convolutional coding with rate 1/3 is used.

This is supported in Release '99.

8.1.21 Interactive or background / UL: 64 DL: 8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.24 of [1], ~~for 3.84 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps plus support for 2 physical channels per TS, DL: 32kbps plus support for turbo coding, maximum TC TB bits 640, or alternatively not support for turbo coding if convolutional coding with rate 1/3 is used.

This is supported in Release '99.

8.1.22 Interactive or background / UL: 32 DL: 64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.25 of [1], ~~for 3.84 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps, or ~~(alternatively plus support for maximum CC TB bits 1280 if convolutional coding with rate 1/3 is used instead of turbo coding);~~ DL: 32kbps plus support for turbo coding, maximum TB bits 2560, and maximum TC TB bits 2560.

This is supported in Release '99.

8.1.23 Interactive or background / UL: 64 DL: 64 kbps / PS RAB + UL: 3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.26 of [1]. ~~for 3.84 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps plus support for 2 physical channels per TS; DL: 32kbps plus support for turbo coding, maximum TB bits 2560, and maximum TC TB bits 2560.

This is supported in Release '99.

8.1.24 Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.27 of [1]. ~~for 3.84 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps plus support for 2 physical channels per TS; DL: 32 kbps plus support for turbo coding, maximum TB bits 3840, maximum TC TB bits 3840, and maximum 16 TBs per TTI.

This is supported in Release '99.

8.1.25 Interactive or background / UL:128 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.28 of [1]. ~~for 3.84 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps plus support for maximum 16 TBs per TTI; DL: 32 kbps plus support for turbo coding, maximum TB bits 3840, maximum TC TB bits 3840, and maximum 16 TBs per TTI.

This is supported in Release '99.

8.1.26 Interactive or background / UL:64 DL:144 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.29 of [1]. ~~for 3.84 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps plus support for 2 physical channels per TS; DL: 64 kbps plus support for maximum 16 TBs per TTI.

This is supported in Release '99.

8.1.27 Interactive or background / UL: 144 DL: 144 kbps / PS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.30 of [1]. ~~for 3.84 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps plus support for maximum 16 TBs per TTI, and 2 physical channels per TS; DL: 64 kbps plus support for maximum 16 TBs per TTI.

This is supported in Release '99.

8.1.28 Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.31 of [1]. ~~for 3.84 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps plus support for 2 physical channels per TS; DL: 128kbps plus support for 16 physical channels per frame, ~~or and~~(if an alternative RAB is used, plus support for maximum TB bits 6400, maximum TC TB bits 6400, and maximum 32 TBs per TTI).

This is supported in Release '99.

8.1.29 Interactive or background / UL: 64 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.32 of [1], ~~for 3.84 Meps TDD~~.

The minimum UE classes supporting this combination are UL: 64kbps plus support for 2 physical channels per TS; DL: 384kbps ~~or and plus~~(if an alternative RAB is used, support for maximum TB bits 8960, maximum TC TB bits 8960).

This is supported in Release '99.

8.1.30 Interactive or background / UL:128 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.33 of [1], ~~for 3.84 Meps TDD~~.

The minimum UE classes supporting this combination are UL: 64kbps plus support for maximum 16 TBs per TTI; DL: 384kbps ~~or and plus~~(if an alternative RAB is used, support for maximum TB bits 8960, maximum TC TB bits 8960).

This is supported in Release '99.

8.1.31 Interactive or background / UL:384 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.34 of [1], ~~for 3.84 Meps TDD~~.

The minimum UE classes supporting this combination are UL: 128kbps plus support for maximum TB bits 8960, maximum TC TB bits 8960, and maximum 32 TBs per TTI, ~~or and~~(if an alternative RAB is used, plus support for maximum TB bits 5120, maximum TC TB bits 5120, and maximum 16 TBs per TTI); DL: 384kbps ~~or and~~(if an alternative RAB is used, plus support for maximum TB bits 8960, maximum TC TB bits 8960).

This is supported in Release '99.

8.1.32 Interactive or background / UL:64 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.35 of [1], ~~for 3.84 Meps TDD~~.

The minimum UE classes supporting this combination are UL: 64kbps plus support for 2 physical channels per TS; DL: 2048kbps plus support for maximum TB bits 40960 and maximum TB TC bits 40960, ~~or and~~(if an alternative RAB is used, plus support for maximum TB bits 81920 and maximum TC TB bits 81920).

This is supported in Release '99.

8.1.33 Interactive or background / UL:128 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.36 of [1], ~~for 3.84 Meps TDD~~.

The minimum UE classes supporting this combination are UL: 64kbps plus support for maximum 16 TBs per TTI; DL: 2048kbps plus support for maximum TB bits 40960 and maximum TB TC bits 40960, ~~or and~~(if an alternative RAB is used, plus support for maximum TB bits 81920 and maximum TB TC bits 81920).

This is supported in Release '99.

8.1.34 Interactive or background / UL: 384 DL:2048 kbps / PS RAB+UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.37 of [1]. ~~for 3.84 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 128kbps plus support for maximum TB bits 8690, maximum TC TB bits 8690, and maximum 32 TBs per TTI, ~~or~~ (if an alternative RAB is used, plus support for maximum TB bits 5120, maximum TC TB bits 5120 and maximum 16 TBs per TTI); DL: 2048 kbps plus support for maximum TB bits 40960, maximum TB TC bits 40960, optional SF 1, ~~or and~~ (if an alternative RAB is used, plus support for maximum TB bits 81920 and maximum TB TC bits 81920).

This is supported in Release '99.

8.1.35 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.38 of [1]. ~~for 3.84 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 64 kbps, ~~or and~~ (if turbo coding is alternatively not used, support for maximum CC TB bits 1280); DL: 32 kbps plus support for Turbo coding, maximum TC TB bits 640, and maximum TB bits 1280, or (alternatively, if convolutional coding with rate 1/3 is used instead of turbo coding, support for maximum CC TB bits 1280).

This is supported in Release '99.

8.1.36 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.39 of [1]. ~~for 3.84 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 64 kbps, (alternatively, if convolutional coding with rate 1/3 is used instead of turbo coding, support for maximum TC TB bits 1280); DL: 32 kbps plus support for turbo coding, maximum TB bits 2560, maximum TC TB bits 2560.

This is supported in Release '99.

8.1.37 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.40 of [1]. ~~for 3.84 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps; DL: 32 kbps plus support for turbo coding, maximum TB bits 2560, and maximum TC TB bits 2560.

This is supported in Release '99.

**8.1.38 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH**

See subclause 6.10.3.4.1.41 of [1], ~~for 3.84 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64 kbps; DL: 128 kbps.

This is supported in Release '99.

**8.1.39 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH**

See subclause 6.10.3.4.1.42 of [1], ~~for 3.84 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64 kbps; DL: 128 kbps plus support of 20 physical channels per frame and 10 physical channels per TS, ~~or and~~ (if an alternative RAB is used, plus support for maximum TB bits 6400, maximum TC TB bits 6400, and maximum 32 TBs per TTI).

This is supported in Release '99.

**8.1.40 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH**

See subclause 6.10.3.4.1.43 of [1], ~~for 3.84 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64 kbps; DL: 384 kbps plus, ~~or~~ (if an alternative RAB is used, support for maximum TB bits 8960, maximum TC TB bits 8960).

This is supported in Release '99.

**8.1.41 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:128 DL:2048 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH**

See subclause 6.10.3.4.1.44 of [1], ~~for 3.84 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64 kbps plus support for maximum 16 TBs per TTI, ~~and~~ 2 physical channels per TS; DL: 2048 kbps plus support for maximum TB bits 40960, maximum TC TB bits 40960, ~~or~~ (if an alternative RAB is used, plus support for maximum TB bits 81920 and maximum TB TC bits 81920).

This is supported in Release '99.

**8.1.42 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming
/ unknown / UL:57.6 DL:57.6 kbps / CS RAB + UL:3.4 DL:3.4 kbps
SRBs for DCCH**

See subclause 6.10.3.4.1.45 of [1], ~~for 3.84 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64 kbps plus support 2 physical channels per TS; DL: 32 kbps plus turbo coding, maximum TB bits 3840 and maximum TC TB bits 2560.

This is supported in Release '99.

8.1.43 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming / unknown / UL:0 DL:64 kbps / CS or PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.46 of [1]. ~~for 3.84 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 32 kbps DL: 32 kbps plus support for turbo coding, maximum TB bits 3840, maximum TC TB bits 2560, and maximum 16 TBs per TTI.

This is supported in Release '99.

8.1.44 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.49 of [1]. ~~for 3.84 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 64 kbps; DL: 32 kbps plus turbo coding, maximum TB bits 2560, maximum TC TB bits 1280, ~~or and~~ (if the alternative RAB is used, plus support for maximum TB bits 3840 and maximum TC TB bits 2560).

This is supported in Release '99.

8.1.45 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.50 of [1]. ~~for 3.84 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 64 kbps plus support of SF1, ~~or and~~ (if the alternative RAB is used, maximum TB bits 6400, maximum TC TB bits 5120, and maximum 16 TBs per TTI); DL: 128 kbps ~~or and~~ (if the alternative RAB is used, plus support for maximum TB bits 6400, maximum TC TB bits 5120).

This is supported in Release '99.

8.1.46 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.51 of [1]. ~~for 3.84 Meps TDD.~~

The minimum UE classes for this combinations are UL: 64 kbps; DL: 32 kbps plus support for turbo coding, maximum TB bits 3840, maximum TC TB bits 3840, ~~or~~ (if the RAB is used, plus support for maximum TB bits 5120, maximum TC TB bits 5120, and maximum 16 TBs per TTI).

This is supported in Release '99.

8.1.47 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.52 of [1]. ~~for 3.84 Meps TDD.~~

The minimum UE classes for this combination are UL: 64 kbps; DL: 128kbps plus support for maximum TB bits 5120, maximum TC TB bits 5120, ~~or and~~ (if the alternative RAB is used, plus support for maximum TB bits 6400, maximum TC TB bits 6400).

This is supported in Release '99.

8.1.48 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or background / UL:128 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.10.3.4.1.53 of [1]. ~~for 3.84 Meps TDD.~~

The minimum UE classes for this combination are UL: 64kbps plus support for support for maximum TB bits 5120, maximum TC TB bits 5120, and maximum 16 TBs per TTI, and 2 physical channels per TS, ~~or and~~ (if the alternative RAB is used, plus support for maximum TB bits 6400, maximum TC TB bits 6400); DL: 128 kbps plus support for support for maximum TB bits 5120, maximum TC TB bits 5120, ~~or and~~ (if the RAB is used, plus support for maximum TB bits 6400, maximum TC TB bits 6400).

This is supported in Release '99.

8.1.49 Interactive or background / UL:64 DL:128 kbps / PS RAB + streaming / unknown / UL:0 DL:64 kbps / CS or PS RAB + UL:3.4 DL:3.4kbps SRBs for DCCH

See subclause 6.10.3.4.1.54 of [1]. ~~for 3.84 Meps TDD.~~

The minimum UE classes for this combination are UL: 64 kbps plus support for 2 physical channels per TS; DL: 128 kbps plus support for maximum TB bits 6400, maximum TC TB bits 6400, and maximum 32 TBs per TTI.

This is supported in Release '99.

8.2 Combinations on PDSCH, SCCH, PUSCH and PRACH

8.2.1 Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:16.8 DL:33.6 kbps SRBs for DCCH, CCCH and BCCH + UL:16.8 DL:16 kbps SRBs for SHCCH

See subclause 6.10.3.4.2.1 of [1]. ~~for 3.84 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 128kbps (See Note), DL: 128kbps plus support for 21 physical channels per frame, maximum TB bits (Alt. 7680), TB CC bits 1280, TB TC bits (Alt. 6400) and (Alt. TTI TB 32).

NOTE: Physical parameters for this RAB define two UL codes and one timeslot. To avoid the UL multicode requirement only supported by the 768kbs class, a second timeslot is provided for the PUSCH.

This is supported in Release '99.

8.2.2 Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:16.8 DL:33.6 kbps SRBs for DCCH, CCCH and BCCH + UL:16.8 DL:16 kbps SRBs for SHCCH

See subclause 6.10.3.4.2.2 of [1], ~~for 3.84 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 128kbps (See Note), DL: 384kbps plus support for 29 physical channels per frame, maximum TB bits (Alt. 10240), TB CC bits 1280, and TB TC bits (Alt. 8960).

NOTE: Physical parameters for this RAB define two UL codes and one timeslot. To avoid the UL multicode requirement only supported by the 768kbs class, a second timeslot is provided for the PUSCH.

This is supported in Release '99.

8.2.3 Interactive or background / UL:64 DL:2048 kbps / PS RAB + UL:16.8 DL:33.6 kbps SRBs for DCCH, CCCH and BCCH + UL:16.8 DL:16 kbps SRBs for SHCCH

See subclause 6.10.3.4.2.3 of [1], ~~for 3.84 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 128kbps (See Note), DL: 2Mbps plus support for 137 physical channels per frame, maximum TB bits 40960 (Alt. 81920), TB CC bits 1280, and TB TC bits 40960 (Alt. 81920).

NOTE: Physical parameters for this RAB define two UL codes and one timeslot. To avoid the UL multicode requirement only supported by the 768kbs class, a second timeslot is provided for the PUSCH.

This is supported in Release '99.

8.3 Combinations on PDSCH, SCCPCH, DPCH, PUSCH and PRACH

8.3.1 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH + interactive or background / UL:64 DL:256 kbps / PS RAB + UL:16.8 kbps SRBs for CCCH and SHCCH + DL:33.6 kbps SRBs for CCCH, SHCCH and BCCH

See subclause 6.10.3.4.3.1 of [1], ~~for 3.84 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 128kbps plus support for maximum CC TB bits 1280, and maximum 16 TBs per TTI, 2 physical channels per TS; DL: 384kbps plus support for maximum CC TB bits 1280, ~~or~~ (if the alternative RAB is used, support for maximum TB bits 7680).

NOTE: It is assumed that the DPCH DL, PDSCH and SCCPCH use different TS.

This is supported in Release '99.

8.3.2 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH + Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:16.8 kbps SRBs for CCCH and SHCCH + DL:33.6 kbps SRBs for CCCH, SHCCH and BCCH

See subclause 6.10.3.4.3.2 of [1], ~~for 3.84 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 128kbps plus support for maximum CC TB bits 1280, maximum 16 TBs per TTI, and 2 physical channels per TS; DL: 384kbps plus support for maximum CC TB bits 1280, 31 physical channels per frame, ~~or and plus~~ (if the alternative RAB is used, support for maximum TB bits 10240, maximum TC TB bits 8960, and maximum 48 TBs per TTI).

NOTE: It is assumed that the DPCH DL, PDSCH and SCCPCH use different TS.

This is supported in Release '99.

8.3.3 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH + Interactive or background / UL:64 DL:2048 kbps / PS RAB + UL:16.8 kbps SRBs for CCCH and SHCCH + DL:33.6 kbps SRBs for CCCH, SHCCH and BCCH

See subclause 6.10.3.4.3.3 of [1], ~~for 3.84 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 128kbps plus support for maximum CC TB bits 1280, maximum 16 TBs per TTI, and 2 physical channels per TS; DL: 2048kbps plus support for maximum TB bits 40960, maximum TC TB bits 40960, and maximum CC TB bits 1280, 139 physical channels per frame, ~~and or plus~~ (if the alternative RAB is used, support for maximum TB bits 81920, maximum TC TB bits 81920).

This is supported in Release '99.

8.4 Combinations on SCCPCH

8.4.1 Stand – alone signalling RB for PCCH

See subclause 6.10.3.4.4.1 of [1], ~~for 3.84 Mcps TDD.~~

The minimum UE class supporting this combination is DL: 32 kbps.

This is supported in Release '99

8.4.2 Interactive / Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH

See subclause 6.10.3.4.4.2 of [1], ~~for 3.84 Mcps TDD.~~

The minimum UE class supporting this combination is -DL: 32 kbps plus turbo coding, maximum TB bits 2560, maximum CC TB bits 1280, and maximum TC TB bits 1280.

This is supported in Release '99.

8.4.3 Interactive / Background 32 kbps RAB + SRB for PCCH + SRB for CCCH + SRB for DCCH + SRB for BCCH

See subclause 6.10.3.4.4.3 of [1], ~~for 3.84 Mcps TDD.~~

The minimum UE class supporting this combination is DL: 32 kbps plus turbo coding, maximum TB bits 2560, maximum CC TB bits 2560, and maximum TC TB bits 1280, maximum 48 TFC, ~~or and plus~~ (if the alternative RAB is used, support for maximum 16 TBs per TTI, and maximum 64 TFC).

This is supported in Release '99.

8.5 Combinations on PRACH

8.5.1 SRB for CCCH + SRB for DCCH

See subclause 6.10.3.4.5.1 of [1], ~~for 3.84 Mcps TDD.~~

The minimum UE class supporting this combination is UL: 32 kbps.

This is supported by Release '99.

9 Examples of Radio Bearers and Signalling Radio Bearers for 1.28 Mcps TDD

9.1 Combinations on DPCH

9.1.1 Stand-alone UL:1.7 DL:1.7 kbps SRBs for DCCH

See subclause 6.11.5.4.1.1 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps; DL: 32kbps.

This is supported in Release 4.

9.1.2 Stand-alone UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.2 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps; DL: 32kbps.

This is supported in Release 4.

9.1.3 Stand-alone UL:13.6 DL:13.6 kbps SRBs for DCCH

See subclause 6.11.5.4.1.3 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps; DL: 32kbps.

This is supported in Release 4.

9.1.4 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.4 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps, DL: 32kbps.

This is supported in Release 4.

9.1.5 Conversational / speech / UL:10.2 DL:10.2 kbps / CS RAB + UL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.5 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps, DL: 32kbps.

This is supported in Release 4.

9.1.6 Conversational / speech / UL:7.95 DL:7.95 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.6 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps; DL: 32kbps.

This is supported in Release 4.

9.1.7 Conversational / speech / UL:7.4 DL:7.4 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.7 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps; DL: 32kbps.

This is supported in Release 4.

9.1.8 Conversational / speech / UL:6.7 DL: 6.7 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.8 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps, DL: 32kbps.

This is supported in Release 4.

9.1.9 Conversational / speech / UL:5.9 DL:5.9 kbps / CS rab + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.9 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps, DL: 32kbps.

This is supported in Release 4.

9.1.10 Conversational / speech / UL:5.15 DL:5.15 kbps / CS RAB + UL:1.7 DL:1.7 kbps SRBs for DCCH

See subclause 6.11.5.4.1.10 of [1], ~~for 1.28 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps, DL: 32kbps.

This is supported in Release 4.

9.1.11 Conversational / speech / UL:4.75 DL:4.75 kbps / CS RAB + UL:1.7 DL:1.7 kbps SRBs for DCCH

See subclause 6.11.5.4.1.11 of [1], ~~for 1.28 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps, DL: 32kbps.

This is supported in Release 4.

9.1.12 Conversational / unknown / UL:28.8 DL:28.8kbps / CS RAB + UL:3.4 DL:3.4kbps SRBs for DCCH

See subclause 6.11.5.4.1.12 of [1], ~~for 1.28 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps plus support for turbo coding, maximum TB bits 2560 and TB TC bits 1280, DL: 32kbps plus support for turbo coding, maximum TB bits 2560 and TB TC bits 1280.

This is supported in Release 4.

9.1.13 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.13 of [1], ~~for 1.28 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps, DL: 32kbps plus support for turbo coding, maximum TB bits 2560 (Alt. 3840) and TB TC bits 1280 (Alt. 2560).

This is supported in Release 4.

9.1.14 Conversational / unknown / UL:32 DL: 32 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.14 of [1], ~~for 1.28 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps plus support for turbo coding, maximum TB bits 1280 (Alt. 2560) and TB TC bits 640 (Alt. 1280), DL: 32kbps plus support for turbo coding and maximum TB bits 1280 (Alt. 2560) and TB TC bits 640 (Alt. 1280).

This is supported in Release 4.

9.1.15 Streaming / unknown / UL:14.4 DL:14.4 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.15 of [1], ~~for 1.28 Meps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps plus support for turbo coding, maximum TB bits 1280 and TB TC bits 640, DL: 32kbps plus support for turbo coding, maximum TB bits 1280 and TB TC bits 640.

This is supported in Release 4.

9.1.16 Streaming / unknown / UL:28.8 DL:28.8 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.16 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps plus support for turbo coding, maximum TB bits 2560 and TB TC bits 1280; DL: 32kbps plus support for turbo coding, maximum TB bits 2560 and TB TC bits 1280.

This is supported in Release 4.

9.1.17 Streaming / unknown / UL: 57.6 DL: 57.6 kbps / CS RAB + UL: 3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.17 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps; DL: 32kbps plus support for turbo coding, maximum TB bits 2560, and maximum TC TB bits 2560.

This is supported in Release 4.

9.1.18 Streaming / unknown / UL:0 DL: 64 kbps / CS or PS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.18 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 32kbps; DL: 32kbps plus support for turbo coding, maximum TB bits 3840, maximum TC TB bits 2560, and maximum 16 TBs per TTI.

This is supported in Release 4.

9.1.19 Streaming / unknown / UL: 64 DL:0 kbps / CS or PS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.19 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps plus support for maximum 16 TBs per TTI; DL: 32kbps.

This is supported in Release 4.

9.1.20 Interactive or background / UL: 32 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.23 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps, or alternatively plus support for maximum CC TB bits 1280 if turbo coding is not used; DL: 32kbps plus support for turbo coding plus maximum TC TB bits 640, or alternatively, not support for turbo coding if convolutional coding with rate 1/3 is used.

This is supported in Release 4.

9.1.21 Interactive or background / UL: 64 DL: 8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.24 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps; DL: 32kbps plus support for turbo coding, maximum TC TB bits 640, or alternatively not support for turbo coding if convolutional coding with rate 1/3 is used.

This is supported in Release 4.

9.1.22 Interactive or background / UL: 32 DL: 64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.25 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps, or ~~if~~ alternatively plus support for maximum CC TB bits 1280 if convolutional coding with rate 1/3 is used instead of turbo coding; DL: 32kbps plus support for turbo coding, maximum TB bits 2560, and maximum TC TB bits 2560.

This is supported in Release 4.

9.1.23 Interactive or background / UL: 64 DL: 64 kbps / PS RAB + UL: 3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.26 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps; DL: 32kbps plus support for turbo coding, maximum TB bits 2560, and maximum TC TB bits 2560.

This is supported in Release 4.

9.1.24 Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.27 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps; DL: 128kbps.

This is supported in Release 4.

9.1.25 Interactive or background / UL:128 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.28 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps plus support for maximum 16 TBs per TTI, and SF 1; DL: 128kbps.

This is supported in Release 4.

9.1.26 Interactive or background / UL:64 DL:144 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.29 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps; DL: 128kbps.

This is supported in Release 4.

9.1.27 Interactive or background / UL: 144 DL: 144 kbps / PS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.30 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps plus support for maximum 16 TBs per TTI, SF 1, and alternatively to support for 8PSK if QPSK is not used; DL: 128kbps.

This is supported in Release 4.

9.1.28 Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.31 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps; DL: 128 kbps plus support for optional SF 1, ~~or and~~ (if an alternative RAB is used, plus support for maximum TB bits 6400, maximum TC TB bits 6400, and maximum 32 TBs per TTI).

This is supported in Release 4.

9.1.29 Interactive or background / UL: 64 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.32 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps; DL: 128 kbps plus maximum TB bits 5120, maximum TC TB bits 5120, SF 1, and 8PSK if QPSK is not used, ~~or and~~ (if an alternative RAB is used, support for maximum TB bits 8960, maximum TC TB bits 8960, and maximum 32 TBs per TTI).

This is supported in Release 4.

9.1.30 Interactive or background / UL:128 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.33 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps plus support for maximum 16 TBs per TTI, and SF 1; DL: 128 kbps plus maximum TB bits 5120, maximum TC TB bits 5120, optional SF 1, and 8PSK if QPSK is not used, ~~or and~~ (if an alternative RAB is used, support for maximum TB bits 8960, maximum TC TB bits 8960, and maximum 32 TBs per TTI).

This is supported in Release 4.

9.1.31 Interactive or background / UL:384 DL:384 kbps / PS RAB +UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.34 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 128kbps plus support for maximum TB bits 8960, maximum TC TB bits 8960, and maximum 32 TBs per TTI, SF 1, and 8PSK if QPSK is not used, ~~or and~~ (if an alternative RAB is

used, plus support for maximum TB bits 5120, maximum TC TB bits 5120, and maximum 16 TBs per TTI); DL: 384kbps plus support for SF 1, 8PSK if QPSK is not used, or (if an alternative RAB is used, plus support for maximum TB bits 8960, maximum TC TB bits 8960).

This is supported in Release 4.

9.1.32 Interactive or background / UL:64 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.35 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps; DL: 2048kbps plus support for maximum TB bits 40960 and maximum TB TC bits 40960, and SF 1.

This is supported in Release 4.

9.1.33 Interactive or background / UL:128 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.36 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps plus support for maximum 16 TBs per TTI, and SF 1; DL: 2048kbps plus support for maximum TB bits 40960 and maximum TB TC bits 40960, and SF 1.

This is supported in Release 4.

9.1.34 Interactive or background / UL: 384 DL:2048 kbps / PS RAB+UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.37 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 128kbps plus support for maximum TB bits 8690, maximum TC TB bits 8690, and maximum 32 TBs per TTI, SF 1, and 8PSK if QPSK is not used, or (if an alternative RAB is used, plus support for maximum TB bits 5120, maximum TC TB bits 5120 and maximum 16 TBs per TTI); DL: 2048 kbps plus support for maximum TB bits 40960, maximum TB TC bits 40960.

This is supported in Release 4.

9.1.35 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.38 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64 kbps, or (alternatively if turbo coding is not used, support for maximum CC TB bits 1280); DL: 32kbps plus support for Turbo coding, maximum TC TB bits 640, and maximum TB bits 1280, or (alternatively, if convolutional coding with rate 1/3 is used instead of turbo coding, support for maxim CC TB bits 1280).

This is supported in Release 4.

**9.1.36 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:32 DL:64 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH**

See subclause 6.11.5.4.1.39 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64 kbps, ~~or~~ (alternatively, if convolutional coding with rate 1/3 is used instead of turbo coding, support for maximum TC TB bits 1280); DL: 64kbps.

This is supported in Release 4.

**9.1.37 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH**

See subclause 6.11.5.4.1.40 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64kbps plus support of SF 1; DL: 64 kbps.

This is supported in Release 4.

**9.1.38 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH**

See subclause 6.11.5.4.1.41 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64 kbps plus support of SF 1; DL: 128 kbps plus support for 8PSK if QPSK is not used.

This is supported in Release 4.

**9.1.39 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH**

See subclause 6.11.5.4.1.42 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64 kbps plus support of SF 1; DL: 128kbps plus support of 8PSK if QPSK is not supported, ~~or and plus~~ (if an alternative RAB is used, plus support for maximum TB bits 6400, maximum TC TB bits 6400, and maximum 32 TBs per TTI).

This is supported in Release 4.

**9.1.40 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH**

See subclause 6.11.5.4.1.43 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64 kbps plus support of SF1; DL: 384 kbps plus support for optional SF 1, 8PSK if QPSK is not used, ~~or and~~ (if an alternative RAB is used, support for maximum TB bits 8960, maximum TC TB bits 8960).

This is supported in Release 4.

9.1.41 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:128 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.44 of [1]. ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64 kbps plus support for maximum 16 TBs per TTI, SF1, and 8PSK if QPSK is not used; DL: 2048 kbps plus support for maximum TB bits 40960, maximum TC TB bits 40960, SF 1, ~~or and~~ (if an alternative RAB is used, plus support for maximum TB bits 81920 and maximum TB TC bits 81920).

This is supported in Release 4.

9.1.42 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming / unknown / UL:57.6 DL:57.6 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.45 of [1]. ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64 kbps; DL: 64 kbps.

This is supported in Release 4.

9.1.43 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming / unknown / UL:0 DL:64 kbps / CS or PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.46 of [1]. ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 32 kbps; DL: 64 kbps plus support for maximum 16 TBs per TTI.

This is supported in Release 4.

9.1.44 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.49 of [1]. ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64 kbps plus support of SF1; DL: 64 kbps.

This is supported in Release 4.

9.1.45 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.50 of [1]. ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 64 kbps plus support of SF1, ~~or and~~ (if the alternative RAB is used, maximum TB bits 6400, maximum TC TB bits 5120, and maximum 16 TBs per TTI); DL: 128 kbps plus support

for 15 physical channels per TS, ~~or and~~ (if the alternative RAB is used, plus support for maximum TB bits 6400, maximum TC TB bits 5120).

This is supported in Release 4.

9.1.46 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.51 of [1], ~~for 1.28 Meps TDD~~.

The minimum UE classes for this combinations are UL: 64 kbps plus support of SF1; DL: 32 kbps plus support for turbo coding, maximum TB bits 3840, maximum TC TB bits 3840, SF1, ~~or and~~ (if the RAB is used, plus support for maximum TB bits 5120, maximum TC TB bits 5120, and maximum 16 TBs per TTI).

This is supported in Release 4.

9.1.47 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.52 of [1], ~~for 1.28 Meps TDD~~.

The minimum UE classes for this combination are UL: 64 kbps plus support of SF1; DL: 128kbps plus support for maximum TB bits 5120, maximum TC TB bits 5120, 24 physical channels per subframe, ~~or and~~ (if the alternative RAB is used, plus support for maximum TB bits 6400, maximum TC TB bits 6400).

This is supported in Release 4.

9.1.48 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or background / UL:128 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.53 of [1], ~~for 1.28 Meps TDD~~.

The minimum UE classes for this combination are UL: 64kbps plus support for support for maximum TB bits 5120, maximum TC TB bits 5120, and maximum 16 TBs per TTI, SF1, and 8PSK if QPSK is not used, ~~or and~~ (if the alternative RAB is used, plus support for maximum TB bits 6400, maximum TC TB bits 6400); DL: 128 kbps plus support for support for maximum TB bits 5120, maximum TC TB bits 5120, 24 physical channels per subframe, ~~or and~~ (if the RAB is used, plus support for maximum TB bits 6400, maximum TC TB bits 6400).

This is supported in Release 4.

9.1.49 Interactive or background / UL:64 DL:128 kbps / PS RAB + streaming / unknown / UL:0 DL:64 kbps / CS or PS RAB + UL:3.4 DL:3.4kbps SRBs for DCCH

See subclause 6.11.5.4.1.54 of [1], ~~for 1.28 Meps TDD~~.

The minimum UE classes for this combination are UL: 64 kbps; DL: 128 kbps plus support for maximum TB bits 6400, maximum TC TB bits 6400, and maximum 32 TBs per TTI, and 24 physical channels per subframe.

This is supported in Release 4.

9.2 Combinations on PDSCH, SCCH, PUSCH and PRACH

9.2.1 Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:16.8 DL:33.6 kbps SRBs for DCCH, CCCH and BCCH + UL:16.8 DL:16 kbps SRBs for SHCCH

See subclause 6.11.5.4.2.1 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 128kbs plus support for SF 1; DL: 384kbs plus support for (Alt. 8PSK), maximum TB bits (Alt. 7680), TB CC bits 1280, TB TC bits (Alt. 6400) and (Alt. TTI TB 32).

This is supported in Release 4.

9.2.2 Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:16.8 DL:33.6 kbps SRBs for DCCH, CCCH and BCCH + UL:16.8 DL:16 kbps SRBs for SHCCH

See subclause 6.11.5.4.2.2 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 128kbs plus support for SF 1, DL: 384kbs (with SF 1 option) plus support for maximum TB bits (Alt. 10240), TB CC bits 1280, and TB TC bits (Alt. 8960).

This is supported in Release 4.

9.2.3 Interactive or background / UL:64 DL:2048 kbps / PS RAB + UL:16.8 DL:33.6 kbps SRBs for DCCH, CCCH and BCCH + UL:16.8 DL:16 kbps SRBs for SHCCH

See subclause 6.11.5.4.2.3 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 128kbs plus support for SF 1, DL: 2Mbps plus support for maximum TB bits 40960 (Alt. 81920) and TB CC bits 1280.

This is supported in Release 4.

9.3 Combinations on PDSCH, SCCPCH, DPCH, PUSCH and PRACH

9.3.1 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH + interactive or background / UL:64 DL:256 kbps / PS RAB + UL:16.8 kbps SRBs for CCCH and SHCCH + DL:33.6 kbps SRBs for CCCH, SHCCH and BCCH

See subclause 6.11.5.4.3.1 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE classes supporting this combination are UL: 128kpbs plus support for maximum CC TB bits 1280, maximum 16 TBs per TTI, and SF 1 for PUSCH; DL: 384kpbs plus support for maximum CC TB bits 1280, 5 TS per subframe, optional SF 1, 8PSK if QPSK is not used for PDSCH, ~~or-and (i) if the alternative RAB is used, support for maximum TB bits 7680.~~

PS. Assume the DPCH DL, PDSCH and SCCPCH use different TS.

This is supported in Release 4.

9.3.2 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH + Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:16.8 kbps SRBs for CCCH and SHCCH + DL:33.6 kbps SRBs for CCCH, SHCCH and BCCH

See subclause 6.11.5.4.3.2 of [1], ~~for 1.28 Mcps TDD~~.

The minimum UE classes supporting this combination are UL: 128kbps plus support for maximum CC TB bits 1280, maximum 16 TBs per TTI, and SF 1 for PUSCH; DL: 384kbps plus support for maximum CC TB bits 1280, 5 TS per subframe, optional SF 1 for PDSCH, ~~or and plus~~ (if the alternative RAB is used, support for maximum TB bits 10240, maximum TC TB bits 8960, and maximum 48 TBs per TTI).

PS. Assume the DPCH DL, PDSCH and SCCPCH use different TS.

This is supported in Release 4.

9.3.3 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH + Interactive or background / UL:64 DL:2048 kbps / PS RAB + UL:16.8 kbps SRBs for CCCH and SHCCH + DL:33.6 kbps SRBs for CCCH, SHCCH and BCCH

See subclause 6.11.5.4.3.3 of [1], ~~for 1.28 Mcps TDD~~.

The minimum UE classes supporting this combination are UL: 128kbps plus support for maximum CC TB bits 1280, maximum 16 TBs per TTI, and SF 1 for PUSCH; DL: 2048kbps plus support for maximum TB bits 40960, maximum TC TB bits 40960, and maximum CC TB bits 1280, 5 TS per subframe, optional SF 1 for PDSCH, ~~or and plus~~ (if the alternative RAB is used, support for maximum TB bits 81920, maximum TC TB bits 81920).

This is supported in Release 4.

9.4 Combinations on SCCPCH

9.4.1 Stand – alone signalling RB for PCCH

See subclause 6.11.5.4.4.1 of [1], ~~for 1.28 Mcps TDD~~.

The minimum UE class supporting this combination is DL: 32 kbps.

This is supported in Release 4.

9.4.2 Interactive / Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH

See subclause 6.11.5.4.4.2 of [1], ~~for 1.28 Mcps TDD~~.

The minimum UE class supporting this combination is DL: 64 kbps plus support for maximum CC TB bits 1280.

This is supported in Release 4.

9.4.3 Interactive / Background 32 kbps RAB + SRB for PCCH + SRB for CCCH + SRB for DCCH + SRB for BCCH

See subclause 6.11.5.4.4.3 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE class supporting this combination is DL: 64 kbps plus support for maximum CC TB bits 2560, ~~or and plus~~ ~~(if the alternative RAB is used, support for maximum 16 TBs per TTI, and maximum 64 TFC).~~

This is supported in Release 4.

9.5 Combinations on PRACH

9.5.1 SRB for CCCH + SRB for DCCH

See subclause 6.11.5.4.5.1 of [1], ~~for 1.28 Mcps TDD.~~

The minimum UE class supporting this combination is UL: 32 kbps.

This is supported by Release 4.