

Source: RAN WG2

Title: 25.993 Rel-6 CRs also affecting earlier releases

The following CRs are in RP-040325:

Spec	CR	Rev	Phase	Subject	Cat	Version-Current	Version-New	Workitem	Doc-2nd-Level	Release impacted
25.993	028	-	Rel-6	Physical layer multiplexing configuration in case of AMR and two PS RABs with zero bit rates	F	6.6.0	6.7.0	TEI6	R2-041749	R99
25.993	029	-	Rel-6	Physical layer multiplexing configuration in case of two PS RABs	F	6.6.0	6.7.0	TEI6	R2-041750	R99
25.993	030	-	Rel-6	Correction of RAB configuration in 1.28Mcps TDD	F	6.6.0	6.7.0	TEI6	R2-041767	Rel-4
25.993	032	-	Rel-6	Conversational PS RAB for HS-DSCH	F	6.6.0	6.7.0	TEI6	R2-041896	Rel-5

CHANGE REQUEST

25.993 CR 028 # rev **-** # Current version: **6.6.0**

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:	#	Physical layer multiplexing configuration in case of AMR and two PS RABs with zero bit rates	
Source:	#	RAN WG2	
Work item code:	#	TEI6	Date: # 18/8/2004
Category:	#	F	Release: # Rel-6
		Use <u>one</u> of the following categories:	Use <u>one</u> of the following releases:
		F (correction)	Ph2 (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)
			Rel-7 (Release 7)

Reason for change:	#	Currently there is no refence of typical RAB combination for physical channel multiplexing option of AMR and two PS RABs with zero bit rate and SRBs.
Summary of change:	#	New reference combination of 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 with physical layer multiplexing introduced in the list of RAB combinations The R99 is affected.
Consequences if not approved:	#	Typical RAB combination is missing from a list of examples of RABs and RAB combinations.

Clauses affected:	#	6 and 7.1								
Other specs affected:	#	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> </table> Other core specifications # Test specifications # O&M Specifications #	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Y	N									
<input type="checkbox"/>	<input checked="" type="checkbox"/>									
<input type="checkbox"/>	<input checked="" type="checkbox"/>									
<input 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.

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, RLC PDU size 320, alt. 640)
+ 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)
- 45a) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:32 DL:32 kbps / PS RAB (20ms TTI)
+ 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

79a) 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 (L1 multiplexing) (FDD)

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
- 97) 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

*** [The section is partly omitted](#)***

7.1.79a 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 (L1 multiplexing) (FDD)

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

This is supported in Release '99.

7.1.79a.1 Uplink

7.1.79a.1.1 Transport channel parameters

7.1.79a.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].

7.1.79a.1.1.2 Transport channel parameters for Interactive or background / UL:0 kbps / PS RAB

See clause 6.10.2.4.1.38a.1.1.2 of [1].

7.1.79a.1.1.3 Transport channel parameters for Interactive or background / UL:0 kbps / PS RAB

See clause 6.10.2.4.1.38a.1.1.2 of [1].

7.1.79a.1.1.4 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1 of [1].

7.1.79a.1.1.5 TFCS

<u>TFCS size</u>	<u>6</u>
<u>TFCS</u>	<u>(RAB subflow#1, RAB subflow#2, RAB subflow#3, 0 kbps RAB, 0 kbps RAB, DCCH)= (TF0, TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0, TF0), (TF0, TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF0, TF1)</u>

7.1.79a.1.2 Physical channel parameters

See clause 6.10.2.4.1.38a.1.2 of [1].

7.1.79a.2 Downlink

7.1.79a.2.1 Transport channel parameters

7.1.79a.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.2.1.1 of [1].

7.1.79a.2.1.2 Transport channel parameters for Interactive or background / DL:0 kbps / PS RAB

See clause 6.10.2.4.1.38a.2.1.2 of [1].

7.1.79a.2.1.3 Transport channel parameters for Interactive or background / DL:0 kbps / PS RAB

See clause 6.10.2.4.1.38a.2.1.2 of [1].

7.1.79a.2.1.4 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1 of [1].

7.1.79a.2.1.5 TFCS

<u>TFCS size</u>	<u>6</u>
<u>TFCS</u>	<u>(RAB subflow#1, RAB subflow#2, RAB subflow#3, 0 kbps RAB, 0 kbps RAB, DCCH)= (TF0, TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0, TF0), (TF0, TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF0, TF1)</u>

7.1.79a.2.2 Physical channel parameters

See clause 6.10.2.4.1.38a.2.2 of [1].

*** The rest of this section is omitted**

CHANGE REQUEST

25.993 CR 029 # rev - # Current version: 6.6.0

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:	# Physical layer multiplexing configuration in case of two PS RABs		
Source:	# RAN WG2		
Work item code:	# TEI6	Date:	# 18/8/2004
Category:	# F	Release:	# Rel-6
	<p>Use <u>one</u> of the following categories:</p> <p>F (correction)</p> <p>A (corresponds to a correction in an earlier release)</p> <p>B (addition of feature),</p> <p>C (functional modification of feature)</p> <p>D (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		<p>Use <u>one</u> of the following releases:</p> <p>Ph2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>Rel-4 (Release 4)</p> <p>Rel-5 (Release 5)</p> <p>Rel-6 (Release 6)</p> <p>Rel-7 (Release 7)</p>

Reason for change:	# Currently there is no refence of typical RAB combination for physical channel multiplexing option of two PS RABs and SRBs.		
Summary of change:	# New reference combination of Interactive or background / UL:32 DL:64 kbps / PS RAB + Interactive or background / UL:32 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH with physical layer multiplexing introduced in the specifications The R99 is affected.		
Consequences if not approved:	# Typical RAB combination is missing from a list of examples of RABs and RAB combinations		

Clauses affected:	# 6 and 7.1										
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>	Y	N	#	X	#	X	#	X	Other core specifications # Test specifications # O&M Specifications #	
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

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, RLC PDU size 320, alt. 640)
+ 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)
- 45a) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:32 DL:32 kbps / PS RAB (20ms TTI)
+ 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
- 97) 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
- 98) [Interactive or background / UL:32 DL:64 kbps / PS RAB](#)
[+ Interactive or background / UL:32 DL:64 kbps / PS RAB](#)
[+ UL:3.4 DL: 3.4 kbps SRBs for DCCH \(L1 multiplexing\) \(FDD\)](#)

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) RB for CTCH (FDD)
 - + Interactive or background / DL: 32 kbps / PS RAB
 - + SRB for PCCH
 - + SRB for CCCH
 - + SRBs for DCCH
 - + SRB for BCCH
 - 6) Interactive or background / DL:16 kbps / PS RAB
 - + SRB for CCCH
 - + SRBs for DCCH
 - + SRB for BCCH.
 - 7) 8 kbps RB for CTCH (FDD)
 - + SRB for CCCH
 - + SRB for BCCH
 - 8) Interactive or background / DL:32 kbps / PS RAB (RLC size 320 bits)
 - + Interactive or background / DL:32 kbps / PS RAB (RLC size 640 bits)
 - + SRB for PCCH
 - + SRB for CCCH
 - + SRBs for DCCH
 - + SRB for BCCH.

Combinations on PRACH

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

7 Examples of Radio Bearers and Signalling Radio Bearers for FDD

7.1 Combinations on DPCH

*** Note: This section is partly omitted ***

7.1.97 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: 12 kbps, DL: 12 kbps plus support for 'Maximum number of TFC' = 32.

This is supported in Release 5.

7.1.98 Interactive or background / UL:32 DL:64 kbps / PS RAB + Interactive or background / UL:32 DL:64 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH (L1 multiplexing) (FDD)

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

This is supported in Release 99.

7.1.98.1 Uplink

7.1.98.1.1 Transport channel parameters

7.1.98.1.1.1 Transport channel parameters for Interactive or background / UL:32 kbps / PS RAB

See clause 6.10.2.4.1.23.1.1.1 of [1].

7.1.98.1.1.2 Transport channel parameters for Interactive or background / UL:32 kbps / PS RAB

See clause 6.10.2.4.1.23.1.1.1 of [1].

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

See clause 6.10.2.4.1.2.1.1.1 of [1].

7.1.98.1.1.4 TFCS

<u>TFCS size</u>	18 (alt. 8)
<u>TFCS</u>	(I/B 32 kbps RAB, I/B 32 kbps RAB, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0), (TF2, TF1, TF0), (TF0, TF2, TF0), (TF1, TF2, TF0), (TF2, TF2, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1), (TF2, TF1, TF1), (TF0, TF2, TF1), (TF1, TF2, TF1), (TF2, TF2, TF1) (alt. (TF0, TF0, TF0), (TF1, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1))

7.1.98.1.2 Physical channel parameters

<u>DPCH Uplink</u>	<u>Min spreading factor</u>	16
	<u>Max number of DPDCH data bits/radio frame</u>	2400
	<u>Puncturing Limit</u>	1

7.1.98.2 Downlink7.1.98.2.1 Transport channel parameters7.1.98.2.1.1 Transport channel parameters for Interactive or background / DL:64 kbps / PS RAB

[See clause 6.10.2.4.1.25.2.1.1 of \[1\].](#)

7.1.98.2.1.2 Transport channel parameters for Interactive or background / DL:64 kbps / PS RAB

[See clause 6.10.2.4.1.25.2.1.1 of \[1\].](#)

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

[See clause 6.10.2.4.1.2.2.1.1 of \[1\].](#)

7.1.98.2.1.4 TFCS

<u>TFCS size</u>	50
<u>TFCS</u>	(I/B 64 kbps RAB, I/B 64 kbps RAB, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF0, TF0), (TF3, TF0, TF0), (TF4, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0), (TF2, TF1, TF0), (TF3, TF1, TF0), (TF4, TF1, TF0), (TF0, TF2, TF0), (TF1, TF2, TF0), (TF2, TF2, TF0), (TF3, TF2, TF0), (TF4, TF2, TF0), (TF0, TF3, TF0), (TF1, TF3, TF0), (TF2, TF3, TF0), (TF3, TF3, TF0), (TF4, TF3, TF0), (TF0, TF4, TF0), (TF1, TF4, TF0), (TF2, TF4, TF0), (TF3, TF4, TF0), (TF4, TF4, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF0, TF1), (TF3, TF0, TF1), (TF4, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1), (TF2, TF1, TF1), (TF3, TF1, TF1), (TF4, TF1, TF1), (TF0, TF2, TF1), (TF1, TF2, TF1), (TF2, TF2, TF1), (TF3, TF2, TF1), (TF4, TF2, TF1), (TF0, TF3, TF1), (TF1, TF3, TF1), (TF2, TF3, TF1), (TF3, TF3, TF1), (TF4, TF3, TF1), (TF0, TF4, TF1), (TF1, TF4, TF1), (TF2, TF4, TF1), (TF3, TF4, TF1), (TF4, TF4, TF1)

7.1.98.2.2 Physical channel parameters

<u>DPCH</u> <u>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>	

*** End of the last modification***

CHANGE REQUEST

25.993 CR 030 # rev **-** # Current version: **6.6.0**

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

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

Title:	# Correction of RAB configuration in 1.28Mcps TDD		
Source:	# RAN WG2		
Work item code:	# TEI6	Date:	# 18/08/2004
Category:	# F	Release:	# Rel-6
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)	Ph2 (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)
			Rel-7 (Release 6)

Reason for change:	# Misalignments between 34.108 and 25.993 remain on latest RAB configuration for 1.28Mcps TDD.		
Summary of change:	# 1. Section 9.1.20, 9.1.21, 9.1.22, 9.1.36, 9.1.37, 9.1.47, 9.1.48 and 9.1.54 were made void; 2. Section 9.1.23a, 9.2.1, 9.2.2, 9.2.3 were updated align with 34.108; 3. Section 9.4.2a, 9.4.2b, 9.4.3a, 9.4.4, 9.5.2 and 9.5.3 were added according to change at 34.108. 4. The Rel-4 is affected.		
Consequences if not approved:	# Misalignments remained.		

Clauses affected:	# 9.1, 9.2, 9.4, 9.5						
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;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	#
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
	<input checked="" type="checkbox"/>	Test specifications	#				
	<input checked="" type="checkbox"/>	O&M Specifications	#				
Other comments:	#						

How to create CRs using this form:

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

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

9 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].

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

This is supported in Release 4.

9.1.1a Stand-alone UL: 1.7 DL: 1.7 kbps SRBs for DCCH (multiframe)

See subclause 6.11.5.4.1.1a of [1].

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].

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].

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].

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

This is supported in Release 4.

9.1.4a Conversational / speech / UL: (12.2, 7.95, 5.9, 4.75) DL: (12.2 kbps, 7.95, 5.9, 4.75) / CS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.4a of [1].

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 DL: 3.4 kbps SRBs for DCCH**

See subclause 6.11.5.4.1.5 of [1].

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

This is supported in Release 4.

**9.1.5a 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**

See subclause 6.11.5.4.1.5a of [1].

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].

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].

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

This is supported in Release 4.

**9.1.7a 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**

See subclause 6.11.5.4.1.7a of [1].

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].

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].

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].

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].

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

See subclause 6.11.5.4.1.12 of [1].

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

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].

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

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].

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

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].

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

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].

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

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].

The minimum UE classes supporting this combination are UL: 64kbps; DL: 32kbps.

This is supported in Release 4.

9.1.18 Void

Void

9.1.19 Void

Void

9.1.20 ~~Streaming / unknown / UL: 0 DL: 128 kbps / CS or PS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH~~ [Void](#)

Void.

9.1.21 ~~Streaming / unknown / UL: 128 DL: 0 kbps / CS or PS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH~~ [Void](#)

Void.

9.1.22 ~~Streaming / unknown / UL: 0 DL: 384 kbps / CS or PS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH~~ [Void](#)

Void.

9.1.23 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].

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

This is supported in Release 4.

9.1.23a Interactive or background / UL: ~~32~~8 DL: 8 kbps / PS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.23a of [1].

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

This is supported in Release 4.

9.1.23b Interactive or background / UL: 16 DL: 16 kbps / PS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.23b of [1].

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

This is supported in Release 4.

9.1.23c Interactive or background / UL: 32 DL: 32 kbps / PS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.23c of [1].

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

This is supported in Release 4.

9.1.23d Interactive or background / UL: 32 DL: 32 kbps / PS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH (20 ms TTI)

See subclause 6.11.5.4.1.23d of [1].

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

This is supported in Release 4.

9.1.24 Void

Void.

9.1.25 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].

The minimum UE classes supporting this combination are UL: 32 kbps; DL: 64 kbps.

This is supported in Release 4.

9.1.26 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].

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

This is supported in Release 4.

9.1.27 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].

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

This is supported in Release 4.

**9.1.28 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].

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

This is supported in Release 4.

**9.1.29 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].

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

This is supported in Release 4.

**9.1.30 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].

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

This is supported in Release 4.

**9.1.31 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].

The minimum UE classes supporting this combination are UL: 64kbps; DL: 384 kbps.

This is supported in Release 4.

**9.1.32 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].

The minimum UE classes supporting this combination are UL: 64kbps; DL: 384 kbps.

This is supported in Release 4.

**9.1.33 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].

The minimum UE classes supporting this combination are UL: 128 kbps; DL: 384 kbps.

This is supported in Release 4.

**9.1.34 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].

The minimum UE classes supporting this combination are UL: 384 kbps; DL: 384kbps.

This is supported in Release 4.

**9.1.35 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].

The minimum UE classes supporting this combination are UL: 64kbps; DL: 2048kbps.

This is supported in Release 4.

**9.1.36 ~~Interactive or background / UL: 128 DL: 2048 kbps / PS RAB + UL:
3.4 DL: 3.4 kbps SRBs for DCCH~~Void**

Void.

**9.1.37 ~~Interactive or background / UL: 384 DL: 2048 kbps / PS RAB+UL:
3.4 DL: 3.4 kbps SRBs for DCCH~~Void**

Void.

**9.1.38 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].

The minimum UE classes supporting this combination are UL: 64 kbps; DL: 32kbps.

This is supported in Release 4.

**9.1.38a 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**

See subclause 6.11.5.4.1.38a of [1].

The minimum UE classes supporting this combination are UL: 64 kbps; DL: 32kbps

This is supported in Release 4.

**9.1.38b 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**

See subclause 6.11.5.4.1.38b of [1].

The minimum UE classes supporting this combination are UL: 64 kbps; DL: 32 kbps

This is supported in Release 4.

9.1.38c 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

See subclause 6.11.5.4.1.38c of [1].

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

This is supported in Release 4.

9.1.38d 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

See subclause 6.11.5.4.1.38d of [1].

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

This is supported in Release 4.

9.1.38e 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

See subclause 6.11.5.4.1.38e of [1].

The minimum UE classes supporting this combination are UL: 64 kbps; DL: 32 kbps

This is supported in Release 4.

9.1.38f 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

See subclause 6.11.5.4.1.38f of [1].

The minimum UE classes supporting this combination are UL: 64 kbps; DL: 32 kbps

This is supported in Release 4.

9.1.38g 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

See subclause 6.11.5.4.1.38g of [1].

The minimum UE classes supporting this combination are UL: 64 kbps; DL: 32 kbps

This is supported in Release 4.

9.1.38h 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

See subclause 6.11.5.4.1.38h of [1].

The minimum UE classes supporting this combination are UL: 64 kbps; DL: 32 kbps

This is supported in Release 4.

9.1.38i 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

See subclause 6.11.5.4.1.38i of [1].

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

This is supported in Release 4.

9.1.38j 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

See subclause 6.11.5.4.1.38j of [1].

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

This is supported in Release 4.

9.1.39 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].

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

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: 64 kbps / PS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH

See subclause 6.11.5.4.1.40 of [1].

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

This is supported in Release 4.

9.1.41 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].

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

This is supported in Release 4.

**9.1.42 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].

The minimum UE classes supporting this combination are UL: 64 kbps; DL: 384 kbps..

This is supported in Release 4.

**9.1.43 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].

The minimum UE classes supporting this combination are UL: 64 kbps; DL: 384 kbps.

This is supported in Release 4.

**9.1.44 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].

The minimum UE classes supporting this combination are UL: 384 kbps; DL: 2048 kbps.

This is supported in Release 4.

**9.1.45 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].

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

This is supported in Release 4.

9.1.46 Void

Void.

~~**9.1.47 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Streaming / unknown / UL:0 DL:128 kbps / CS or PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH**~~ [Void](#)

Void.

~~**9.1.48 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB +
Streaming / unknown / UL:0 DL:384 kbps / CS or PS RAB + UL:3.4
DL:3.4 kbps SRBs for DCCH**~~ [Void](#)

Void.

**9.1.49 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].

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

This is supported in Release 4.

**9.1.49a 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**

See subclause 6.11.5.4.1.49 of [1].

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

This is supported in Release 4.

**9.1.50 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].

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

This is supported in Release 4.

**9.1.51 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].

The minimum UE classes for this combinations are UL: 64 kbps; DL: 128 kbps.

This is supported in Release 4.

**9.1.51a 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**

See subclause 6.11.5.4.1.51a of [1].

The minimum UE classes for this combinations are UL: 64 kbps ; DL: 64 kbps.

This is supported in Release 4.

**9.1.51b 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**

See subclause 6.11.5.4.1.51b of [1].

The minimum UE classes for this combinations are UL: 64 kbps ; DL: 128 kbps.

This is supported in Release 4.

9.1.52 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].

The minimum UE classes for this combination are UL: 64 kbps; DL: 384 kbps.

This is supported in Release 4.

9.1.53 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].

The minimum UE classes for this combination are UL: 384 kbps; DL: 384 kbps.

This is supported in Release 4.

9.1.54 [Void](#)

Void.

9.1.55 Void

9.1.56 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

See subclause 6.11.5.4.1.56 of [1].

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

This is supported in Release 4.

9.1.57 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

See subclause 6.11.5.4.1.57 of [1].

The minimum UE classes for this combination are UL: 64 kbps, DL: 64 kbps.

This is supported in Release 4.

9.1.58 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

See subclause 6.11.5.4.1.58 of [1].

The minimum UE classes for this combination are UL: 64 kbps, DL: 64 kbps.

This is supported in Release 4.

9.1.59 Reserved for future use

9.1.60 Reserved for future use

9.2.61 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

See subclause 6.11.5.4.1.561 of [1].

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

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:3.4 DL:3.4 kbps SRBs for DCCH](#) + 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].

The minimum UE classes supporting this combination are UL: 128kbs; DL: 384kbs.

This is supported in Release 4.

9.2.2 Interactive or background / UL: 64 DL: 384 kbps / PS RAB [+ UL:3.4 DL:3.4 kbps SRBs for DCCH](#) + 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].

The minimum UE classes supporting this combination are UL: 128kbs, DL: 384kbs.

This is supported in Release 4.

9.2.3 Interactive or background / UL: 64 DL: 2048 kbps / PS RAB [+ UL:3.4 DL:3.4 kbps SRBs for DCCH](#) + 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].

The minimum UE classes supporting this combination are UL: 128kbs, DL: 2Mbps.

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].

The minimum UE classes supporting this combination are UL: 128kbps; DL: 384kbps.

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].

The minimum UE classes supporting this combination are UL: 128kbps; DL: 384kbps.

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].

The minimum UE classes supporting this combination are UL: 128kbps; DL: 2048kbps.

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].

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].

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

This is supported in Release 4.

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

[See subclause 6.11.5.4.4.2a of \[1\].](#)

[The minimum UE class supporting this combination is DL: 64 kbps.](#)

[This is supported in Release 4.](#)

9.4.2b SRBs for CCCH + SRB for DCCH + SRB for BCCH

[See subclause 6.11.5.4.4.2b of \[1\].](#)

[The minimum UE class supporting this combination is DL: 32 kbps.](#)

[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].

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

This is supported in Release 4.

9.4.3a SRB for PCCH + SRB for CCCH + SRB for DCCH + SRB for BCCH

[See subclause 6.11.5.4.4.3a of \[1\].](#)

[The minimum UE class supporting this combination is DL: 32 kbps..](#)

[This is supported in Release 4.](#)

9.4.4 RB for CTCH + SRB for CCCH + SRB for BCCH

[See subclause 6.11.5.4.4.4 of \[1\].](#)

[The minimum UE class supporting this combination is DL: 64 kbps..](#)

[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].

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

This is supported in Release 4.

9.5.2 Interactive/Background 12.8 kbps PS RAB + SRB for CCCH + SRBs for DCCH

[See subclause 6.11.5.4.5.2 of \[1\].](#)

[The minimum UE class supporting this combination is UL: 32 kbps..](#)

[This is supported in Release 4.](#)

9.5.3 Interactive/Background 12.8 kbps PS RAB + Interactive/Background 12.8 kbps PS RAB + SRB for CCCH + SRBs for DCCH

[See subclause 6.11.5.4.5.3 of \[1\].](#)

[The minimum UE class supporting this combination is UL: 32 kbps..](#)

[This is supported in Release 4.](#)

CR-Form-v7

CHANGE REQUEST

25.993 CR 032 # rev **-** # Current version: **6.6.0**

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:	# Conversational PS RAB for HS-DSCH		
Source:	# RAN WG2		
Work item code:	# TEI6	Date:	# 20/08/2004
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:	# Introduction of a RAB that allows VoIP over HSDPA in Rel5.		
Summary of change:	# The following combination is presented for approval:		
	1. Conversational / unknown / UL:42.8 kbps DL:[max bit rate depending on UE category] / PS RAB + interactive or background / UL:16 kbps DL:[max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.		
	This CR affects the Rel-5.		
Consequences if not approved:	# There are no examples of PS RAB combinations of conversational class supporting VoIP or gaming with HSDPA in Rel 5.		

Clauses affected:	# 5, 6, 7										
Other specs Affected:	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="text-align: center;">Y</td> <td style="text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications Test specifications O&M Specifications	#
Y	N										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
<input 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	Streaming	Unknown	UL:128 DL:16	PS
56	Conversational	Speech	UL:(12.65 8.85 6.6) DL:(12.65 8.85 6.6)	CS
57	Conversational	Unknown	UL :42.8 DL:42.8	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
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 and HS-PDSCH

X) Conversational / unknown / UL:42.8 DL:[max bit rate depending on UE category] kbps / PS RAB + interactive or background UL:16 DL:[max bit rate depending on UE category] kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.

7 Examples of Radio Bearers and Signalling Radio Bearers for FDD

7.1 Combinations on DPCH

[...]

7.2 Combinations on S-CCPCH

[...]

7.3 Combinations on PRACH

[...]

7.4 Combinations on DPCH and HS-PDSCH

7.4.X) Conversational / unknown / UL:42.8 kbps DL:[max bit rate depending

on UE category] / PS RAB + interactive / background UL: 16 kbps
DL:[max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4
kbps SRBs for DCCH.

This is supported in Release '5.

7.4.X.1 Uplink

See subclause 6.10.2.4.1.60.1 of [1]

7.4.X.2 Downlink

7.4.X.2.1 Transport channel parameters

7.4.X.2.1.1 Transport channel parameters for HS-DSCH

7.4.X.2.1.1.1 MAC-d flow parameters for conversational / unknown DL:[max bit rate depending on UE category] / PS RAB

<u>Higher Layer</u>	<u>RAB/Signalling RB</u>	<u>RAB</u>
<u>RLC</u>	<u>Logical channel type</u>	<u>DTCH</u>
	<u>RLC mode</u>	<u>UM</u>
	<u>Payload sizes, bit</u>	<u>920, 304, 96</u>
	<u>Max data rate, bps</u>	<u>depends on UE category</u>
	<u>UMD PDU header, bit</u>	<u>NOTE1</u>
<u>MAC</u>	<u>MAC-d header, bit</u>	<u>8</u>
	<u>MAC multiplexing</u>	<u>0</u>
	<u>MAC-d PDU size, bit</u>	<u>N/A</u>
	<u>MAC-hs header fixed part, bit</u>	<u>928, 312, 104</u>
<u>Layer 1</u>	<u>TrCH type</u>	<u>21</u>
	<u>TTI</u>	<u>HS-DSCH</u>
	<u>Coding type</u>	<u>2 ms</u>
	<u>CRC, bit</u>	<u>TC</u>
		<u>24</u>

NOTE1: The peak throughput may be limited by the maximum number of MAC-d PDUs that can be included in a single MAC-hs PDU (see [25.321]).

7.4.X.2.1.1.2 MAC-d flow parameters for interactive or background DL:[max bit rate depending on UE category] / PS RAB

See subclause 6.10.2.4.5.1.2.1.1.1 of [1]

7.4.X.2.1.2 Transport channel parameters for DCH

7.4.X.2.1.2.1 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See subclause 6.10.2.4.1.2.2.1.1 of [1]

7.4.X.2.1.3 TFCS

See subclause 6.10.2.4.1.2.2.1.2 of [1]

7.4.X.2.2 Physical channel parameters

7.4.X.2.2.1 Physical channel parameters on DPCH

See subclause 6.10.2.4.1.2.2.2 in [1]

7.4.X.2.2.2 Physical channel parameters on HS-PDSCH

See subclause 6.10.2.4.5.2.2.2 in [1]