TSG-RAN Meeting #9 *RP-000447*
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To:	**R1, R2**
CC:	**TSG-RAN, R3, R4**
Title:	**Typical Radio Parameter Sets Version 1.3**
Agenda item:	**4.2**
Source:	**GSMA ISG**
Document for:	**Information**

Summary

In RAN#7, it was endorsed to change TR25.926 and TR25.944 to align with "Typical radio parameter sets" from ISG.
"Typical radio parameter sets" was revised in the ad hoc of ISG to correct errors and to fix TBD parameters.
The attached document is the latest version (version 1.3) of "Typical radio parameter sets", which was approved in ISG, to be submitted to the appropriate 3GPP TSGs and WGs. The major changes from the version 1.2 to version 1.3 are summarised in the appendix "Overview of Typical Radio Interface Parameter Sets version 1.3".
ISG hopes that WG1 and WG2 will check necessity of any changes in TRs to reflect changes in the version 1.3.

Please note that the version 1.3 is now stable. There is no plan to revise the document in ISG except for editorial correction.

Typical Radio Interface Parameter Sets

Version 1.3

August 2000

Contents

1. Scope

This document describes the typical parameter sets for layer 1 and 2 configurations preferred by operators to ensure interoperability. It has to be noted that these sets of prioritised parameters are not imposing constraints in the standard, nor removing the flexibility which has been included in the standard as a requirement from the operators, nor will the document define specific essential services for roaming in IMT-2000(UTRA FDD) networks. Moreover, the identification of typical parameter sets does not prevent operators to exploit full flexibility in their networks by the use of parameter settings which are not mentioned in this document. It is expected that the prioritised parameter sets identified in this document will be reflected in the test specifications for UTRA FDD mobile handsets, forming the first class testing cases.

2. Reference

[1] 3G TS 25.211 Physical Channels and mapping of Transport Channels onto Physical channels (FDD)
[2] 3G TS 25.212 Multiplexing and Channel Coding (FDD)
[3] 3G TS 23.107 QoS concept and Architecture
[4] 3G TS 26.110 Codec for Circuit Switched Multimedia Telephony Service; General Description
[5] 3G TS 29.007 General requirements on interworking between the Public Land Mobile Network (PLMN) and the Integrated Services Digital Network (ISDN) or Public Switched Telephone Network (PSTN)
[6] 3G TR 23.910 Circuit Switched Data Bearer Service

3. Abbreviations

AM	Acknowledgement mode
BCCH	Broadcast Control Channel
CBS	Cell Broadcast Service
CC	Convolutional coding
CCCH	Common Control Channel
CCTrCH	Coded Composite Transport Channel
CS	Circuit switching
DCCH	Dedicated Control Channel
DL	Downlink
DPCH	Dedicated Physical Channel
DT	Direct transfer
DTCH	Dedicated Traffic Channel
FTM	File tunnelling mode
NAS	Non-access stratum
PRACH	Physical Randome Access Channel
PS	Packet switching
RAB	Radio Access Bearer
RB	Radio Bearer
SCCPCH	Secondary Common Control Physical Channel
SMS	Short Message Service
SRB	Signalling RB
SSD	Source statistics descriptor
TC	Turbo coding
TM	Transparent mode
UL	Uplink
UM	Unacknowledgement mode

4. QoS Architecture and RAB attributes

From a user point-of-view services are considered end-to-end, this means from a Terminal Equipment (TE) to another TE. An End-to-End Service may have a certain Quality of Service (QoS) which is provided for the user through the different networks. In UMTS, it is the UMTS Bearer Service that provides the requested QoS through the use of different QoS classes as defined in TS 23.107 [3].
The UMTS Bearer Service consists of two parts, the Radio Access Bearer Service, RAB, and the Core Network Bearer Service. The Radio Access Bearer Service is realised by a Radio Bearer Service and an Iu-Bearer Service. The relationship between the services is illustrated in figure 1.

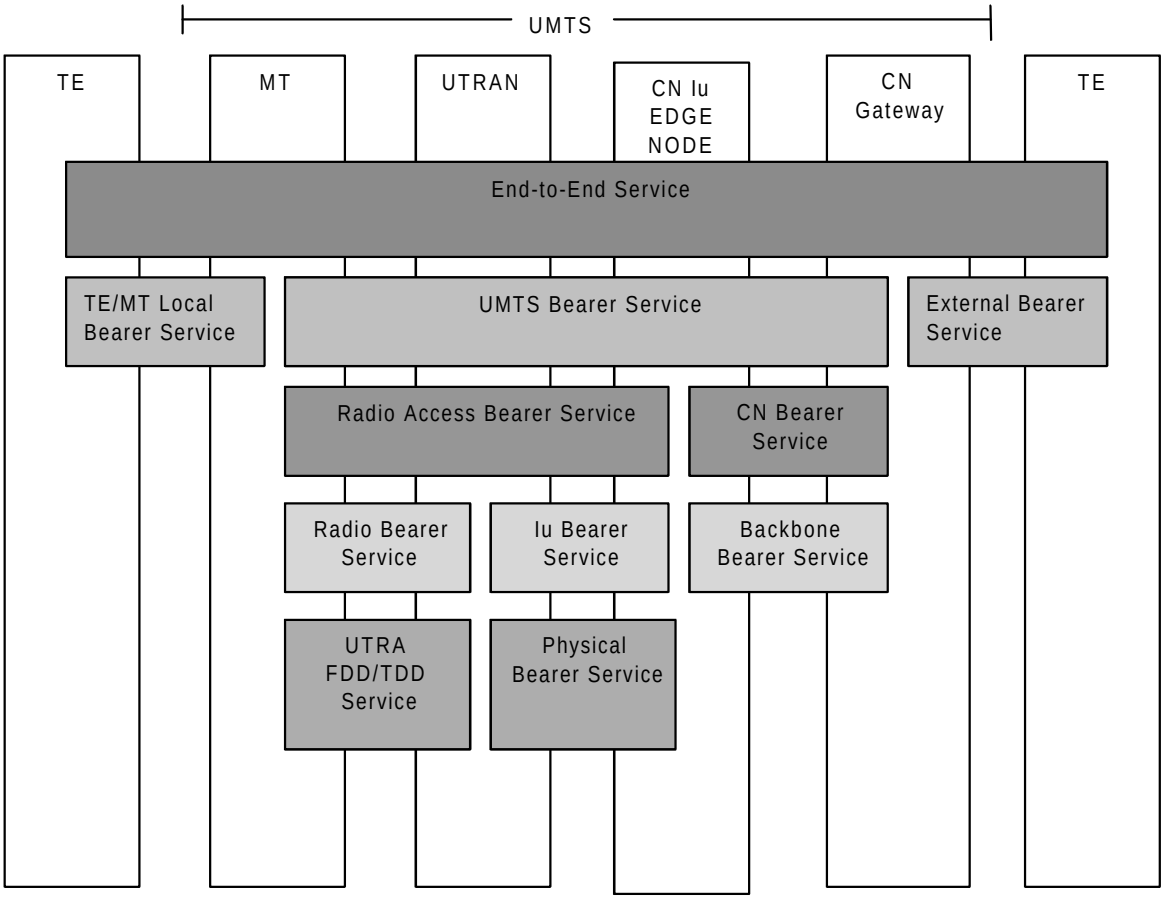

Figure 1: UMTS QoS Architecture

The Radio Access Bearer Service is characterised by a number of attributes such as Traffic class, Maximum bit rate, Guaranteed bit rate, SDU error ratio, Residual BER, Transfer Delay etc [3]. As a first approach the four following attributes have been considered to come up with the parameter settings in section 5.4:
- Traffic class
- SSD
- Maximum bit rate
- Residual BER

The Traffic classes are explained in table 1. The Maximum bit rate has been considered at RLC layer and Physical Layer for the acknowledged and unacknowledged modes respectively. The Residual BER is understood as BER at RLC layer and Transport BLER for the acknowledged and unacknowledged modes respectively.

Table 1: Traffic classes

Traffic class	**Conversational class** conversational RT	**Streaming class** streaming RT	**Interactive class** Interactive best effort	**Background** Background best effort
Fundamental characteristics	- Preserve time relation (variation) between information entities of the stream Conversational pattern (stringent and low delay)	- Preserve time relation (variation) between information entities of the stream (i.e. some but constant delay)	Request response pattern Preserve payload content	Destination is not expecting the data within a certain time Preserve payload content
Example of the application	- speech, video, …	- facsimile (NT) - streaming audio and video	- Web browsing	- background download of emails

5. RAB and signalling RB

5.1. RABs and signalling RBs

In the following sections, the typical parameter sets are presented for reference RABs, signalling RBs and important combinations of them. The data rate given for each RAB is the maximum data rate that can be supported by that RAB.
NOTE: The granularity for each RAB needs to be clarified.

Table 2: Prioritised RABs.

#	Traffic class[3]	SSD[3]	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	Streaming	Unknown	UL:14.4 DL:14.4	CS
13	Streaming	Unknown	UL:28.8 DL:28.8	CS
14	Streaming	Unknown	UL:57.6 DL:57.6	CS
15	Streaming	Unknown	UL:0 DL:64	CS or PS
16	Streaming	Unknown	UL:64 DL:0	CS or PS
17	Streaming	Unknown	UL:0 DL:128	CS or PS
18	Streaming	Unknown	UL:128 DL:0	CS or PS
19	Streaming	Unknown	UL:0 DL:384	CS or PS
20	Interactive or Background	N/A	UL:32 DL:8	PS
21	Interactive or Background	N/A	UL:64 DL:8	PS
22	Interactive or Background	N/A	UL:32 DL:64	PS
23	Interactive or Background	N/A	UL:64 DL:64	PS
24	Interactive or Background	N/A	UL:64 DL:128	PS
25	Interactive or Background	N/A	UL:128 DL:128	PS

26	Interactive or Background	N/A	UL:64 DL:384	PS
27	Interactive or Background	N/A	UL:128 DL:384	PS
28	Interactive or Background	N/A	UL:384 DL:384	PS
29	Interactive or Background	N/A	UL:64 DL:2048	PS
30	Interactive or Background	N/A	UL:128 DL:2048	PS
31	Interactive or Background	N/A	UL:384 DL:2048	PS

Table 3: Signalling RBs

#	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

5.2. Combinations of RABs and Signalling RBs

In this document, physical channel parameters for following combinations of RABs and signalling RBs on a CCTrCH are described.
Note: It is understood that for speech service the AMR mode may be operated asymmetrically for the uplink and downlink.

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:10.2 DL:10.2 kbps / CS RAB
   + UL:3.4 DL:3.4 kbps SRBs for DCCH
6) Conversational / speech / UL:7.95 DL:7.95 kbps / CS RAB
   + UL:3.4 DL:3.4 kbps SRBs for DCCH
7) Conversational / speech / UL:7.4 DL:7.4 kbps / CS RAB
   + UL:3.4 DL:3.4 kbps SRBs for DCCH
8) Conversational / speech / UL:6.7 DL:6.7 kbps / CS RAB
   + UL:3.4 DL:3.4 kbps SRBs for DCCH
9) Conversational / speech / UL:5.9 DL:5.9 kbps / CS RAB
   + UL:3.4 DL:3.4 kbps SRBs for DCCH
10) Conversational / speech / UL:5.15 DL:5.15 kbps / CS RAB
   + UL:1.7 DL:1.7 kbps SRBs for DCCH
11) Conversational / speech / UL:4.75 DL:4.75 kbps / CS RAB
   + UL:1.7 DL:1.7 kbps SRBs for DCCH
12) Conversational / unknown / UL:28.8 DL:28.8 kbps / CS RAB
   + UL:3.4 DL:3.4 kbps SRBs for DCCH
13) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
   + UL:3.4 DL:3.4 kbps SRBs for DCCH
14) Conversational / unknown / UL:32 DL:32 kbps / CS RAB
   + UL:3.4 DL:3.4 kbps SRBs for DCCH
15) Streaming / unknown / UL:14.4/DL:14.4 kbps / CS RAB
   + UL:3.4 DL:3.4 kbps SRBs for DCCH

16) Streaming / unknown / UL:28.8/DL:28.8 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
17) Streaming / unknown / UL:57.6/DL:57.6 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
18) Streaming / unknown / UL:0 DL:64 kbps / CS or PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
19) Streaming / unknown / UL:64 DL:0 kbps / CS or PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
20) Streaming / unknown / UL:0 DL:128 kbps / CS or PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
21) Streaming / unknown / UL:128 DL:0 kbps / CS or PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
22) Streaming / unknown / UL:0 DL:384 kbps / CS or PS 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:64 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
25) Interactive or background / UL:32 DL: 64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
26) Interactive or background / UL:64 DL: 64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
27) Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
28) Interactive or background / UL:128 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
29) Interactive or background / UL:64 DL:144 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
30) Interactive or background / UL:144 DL:144 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
31) Interactive or background / UL:64 DL:256 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH
32) Interactive or background / UL:64 DL:384 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH
33) Interactive or background / UL:128 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
34) Interactive or background / UL:384 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
35) Interactive or background / UL:64 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
36) Interactive or background / UL:128 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
37) Interactive or background / UL:384 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
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
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
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
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
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

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
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
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
46) 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
47) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:0 DL:128 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
48) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:0 DL:384 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
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
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
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
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
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
54) 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
55) Interactive or /background / UL:64 kbps DL:128 kbps / PS RAB
+ Streaming / unknown / UL:0 DL:128 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

Combinations on DSCH and DPCH
1) Interactive or background / UL:64 DL:256 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH
2) Interactive or background / UL:64 DL:384 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH
3) 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
4) 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
5) 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

Combinations on SCCPCH
1) Stand-alone 32 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

Combinations on PRACH
1) Interactive or background / UL:32 kbps / PS RAB
   + SRB for CCCH
   + SRBs for DCCH

5.3. Example of linkage between RABs and services

RABs, which are included in this document, can provide the services as shown in Table 1. Furthermore, the required BER for each RAB, which is assumed in this document, is shown in Table 4.

Table 4: Example of linkage between RABs and services

RAB				Residual BER[3]	Services
Traffic class[3]	SSD[3]	Max. rate, kbps	CS/PS		
Conversational	Speech	UL:4.75-12.2 DL:4.75-12.2	CS	$5x10^{-4}$, $1x10^{-3}$, $5x10^{-3}$	AMR speech
Conversational	Unknown	UL:64 DL:64	CS	$1x10^{-4}$ or $1x10^{-6}$	UDI 1B, 64k 3G-324M[4]
Conversational	Unknown	UL:32 DL:32	CS	$1x10^{-4}$ or $1x10^{-6}$	32k 3G-324M[4]
Conversational	Unknown	UL:28.8 DL:28.8	CS	$1x10^{-3}$	Transparent modem
Streaming	Unknown	UL:14.4 DL:14.4	CS	$1x10^{-3}$	FAX[6]
Streaming	Unknown	UL:28.8 DL:28.8	CS	$1x10^{-3}$	FAX[6] PIAFS 32 kbps
Streaming	Unknown	UL:57.6 DL:57.6	CS	$1x10^{-3}$	Modem[6], FTM[5], PIAFS 64 kbps
Streaming	Unknown	UL:64-128 or DL:64-384	CS or PS	$1x10^{-3}$ or $1x10^{-4}$	Streaming video, uni-directional
Interactive or Background	N/A	UL:32-384 DL:8-2048	PS	$1x10^{-3}$ or $1x10^{-4}$	Packet

Note: SMS can be provided via the signalling RB (DCCH) on DPCH or SCCPCH.
Note: CBS can be provided via the signalling RB (CTCH) on SCCPCH
Note: UDI *n*B can be provided via *n* RABs of conversational 64 kbps.

5.4. Typical radio parameter sets

5.4.1. Combinations on DPCH

5.4.1.1. Stand-alone UL:1.7 DL:1.7 kbps SRBs for DCCH

5.4.1.1.1. Uplink

5.4.1.1.1.1. Transport channel parameters

~~5.4.1.1.1.~~5.4.1.1.1.1. **Transport channel parameters for UL:1.7 kbps SRBs for DCCH**

Higher layer	RAB/signalling RB		**SRB#1**	**SRB#2**	**SRB#3**	**SRB#4**
	User of Radio Bearer		RRC	RRC	NAS_DT High prio	NAS_DT Low prio
RLC	Logical channel type		DCCH	DCCH	DCCH	DCCH
	RLC mode		UM	AM	AM	AM
	Payload sizes, bit		136	128	128	128
	Max data rate, bps		1700	1600	1600	1600
	RLC header, bit		8	16	16	16
MAC	MAC header, bit		4	4	4	4
	MAC multiplexing		4 logical channel multiplexing			
Layer 1	TrCH type		DCH			
	TB sizes, bit		148			
	TFS	TF0, bits	0x148			
		TF1, bits	1x148			
	TTI, ms		80			
	Coding type		CC 1/3			
	CRC, bit		16			
	Max number of bits/TTI before rate matching		516			
	Uplink: Max number of bits/radio frame before rate matching		65			

5.4.1.1.1.2. TFCS

TFCS size	2
TFCS	SRBs for DCCH = TF0, TF1

5.4.1.1.2. Physical channel parameters

DPCH Uplink	Min spreading factor	256
	Max number of DPDCH data bits/radio frame	150
	Puncturing Limit	1

5.4.1.2. Downlink

5.4.1.2.1. Transport channel parameters

~~5.4.1.2.1.~~5.4.1.2.1.1. **Transport channel parameters for DL:1.7 kbps SRBs for DCCH**

Higher layer	RAB/signalling RB	**SRB#1**	**SRB#2**	**SRB#3**	**SRB#4**
	User of Radio Bearer	RRC	RRC	NAS_DT High prio	NAS_DT Low prio
RLC	Logical channel type	DCCH	DCCH	DCCH	DCCH
	RLC mode	UM	AM	AM	AM
	Payload sizes, bit	136	128	128	128

	Max data rate, bps		1700	1600	1600	1600
	RLC header, bit		8	16	16	16
MAC	MAC header, bit		4	4	4	4
	MAC multiplexing		4 logical channel multiplexing			
Layer 1	TrCH type		DCH			
	TB sizes, bit		148			
	TFS	TF0, bits	0x148			
		TF1, bits	1x148			
	TTI, ms		80			
	Coding type		CC 1/3			
	CRC, bit		16			
	Max number of bits/TTI before rate matching		516			

5.4.1.1.2.1.2. TFCS

TFCS size	2
TFCS	SRBs for DCCH = TF0, TF1

5.4.1.1.2.2. Physical channel parameters

DPCH Downlink	DTX position		N/A (SingleTrCH)
	Minimum spreading factor		512
	DPCCH	Number of TFCI bits/slot	0
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	4
	DPDCH	Number of data bits/slot	4
		Number of data bits/frame	60

5.4.1.2. Stand-alone UL:3.4 DL:3.4 kbps SRBs for DCCH

5.4.1.2.1. Uplink

5.4.1.2.1.1. Transport channel parameters

~~5.4.1.2.1.1.~~5.4.1.2.1.1.1. **Transport channel parameters for UL:3.4 kbps SRBs for DCCH**

			SRB#1	**SRB#2**	**SRB#3**	**SRB#4**
Higher layer	RAB/signalling RB					
	User of Radio Bearer		RRC	RRC	NAS_DT High prio	NAS_DT Low prio
RLC	Logical channel type		DCCH	DCCH	DCCH	DCCH
	RLC mode		UM	AM	AM	AM
	Payload sizes, bit		136	128	128	128
	Max data rate, bps		3400	3200	3200	3200
	RLC header, bit		8	16	16	16
MAC	MAC header, bit		4	4	4	4
	MAC multiplexing		4 logical channel multiplexing			
Layer 1	TrCH type		DCH			
	TB sizes, bit		148			
	TFS	TF0, bits	0x148			
		TF1, bits	1x148			
	TTI, ms		40			
	Coding type		CC 1/3			
	CRC, bit		16			
	Max number of bits/TTI before rate matching		516			
	Uplink: Max number of bits/radio frame before rate matching		129			
	RM attribute		155-165			

5.4.1.2.1.1.2. TFCS

TFCS size	2
TFCS	SRBs for DCCH = TF0, TF1

5.4.1.2.1.2. Physical channel parameters

DPCH Uplink	Min spreading factor	256
	Max number of DPDCH data bits/radio frame	150
	Puncturing Limit	1

5.4.1.2.2. Downlink

5.4.1.2.2.1. Transport channel parameters

~~5.4.1.2.2.1.~~5.4.1.2.2.1.1. **Transport channel parameters for DL:3.4 kbps SRBs for DCCH**

		SRB#1	**SRB#2**	**SRB#3**	**SRB#4**
Higher layer	RAB/signalling RB				
	User of Radio Bearer	RRC	RRC	NAS_DT High prio	NAS_DT Low prio
RLC	Logical channel type	DCCH	DCCH	DCCH	DCCH
	RLC mode	UM	AM	AM	AM
	Payload sizes, bit	136	128	128	128
	Max data rate, bps	3400	3200	3200	3200
	RLC header, bit	8	16	16	16
MAC	MAC header, bit	4	4	4	4

	MAC multiplexing		4 logical channel multiplexing
Layer 1	TrCH type		DCH
	TB sizes, bit		148
	TFS	TF0, bits	0x148
		TF1, bits	1x148
	TTI, ms		40
	Coding type		CC 1/3
	CRC, bit		16
	Max number of bits/TTI before rate matching		516
	RM attribute		155-165

5.4.1.2.2.1.2. TFCS

TFCS size	2
TFCS	SRBs for DCCH = TF0, TF1

5.4.1.2.2.2. Physical channel parameters

DPCH Downlink	DTX position		N/A (SingleTrCH)
	Minimum spreading factor		256
	DPCCH	Number of TFCI bits/slot	0
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	4~~8~~
	DPDCH	Number of data bits/slot	14~~10~~
		Number of data bits/frame	210~~150~~

5.4.1.3. Stand-alone UL:13.6 DL:13.6 kbps SRBs for DCCH

5.4.1.3.1. Uplink

5.4.1.3.1.1. Transport channel parameters

~~5.4.1.3.1.1.~~5.4.1.3.1.1.1. Transport channel parameters for UL:13.6 kbps SRBs for DCCH

Higher layer	RAB/signalling RB		**SRB#1**	**SRB#2**	**SRB#3**	**SRB#4**
	User of Radio Bearer		RRC	RRC	NAS_DT High prio	NAS_DT Low prio
RLC	Logical channel type		DCCH	DCCH	DCCH	DCCH
	RLC mode		UM	AM	AM	AM
	Payload sizes, bit		136	128	128	128
	Max data rate, bps		13600	12800	12800	12800
	RLC header, bit		8	16	16	16
MAC	MAC header, bit		4	4	4	4
	MAC multiplexing		4 logical channel multiplexing			
Layer 1	TrCH type		DCH			
	TB sizes, bit		148			
	TFS	TF0, bits	0x148			
		TF1, bits	1x148			
	TTI, ms		10			
	Coding type		CC 1/3			
	CRC, bit		16			
	Max number of bits/TTI before rate matching		516			
	Uplink: Max number of bits/radio frame before rate matching		516			

5.4.1.3.1.2. TFCS

TFCS size	2
TFCS	SRBs for DCCH = TF0, TF1

5.4.1.3.2. Physical channel parameters

DPCH Uplink	Min spreading factor	64
	Max number of DPDCH data bits/radio frame	600
	Puncturing Limit	1

5.4.1.3.2. Downlink

5.4.1.3.2.1. Transport channel parameters

~~5.4.1.3.2.1.~~5.4.1.3.2.1.1. Transport channel parameters for DL:13.6 kbps SRBs for DCCH

Higher layer	RAB/signalling RB		**SRB#1**	**SRB#2**	**SRB#3**	**SRB#4**
	User of Radio Bearer		RRC	RRC	NAS_DT High prio	NAS_DT Low prio
RLC	Logical channel type		DCCH	DCCH	DCCH	DCCH
	RLC mode		UM	AM	AM	AM
	Payload sizes, bit		136	128	128	128
	Max data rate, bps		13600	12800	12800	12800
	RLC header, bit		8	16	16	16
MAC	MAC header, bit		4	4	4	4
	MAC multiplexing		4 logical channel multiplexing			

Layer 1	TrCH type		DCH
	TB sizes, bit		148
	TFS	TF0, bits	0x148
		TF1, bits	1x148
	TTI, ms		10
	Coding type		CC 1/3
	CRC, bit		16
	Max number of bits/TTI before rate matching		516

5.4.1.3.2.1.2. TFCS

TFCS size	2
TFCS	SRBs for DCCH = TF0, TF1

5.4.1.3.2.2. Physical channel parameters

DPCH Downlink	DTX position		N/A (SingleTrCH)
	Minimum spreading factor		128
	DPCCH	Number of TFCI bits/slot	0
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	4
	DPDCH	Number of data bits/slot	34
		Number of data bits/frame	510

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

5.4.1.4.1. Uplink

5.4.1.4.1.1. Transport channel parameters

~~5.4.1.4.1.1.~~5.4.1.4.1.1.1. Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

Higher layer	RAB/Signalling RB		RAB subflow #1	RAB subflow #2	RAB subflow #3
RLC	Logical channel type		DTCH		
	RLC mode		TM	TM	TM
	Payload sizes, bit		39, 81 (alt. 0, 39, 81)	103	60
	Max data rate, bps		12200		
	RLC header, bit		0		
MAC	MAC header, bit		0		
	MAC multiplexing		N/A		
Layer 1	TrCH type		DCH	DCH	DCH
	TB sizes, bit		39, 81 (alt. 0, 39, 81)	~~0,~~ 103	~~0,~~ 60
	TFS*[1]	TF0, bits	0x81(alt. 1x0*[2])	0x103~~1x0~~	0x60~~1x0~~
		TF1, bits	1x39	1x103~~0~~	1x60~~0~~
		TF2, bits	1x81	N/A~~1x103~~	N/A~~1x60~~
	TTI, ms		20	20	20
	Coding type		CC 1/3	CC 1/3	CC 1/2
	CRC, bit		12	-N/A	-N/A
	Max number of bits/TTI after channel coding		303	333	136
	Uplink: Max number of bits/radio frame before rate matching		152	167	68
	RM attribute		180-220	170-210	215-256

*1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212)~~TFs of a three RAB subflows are associated each other as stated in above table~~.
*2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see section 4.2.1.1 in TS25.212.).

~~5.4.1.4.1.2.~~5.4.1.4.1.1.2. Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See 5.4.1.2.1.1.1

5.4.1.4.1.1.3. TFCS

TFCS size	6
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3,DCCH)= (TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0), (TF2, TF1, TF1, TF0), (TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF1), (TF2, TF1, TF1, TF1)

~~5.4.1.4.1.3.~~5.4.1.4.1.2. Physical channel parameters

DPCH Uplink	Min spreading factor	64
	Max number of DPDCH data bits/radio frame	600
	Puncturing Limit	0.88~~1~~

5.4.1.4.2. Downlink

5.4.1.4.2.1. Transport channel parameters

~~5.4.1.4.2.1.~~5.4.1.4.2.1.1. Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

Higher layer	RAB/Signalling RB		RAB subflow #1	RAB subflow #2	RAB subflow #3
RLC	Logical channel type		DTCH		
	RLC mode		TM	TM	TM
	Payload sizes, bit		0, 39, 81	~~0,~~ 103	~~0,~~ 60
	Max data rate, bps		12200		
	RLC header, bit		0		
MAC	MAC header, bit		0		
	MAC multiplexing		N/A		
Layer 1	TrCH type		DCH	DCH	DCH
	TB sizes, bit		0, 39, 81	~~0,~~ 103	~~0,~~ 60
	TFS*[1]	TF0, bits	1x0*[2]	0x103~~1x0~~	0x60~~1x0~~
		TF1, bits	1x39	1x103~~0~~	1x60
		TF2, bits	1x81	N/A~~1x103~~	N/A~~1x60~~
	TTI, ms		20	20	20
	Coding type		CC 1/3	CC 1/3	CC 1/2
	CRC, bit		12	-N/A	-N/A
	Max number of bits/TTI after channel coding		303	333	136
	RM attribute		180-220	170-210	215-256

*1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212)~~TFs of a three RAB subflows are associated each other as stated in above table~~.

*2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see section 4.2.1.1 in TS25.212.).

~~5.4.1.4.2.2.~~5.4.1.4.2.1.2. Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See 5.4.1.2.2.1.1

5.4.1.4.2.1.3. TFCS

TFCS size	6
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3,DCCH)= (TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0), (TF2, TF1, TF1, TF0), (TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF1), (TF2, TF1, TF1, TF1)

~~5.4.1.4.2.3.~~5.4.1.4.2.2. Physical channel parameters

DPCH Downlink	DTX position		Fixed
	Spreading factor		128
	DPCCH	Number of TFCI bits/slot	0
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	4
	DPDCH	Number of data bits/slot	34
		Number of data bits/frame	510

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

5.4.1.5.1. Uplink

5.4.1.5.1.1. Transport channel parameters

~~5.4.1.5.1.1.~~5.4.1.5.1.1.1. **Transport channel parameters for Conversational / speech / UL:10.2 kbps / CS RAB**

Higher layer	RAB/Signalling RB		RAB subflow #1	RAB subflow #2	RAB subflow #3
RLC	Logical channel type		DTCH		
	RLC mode		TM	TM	TM
	Payload sizes, bit		39, 65 (alt. 0, 39, 65)	~~0,~~ 99	~~0,~~ 40
	Max data rate, bps		10200		
	RLC header, bit		0		
MAC	MAC header, bit		0		
	MAC multiplexing		N/A		
Layer 1	TrCH type		DCH	DCH	DCH
	TB sizes, bit		39, 65 (alt. 0, 39, 65)	~~0,~~ 99	~~0,~~ 40
	TFS*[1]	TF0, bits	0x65 (alt. 1x0*[2])	0x99~~1x0~~	0x40~~1x0~~
		TF1, bits	1x39	1x99~~0~~	1x40
		TF2, bits	1x65	N/A~~1x99~~	N/A~~1x40~~
	TTI, ms		20	20	20
	Coding type		CC 1/3	CC 1/3	CC 1/2
	CRC, bit		12	~~-~~N/A	~~-~~N/A
	Max number of bits/TTI after channel coding		255	321	96
	Uplink: Max number of bits/radio frame before rate matching		128	161	48
	RM attribute		180-220	170-210	215-256

*1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212)~~TFs of a three RAB subflows are associated each other as stated in above table~~.
*2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see section 4.2.1.1 in TS25.212.).

~~5.4.1.5.1.2.~~5.4.1.5.1.1.2. **Transport channel parameters for UL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.1.1.1

5.4.1.5.1.1.3. TFCS

TFCS size	6
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3,DCCH)= (TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0), (TF2, TF1, TF1, TF0), (TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF1), (TF2, TF1, TF1, TF1)

~~5.4.1.5.1.3.~~5.4.1.5.1.2. **Physical channel parameters**

DPCH Uplink	Min spreading factor	64
	Max number of DPDCH data bits/radio frame	600
	Puncturing Limit	1

5.4.1.5.2. Downlink

5.4.1.5.2.1. Transport channel parameters

~~5.4.1.5.2.1.~~5.4.1.5.2.1.1. Transport channel parameters for Conversational / speech / DL:10.2 kbps / CS RAB

Higher layer	RAB/Signalling RB		RAB subflow #1	RAB subflow #2	RAB subflow #3
RLC	Logical channel type		DTCH		
	RLC mode		TM	TM	TM
	Payload sizes, bit		0, 39, 65	~~0,~~ 99	~~0,~~ 40
	Max data rate, bps		10200		
	RLC header, bit		0		
MAC	MAC header, bit		0		
	MAC multiplexing		N/A		
Layer 1	TrCH type		DCH	DCH	DCH
	TB sizes, bit		0, 39, 65	~~0,~~ 99	~~0,~~ 40
	TFS*[1]	TF0, bits	1x0*[2]	0x99~~1x0~~	0x40~~1x0~~
		TF1, bits	1x39	1x99~~0~~	1x40
		TF2, bits	1x65	N/A~~1x99~~	N/A~~1x40~~
	TTI, ms		20	20	20
	Coding type		CC 1/3	CC 1/3	CC 1/2
	CRC, bit		12	~~-~~N/A	~~-~~N/A
	Max number of bits/TTI after channel coding		255	321	96
	RM attribute		180-220	170-210	215-256

*1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212)~~TFs of a three RAB subflows are associated each other as stated in above table~~.

*2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see section 4.2.1.1 in TS25.212.).

~~5.4.1.5.2.2.~~5.4.1.5.2.1.2. Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See 5.4.1.2.2.1.1

5.4.1.5.2.1.3. TFCS

TFCS size	6
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3,DCCH)= (TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0), (TF2, TF1, TF1, TF0), (TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF1), (TF2, TF1, TF1, TF1)

~~5.4.1.5.2.3.~~5.4.1.5.2.2. Physical channel parameters

DPCH Downlink	DTX position		Fixed
	Spreading factor		128
	DPCCH	Number of TFCI bits/slot	0
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	4
	DPDCH	Number of data bits/slot	34
		Number of data bits/frame	510

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

5.4.1.6.1. Uplink

5.4.1.6.1.1. Transport channel parameters

~~5.4.1.6.1.1.~~5.4.1.6.1.1.1. Transport channel parameters for Conversational / speech / UL:7.95 kbps / CS RAB

Higher layer	RAB/Signalling RB		RAB subflow #1	RAB subflow #2
RLC	Logical channel type		DTCH	
	RLC mode		TM	TM
	Payload sizes, bit		39, 75 (alt. 0, 39, 75)	~~0,~~ 84
	Max data rate, bps		7950	
	RLC header, bit		0	
MAC	MAC header, bit		0	
	MAC multiplexing		N/A	
Layer 1	TrCH type		DCH	DCH
	TB sizes, bit		39, 75 (alt. 0, 39, 75)	~~0,~~ 84
	TFS*[1]	TF0, bits	0x75 (alt. 1x0*[2])	0x84~~1x0~~
		TF1, bits	1x39	1x84~~0~~
		TF2, bits	1x75	N/A~~1x84~~
	TTI, ms		20	20
	Coding type		CC 1/3	CC 1/3
	CRC, bit		12	~~-~~N/A
	Max number of bits/TTI after channel coding		285	276
	Uplink: Max number of bits/radio frame before rate matching		143	138
	RM attribute		180-220	170-210

*1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212)~~TFs of a three RAB subflows are associated each other as stated in above table~~.

*2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see section 4.2.1.1 in TS25.212.).

~~5.4.1.6.1.2.~~5.4.1.6.1.1.2. Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See 5.4.1.2.1.1.1.

5.4.1.6.1.1.3. TFCS

TFCS size	6
TFCS	(RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1)

~~5.4.1.6.1.3.~~5.4.1.6.1.2. Physical channel parameters

DPCH Uplink	Min spreading factor	64
	Max number of DPDCH data bits/radio frame	600
	Puncturing Limit	1

5.4.1.6.2. Downlink

5.4.1.6.2.1. Transport channel parameters

~~5.4.1.6.2.1.~~5.4.1.6.2.1.1. Transport channel parameters for Conversational / speech / DL:7.95 kbps / CS RAB

Higher layer	RAB/Signalling RB		**RAB subflow #1**	**RAB subflow #2**
RLC	Logical channel type		DTCH	
	RLC mode		TM	TM
	Payload sizes, bit		0, 39, 75	~~0,~~ 84
	Max data rate, bps		7950	
	RLC header, bit		0	
MAC	MAC header, bit		0	
	MAC multiplexing		N/A	
Layer 1	TrCH type		DCH	DCH
	TB sizes, bit		0, 39, 75	~~0,~~ 84
	TFS*[1]	TF0, bits	1x0*[2]	0x84~~1x0~~
		TF1, bits	1x39	1x84~~0~~
		TF2, bits	1x75	N/A~~1x84~~
	TTI, ms		20	20
	Coding type		CC 1/3	CC 1/3
	CRC, bit		12	-N/A
	Max number of bits/TTI after channel coding		285	276
	RM attribute		180-220	170-210

*1: : The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212)~~TFs of a three RAB subflows are associated each other as stated in above table~~.

*2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see section 4.2.1.1 in TS25.212.).

~~5.4.1.6.2.2.~~5.4.1.6.2.1.2. Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See 5.4.1.2.2.1.1

5.4.1.6.2.1.3. TFCS

TFCS size	6
TFCS	(RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1)

~~5.4.1.6.2.3.~~5.4.1.6.2.2. Physical channel parameters

DPCH Downlink	DTX position		Fixed
	Spreading factor		128
	DPCCH	Number of TFCI bits/slot	0
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	4
	DPDCH	Number of data bits/slot	34
		Number of data bits/frame	510

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

5.4.1.7.1. Uplink

5.4.1.7.1.1. Transport channel parameters

~~5.4.1.7.1.1.~~5.4.1.7.1.1.1. **Transport channel parameters for Conversational / speech / UL:7.4 kbps / CS RAB**

Higher layer	RAB/Signalling RB		RAB subflow #1	RAB subflow #2
RLC	Logical channel type		DTCH	
	RLC mode		TM	TM
	Payload sizes, bit		39, 61 (alt. 0, 39, 61)	~~0,~~ 87
	Max data rate, bps		7400	
	RLC header, bit		0	
MAC	MAC header, bit		0	
	MAC multiplexing		N/A	
Layer 1	TrCH type		DCH	DCH
	TB sizes, bit		39, 61 (alt. 0, 39, 61)	~~0,~~ 87
	TFS*[1]	TF0, bits	0x61 (alt. 1x0*[2])	0x87~~1x0~~
		TF1, bits	1x39	1x87~~0~~
		TF2, bits	1x61~~5~~	N/A~~1x87~~
	TTI, ms		20	20
	Coding type		CC 1/3	CC 1/3
	CRC, bit		12	~~-~~N/A
	Max number of bits/TTI after channel coding		243	285
	Uplink: Max number of bits/radio frame before rate matching		122	143
	RM attribute		180-220	170-210

*1: : The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212)~~TFs of a three RAB subflows are associated each other as stated in above table~~.

*2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see section 4.2.1.1 in TS25.212.).

~~5.4.1.7.1.2.~~5.4.1.7.1.1.2. **Transport channel parameters for UL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.1.1.1

5.4.1.7.1.1.3. TFCS

TFCS size	6
TFCS	(RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1)

~~5.4.1.7.1.3.~~5.4.1.7.1.2. **Physical channel parameters**

DPCH Uplink	Min spreading factor	64
	Max number of DPDCH data bits/radio frame	600
	Puncturing Limit	1

5.4.1.7.2. Downlink

5.4.1.7.2.1. Transport channel parameters

~~5.4.1.7.2.1.~~5.4.1.7.2.1.1. **Transport channel parameters for Conversational / speech / DL:7.4 kbps / CS RAB**

Higher layer	RAB/Signalling RB		**RAB subflow #1**	**RAB subflow #2**
RLC	Logical channel type		DTCH	
	RLC mode		TM	TM
	Payload sizes, bit		0, 39, 61	~~0,~~ 87
	Max data rate, bps		7400	
	RLC header, bit		0	
MAC	MAC header, bit		0	
	MAC multiplexing		N/A	
Layer 1	TrCH type		DCH	DCH
	TB sizes, bit		0, 39, 61	~~0,~~ 87
	TFS*[1]	TF0, bits	1x0*[2]	0x87~~1x0~~
		TF1, bits	1x39	1x87~~0~~
		TF2, bits	1x61	N/A~~1x87~~
	TTI, ms		20	20
	Coding type		CC 1/3	CC 1/3
	CRC, bit		12	-N/A
	Max number of bits/TTI after channel coding		243	285
	RM attribute		180-220	170-210

*1: : The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212)~~TFs of a three RAB subflows are associated each other as stated in above table~~.

*2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see section 4.2.1.1 in TS25.212.).

~~5.4.1.7.2.2.~~5.4.1.7.2.1.2. Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See 5.4.1.2.2.1.1

5.4.1.7.2.1.3. TFCS

TFCS size	6
TFCS	(RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1)

~~5.4.1.7.2.3.~~5.4.1.7.2.2. Physical channel parameters

DPCH Downlink	DTX position		Fixed
	Spreading factor		128
	DPCCH	Number of TFCI bits/slot	0
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	4
	DPDCH	Number of data bits/slot	34
		Number of data bits/frame	510

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

5.4.1.8.1. Uplink

5.4.1.8.1.1. Transport channel parameters

~~5.4.1.8.1.1.~~5.4.1.8.1.1.1. Transport channel parameters for Conversational / speech / UL:6.7 kbps / CS RAB

Higher layer	RAB/Signalling RB		RAB subflow #1	RAB subflow #2
RLC	Logical channel type		DTCH	
	RLC mode		TM	TM
	Payload sizes, bit		39, 58 (alt. 0, 39, 58)	~~0,~~76
	Max data rate, bps		6700	
	RLC header, bit		0	
MAC	MAC header, bit		0	
	MAC multiplexing		N/A	
Layer 1	TrCH type		DCH	DCH
	TB sizes, bit		39, 58 (alt. 0, 39, 58)	~~0,~~76
	TFS*[1]	TF0, bits	0x58 (alt. 1x0*[2])	0x76~~1x0~~
		TF1, bits	1x39	1x76~~0~~
		TF2, bits	1x58	N/A~~1x76~~
	TTI, ms		20	20
	Coding type		CC 1/3	CC 1/3
	CRC, bit		12	~~-~~N/A
	Max number of bits/TTI after channel coding		234	252
	Uplink: Max number of bits/radio frame before rate matching		117	126
	RM attribute		180-220	170-210

*1: : The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212)~~TFs of a three RAB subflows are associated each other as stated in above table~~.

*2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see section 4.2.1.1 in TS25.212.).

~~5.4.1.8.1.2.~~5.4.1.8.1.1.2. Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See 5.4.1.2.1.1.1

5.4.1.8.1.1.3. TFCS

TFCS size	6
TFCS	(RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1)

~~5.4.1.8.1.3.~~5.4.1.8.1.2. Physical channel parameters

DPCH Uplink	Min spreading factor	64
	Max number of DPDCH data bits/radio frame	600
	Puncturing Limit	1

5.4.1.8.2. Downlink

5.4.1.8.2.1. Transport channel parameters

~~5.4.1.8.2.1.~~5.4.1.8.2.1.1. Transport channel parameters for Conversational / speech / DL:6.7 kbps / CS RAB

Higher layer	RAB/Signalling RB		**RAB subflow #1**	**RAB subflow #2**
RLC	Logical channel type		DTCH	
	RLC mode		TM	TM
	Payload sizes, bit		0, 39, 58	~~0,~~ 76
	Max data rate, bps		6700	
	RLC header, bit		0	
MAC	MAC header, bit		0	
	MAC multiplexing		N/A	
Layer 1	TrCH type		DCH	DCH
	TB sizes, bit		0, 39, 58	~~0,~~ 76
	TFS*[1]	TF0, bits	1x0*[2]	0x76~~1x0~~
		TF1, bits	1x39	1x76~~0~~
		TF2, bits	1x58	N/A~~1x76~~
	TTI, ms		20	20
	Coding type		CC 1/3	CC 1/3
	CRC, bit		12	-N/A
	Max number of bits/TTI after channel coding		234	252
	RM attribute		180-220	170-210

*1: : The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212)~~TFs of a three RAB subflows are associated each other as stated in above table~~.

*2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see section 4.2.1.1 in TS25.212.).

~~5.4.1.8.2.2.~~5.4.1.8.2.1.2. Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See 5.4.1.2.2.1.1

5.4.1.8.2.1.3. TFCS

TFCS size	6
TFCS	(RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1)

~~5.4.1.8.2.3.~~5.4.1.8.2.2. Physical channel parameters

DPCH Downlink	DTX position		Fixed
	Spreading factor		128
	DPCCH	Number of TFCI bits/slot	0
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	4
	DPDCH	Number of data bits/slot	34
		Number of data bits/frame	510

5.4.1.9. Conversational / speech / UL:5.9 DL:5.9 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

5.4.1.9.1. Uplink

5.4.1.9.1.1. Transport channel parameters

~~5.4.1.9.1.1.~~5.4.1.9.1.1.1. Transport channel parameters for Conversational / speech / UL:5.9 kbps / CS RAB

Higher layer	RAB/Signalling RB		RAB subflow #1	RAB subflow #2
RLC	Logical channel type		DTCH	
	RLC mode		TM	TM
	Payload sizes, bit		39, 55 (alt. 0, 39, 55)	~~0,~~ 63
	Max data rate, bps		5900	
	RLC header, bit		0	
MAC	MAC header, bit		0	
	MAC multiplexing		N/A	
Layer 1	TrCH type		DCH	DCH
	TB sizes, bit		39, 55 (alt. 0, 39, 55)	~~0,~~ 63
	TFS*[1]	TF0, bits	0x55 (alt. 1x0*[2])	0x63~~1x0~~
		TF1, bits	1x39	1x63~~0~~
		TF2, bits	1x55	N/A~~1x63~~
	TTI, ms		20	20
	Coding type		CC 1/3	CC 1/3
	CRC, bit		12	~~-~~N/A
	Max number of bits/TTI after channel coding		225	213
	Uplink: Max number of bits/radio frame before rate matching		113	107
	RM attribute		180-220	170-210

*1: : The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212)~~TFs of a three RAB subflows are associated each other as stated in above table~~.

*2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see section 4.2.1.1 in TS25.212.).

~~5.4.1.9.1.2.~~5.4.1.9.1.1.2. Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See 5.4.1.2.1.1.1

5.4.1.9.1.1.3. TFCS

TFCS size	6
TFCS	(RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1)

~~5.4.1.9.1.3.~~5.4.1.9.1.2. Physical channel parameters

DPCH Uplink	Min spreading factor	64
	Max number of DPDCH data bits/radio frame	600
	Puncturing Limit	1

5.4.1.9.2. Downlink

5.4.1.9.2.1. Transport channel parameters

~~5.4.1.9.2.1.~~5.4.1.9.2.1.1. Transport channel parameters for Conversational / speech / DL:5.9 kbps / CS RAB

Higher layer	RAB/Signalling RB		**RAB subflow #1**	**RAB subflow #2**
RLC	Logical channel type		DTCH	
	RLC mode		TM	TM
	Payload sizes, bit		0, 39, 55	~~0,~~ 63
	Max data rate, bps		5900	
	RLC header, bit		0	
MAC	MAC header, bit		0	
	MAC multiplexing		N/A	
Layer 1	TrCH type		DCH	DCH
	TB sizes, bit		0, 39, 55	~~0,~~ 63
	TFS*[1]	TF0, bits	1x0*[2]	0x63~~1x0~~
		TF1, bits	1x39	1x63~~0~~
		TF2, bits	1x55	N/A~~1x63~~
	TTI, ms		20	20
	Coding type		CC 1/3	CC 1/3
	CRC, bit		12	-N/A
	Max number of bits/TTI after channel coding		225	213
	RM attribute		180-220	170-210

*1: : The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212)~~TFs of a three RAB subflows are associated each other as stated in above table~~.

*2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see section 4.2.1.1 in TS25.212.).

~~5.4.1.9.2.2.~~5.4.1.9.2.1.2. Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See 5.4.1.2.2.1.1

5.4.1.9.2.1.3. TFCS

TFCS size	6
TFCS	(RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1)

~~5.4.1.9.2.3.~~5.4.1.9.2.2. Physical channel parameters

DPCH Downlink	DTX position		Fixed
	Spreading factor		128
	DPCCH	Number of TFCI bits/slot	0
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	4
	DPDCH	Number of data bits/slot	34
		Number of data bits/frame	510

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

5.4.1.10.1. Uplink

5.4.1.10.1.1. Transport channel parameters

~~5.4.1.10.1.1~~5.4.1.10.1.1.1. Transport channel parameters for Conversational / speech / UL:5.15 kbps / CS RAB

Higher layer	RAB/Signalling RB		RAB subflow #1	RAB subflow #2
RLC	Logical channel type		DTCH	
	RLC mode		TM	TM
	Payload sizes, bit		39, 49 (alt. 0, 39, 49)	~~0,~~54
	Max data rate, bps		5150	
	RLC header, bit		0	
MAC	MAC header, bit		0	
	MAC multiplexing		N/A	
Layer 1	TrCH type		DCH	DCH
	TB sizes, bit		39, 49 (alt. 0, 39, 49)	~~0,~~54
	TFS*[1]	TF0, bits	0x49 (alt. 1x0*[2])	0x54~~1x0~~
		TF1, bits	1x39	1x54~~0~~
		TF2, bits	1x49	N/A~~1x54~~
	TTI, ms		20	20
	Coding type		CC 1/3	CC 1/3
	CRC, bit		12	~~-~~N/A
	Max number of bits/TTI after channel coding		207	186
	Uplink: Max number of bits/radio frame before rate matching		104	93
	RM attribute		180-220	170-210

*1: : The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212)~~TFs of a three RAB subflows are associated each other as stated in above table~~.

*2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see section 4.2.1.1 in TS25.212.).

~~5.4.1.10.1.2~~5.4.1.10.1.1.2. Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See 5.4.1.2.1.1.1

5.4.1.10.1.1.3. TFCS

TFCS size	6
TFCS	(RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1)

~~5.4.1.10.1.3~~5.4.1.10.1.2. Physical channel parameters

DPCH Uplink	Min spreading factor	128
	Max number of DPDCH data bits/radio frame	300
	Puncturing Limit	1

5.4.1.10.2. Downlink

5.4.1.10.2.1. Transport channel parameters

~~5.4.1.10.2.1~~5.4.1.10.2.1.1. Transport channel parameters for Conversational / speech / DL:5.15 kbps / CS RAB

Higher layer	RAB/Signalling RB		**RAB subflow #1**	**RAB subflow #2**
RLC	Logical channel type		DTCH	
	RLC mode		TM	TM
	Payload sizes, bit		0, 39, 49	~~0,~~ 54
	Max data rate, bps		5150	
	RLC header, bit		0	
MAC	MAC header, bit		0	
	MAC multiplexing		N/A	
Layer 1	TrCH type		DCH	DCH
	TB sizes, bit		0, 39, 49	~~0,~~ 54
	TFS*[1]	TF0, bits	1x0	0x54~~1x0~~
		TF1, bits	1x39	1x54~~0~~
		TF2, bits	1x49	N/A~~1x54~~
	TTI, ms		20	20
	Coding type		CC 1/3	CC 1/3
	CRC, bit		12	-N/A
	Max number of bits/TTI after channel coding		207	186
	RM attribute		180-220	170-210

*1: : The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212)~~TFs of a three RAB subflows are associated each other as stated in above table~~.

*2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see section 4.2.1.1 in TS25.212.).

~~5.4.1.10.2.2.~~5.4.1.10.2.1.2. Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See 5.4.1.2.2.1.1

5.4.1.10.2.1.3. TFCS

TFCS size	6
TFCS	(RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1)

~~5.4.1.10.2.3.~~5.4.1.10.2.2. Physical channel parameters

DPCH Downlink	DTX position		Fixed
	Spreading factor		256
	DPCCH	Number of TFCI bits/slot	0
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	4
	DPDCH	Number of data bits/slot	14
		Number of data bits/frame	210

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

5.4.1.11.1. Uplink

5.4.1.11.1.1. Transport channel parameters

~~5.4.1.11.1.1.~~5.4.1.11.1.1.1. **Transport channel parameters for Conversational / speech / UL:4.75 kbps / CS RAB**

Higher layer	RAB/Signalling RB		RAB subflow #1	RAB subflow #2
RLC	Logical channel type		DTCH	
	RLC mode		TM	TM
	Payload sizes, bit		39, 42 (alt. 0, 39, 42)	~~0,~~53
	Max data rate, bps		4750	
	RLC header, bit		0	
MAC	MAC header, bit		0	
	MAC multiplexing		N/A	
Layer 1	TrCH type		DCH	DCH
	TB sizes, bit		39, 42 (alt. 0, 39, 42)	~~0,~~53
	TFS*[1]	TF0, bits	0x42 (alt. 1x0*[2])	0x53~~1x0~~
		TF1, bits	1x39	1x53~~0~~
		TF2, bits	1x42	N/A~~1x53~~
	TTI, ms		20	20
	Coding type		CC 1/3	CC 1/3
	CRC, bit		12	~~-~~N/A
	Max number of bits/TTI after channel coding		186	183
	Uplink: Max number of bits/radio frame before rate matching		93	92
	RM attribute		180-220	170-210

*1: : The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212)~~TFs of a three RAB subflows are associated each other as stated in above table~~.

*2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see section 4.2.1.1 in TS25.212.).

~~5.4.1.11.1.2.~~5.4.1.11.1.1.2. **Transport channel parameters for UL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.1.1.1

5.4.1.11.1.3. TFCS

TFCS size	6
TFCS	(RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1)

~~5.4.1.11.1.3.~~5.4.1.11.1.2. **Physical channel parameters**

DPCH Uplink	Min spreading factor	128
	Max number of DPDCH data bits/radio frame	300
	Puncturing Limit	1

5.4.1.11.2. Downlink

5.4.1.11.2.1. Transport channel parameters

~~5.4.1.11.2.1.~~5.4.1.11.2.1.1. **Transport channel parameters for Conversational / speech / DL:4.75 kbps / CS RAB**

Higher layer	RAB/Signalling RB		**RAB subflow #1**	**RAB subflow #2**
RLC	Logical channel type		DTCH	
	RLC mode		TM	TM
	Payload sizes, bit		0, 39, 42	~~0,~~ 53
	Max data rate, bps		4750	
	RLC header, bit		0	
MAC	MAC header, bit		0	
	MAC multiplexing		N/A	
Layer 1	TrCH type		DCH	DCH
	TB sizes, bit		0, 39, 42	~~0,~~ 53
	TFS*[1]	TF0, bits	1x0*[2]	0x53~~1x0~~
		TF1, bits	1x39	1x53~~0~~
		TF2, bits	1x42	N/A~~1x53~~
	TTI, ms		20	20
	Coding type		CC 1/3	CC 1/3
	CRC, bit		12	-N/A
	Max number of bits/TTI after channel coding		186	183
	RM attribute		180-220	170-210

*1: : The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212)~~TFs of a three RAB subflows are associated each other as stated in above table~~.

*2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see section 4.2.1.1 in TS25.212.).

~~5.4.1.11.2.2.~~5.4.1.11.2.1.2. Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See 5.4.1.2.2.1.1

5.4.1.11.2.1.3. TFCS

TFCS size	6
TFCS	(RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1)

~~5.4.1.11.2.3.~~5.4.1.11.2.2. Physical channel parameters

DPCH Downlink	DTX position		Fixed
	Spreading factor		256
	DPCCH	Number of TFCI bits/slot	0
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	4
	DPDCH	Number of data bits/slot	14
		Number of data bits/frame	210

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

5.4.1.12.1. Uplink

5.4.1.12.1.1. Transport channel parameters

~~5.4.1.12.1.1~~ 5.4.1.12.1.1.1. **Transport channel parameters for conversational / unknown / UL:28.8 kbps / CS RAB**

Higher layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		TM
	Payload sizes, bit		576
	Max data rate, bps		28800
	RLC header, bit		0
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		576
	TFS	TF0, bits	0x576
		TF1, bits	1x576
		TF2, bits	2x576
	TTI, ms		40
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		3564
	Uplink: Max number of bits/radio frame before rate matching		891
	RM attribute		160-200~~TBD~~

~~5.4.1.12.1.2~~ 5.4.1.12.1.1.2. **Transport channel parameters for UL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.1.1.1

5.4.1.12.1.1.3. TFCS

TFCS size	6
TFCS	(28.8 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1)

~~5.4.1.12.1.3~~ 5.4.1.12.1.2. **Physical channel parameters**

DPCH Uplink	Min spreading factor	32
	Max number of DPDCH data bits/radio frame	1200
	Puncturing Limit	0.92~~4~~

5.4.1.12.2. Downlink

5.4.1.12.2.1. Transport channel parameters

~~5.4.1.12.2.1~~ 5.4.1.12.2.1.1. **Transport channel parameters for conversational / unknown / DL:28.8 kbps / CS RAB**

Higher layer	RAB/Signalling RB	**RAB**
RLC	Logical channel type	DTCH
	RLC mode	TM
	Payload sizes, bit	576

	Max data rate, bps		28800
	RLC header, bit		0
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		576
	TFS	TF0, bits	0x576
		TF1, bits	1x576
		TF2, bits	2x576
	TTI, ms		40
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		3564
	RM attribute		160-200~~TBD~~

~~5.4.1.12.2.2.~~5.4.1.12.2.1.2. Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See 5.4.1.2.2.1.1

5.4.1.12.2.1.3. TFCS

TFCS size	6
TFCS	(28.8 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1)

~~5.4.1.12.2.3.~~5.4.1.12.2.2. Physical channel parameters

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

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

5.4.1.13.1. Uplink

5.4.1.13.1.1. Transport channel parameters

~~5.4.1.13.1.1~~ 5.4.1.13.1.1.1. **Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB**

Higher layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		TM
	Payload sizes, bit		640
	Max data rate, bps		64000
	RLC header, bit		0
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		640
	TFS	TF0, bits	0x640
		TF1, bits	2x640(alt. 4x640)
	TTI, ms		20(alt. 40)
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		3948(alt. 7884)
	Uplink: Max number of bits/radio frame before rate matching		1974(alt. 1971)
	RM attribute		150-195

~~5.4.1.13.1.2~~ 5.4.1.13.1.1.2. **Transport channel parameters for UL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.1.1.1

5.4.1.13.1.1.3. TFCS

TFCS size	4
TFCS	(64 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1)

~~5.4.1.13.1.3~~ 5.4.1.13.1.2. **Physical channel parameters**

DPCH Uplink	Min spreading factor	16
	Max number of DPDCH data bits/radio frame	2400
	Puncturing Limit	0.92~~1~~

5.4.1.13.2. Downlink

5.4.1.13.2.1. Transport channel parameters

~~5.4.1.13.2.1~~ 5.4.1.13.2.1.1. **Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB**

Higher layer	RAB/Signalling RB	**RAB**
RLC	Logical channel type	DTCH
	RLC mode	TM
	Payload sizes, bit	640
	Max data rate, bps	64000

	RLC header, bit		0
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		640
	TFS	TF0, bits	0x640
		TF1, bits	2x640(alt. 4x640)
	TTI, ms		20(alt. 40)
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		3948(alt. 7884)
	RM attribute		150-195

~~5.4.1.13.2.2.~~5.4.1.13.2.1.2. Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See 5.4.1.2.2.1.1

5.4.1.13.2.1.3. TFCS

TFCS size	4
TFCS	(64 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1)

~~5.4.1.13.2.3.~~5.4.1.13.2.2. Physical channel parameters

DPCH Downlink	DTX position		Flexible
	Spreading factor		32
	DPCCH	Number of TFCI bits/slot	8
		Number of TPC bits/slot	4
		Number of Pilot bits/slot	8
	DPDCH	Number of data bits/slot	140
		Number of data bits/frame	2100

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

5.4.1.14.1. Uplink

5.4.1.14.1.1. Transport channel parameters

~~5.4.1.14.1.1.~~5.4.1.14.1.1.1. Transport channel parameters for Conversational / unknown / UL:32 kbps / CS RAB

Higher layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		TM
	Payload sizes, bit		640
	Max data rate, bps		32000
	RLC header, bit		0
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		640
	TFS	TF0, bits	0x640
		TF1, bits	1x640(alt. 2x640)
	TTI, ms		20(alt. 40)
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		1980(alt. 3948)
	Uplink: Max number of bits/radio frame before rate matching		990(alt. 987)
	RM attribute		165-210

~~5.4.1.14.1.2.~~5.4.1.14.1.1.2. Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See 5.4.1.2.1.1.1

5.4.1.14.1.1.3. TFCS

TFCS size	4
TFCS	(32 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1)

~~5.4.1.14.1.3.~~5.4.1.14.1.2. Physical channel parameters

DPCH Uplink	Min spreading factor	32
	Max number of DPDCH data bits/radio frame	1200
	Puncturing Limit	0.8~~1~~

5.4.1.14.2. Downlink

5.4.1.14.2.1. Transport channel parameters

~~5.4.1.14.2.1.~~5.4.1.14.2.1.1. Transport channel parameters for Conversational / unknown / DL:32 kbps / CS RAB

Higher layer	RAB/Signalling RB	**RAB**
RLC	Logical channel type	DTCH
	RLC mode	TM
	Payload sizes, bit	640
	Max data rate, bps	32000

	RLC header, bit		0
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		640
	TFS	TF0, bits	0x640
		TF1, bits	1x640(alt. 2x640)
	TTI, ms		20(alt. 40)
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		1980(alt. 3948)
	RM attribute		165-210

~~5.4.1.14.2.2.~~5.4.1.14.2.1.2. Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See 5.4.1.2.2.1.1

5.4.1.14.2.1.3. TFCS

TFCS size	4
TFCS	(32 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1)

~~5.4.1.14.2.3.~~5.4.1.14.2.2. Physical channel parameters

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

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

5.4.1.15.1. Uplink

5.4.1.15.1.1. Transport channel parameters

~~5.4.1.15.1.1.~~5.4.1.15.1.1.1. Transport channel parameters for Streaming / unknown / UL: 14.4 kbps / CS RAB

Higher layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		TM
	Payload sizes, bit		576
	Max data rate, bps		1440~~28800~~
	RLC header, bit		0
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		576
	TFS	TF0, bits	0x576
		TF1, bits	1x576
	TTI, ms		40
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		1788
	Uplink: Max number of bits/radio frame before rate matching		447
	RM attribute		145-185~~TBD~~

~~5.4.1.15.1.2.~~5.4.1.15.1.1.2. Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See 5.4.1.2.1.1.1

5.4.1.15.1.1.3. TFCS

TFCS size	4
TFCS	(14.4 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1)

~~5.4.1.15.1.3.~~5.4.1.15.1.2. Physical channel parameters

DPCH Uplink	Min spreading factor	64
	Max number of DPDCH data bits/radio frame	600
	Puncturing Limit	1

5.4.1.15.2. Downlink

5.4.1.15.2.1. Transport channel parameters

~~5.4.1.15.2.1.~~5.4.1.15.2.1.1. Transport channel parameters for Streaming / unknown / DL:14.4 kbps / CS RAB

Higher layer	RAB/Signalling RB	**RAB**
RLC	Logical channel type	DTCH
	RLC mode	TM
	Payload sizes, bit	576
	Max data rate, bps	1440~~28800~~

	RLC header, bit		0
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		576
	TFS	TF0, bits	0x576
		TF1, bits	1x576
	TTI, ms		40
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		1788
	RM attribute		145-185~~TBD~~

~~5.4.1.15.2.2.~~5.4.1.15.2.1.2. Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See 5.4.1.2.2.1.1

5.4.1.15.2.1.3. TFCS

TFCS size	4
TFCS	(14.4 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1)

~~5.4.1.15.2.3.~~5.4.1.15.2.2. Physical channel parameters

DPCH Downlink	DTX position		Flexible
	Spreading factor		128
	DPCCH	Number of TFCI bits/slot	2
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	8
	DPDCH	Number of data bits/slot	28
		Number of data bits/frame	420

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

5.4.1.16.1. Uplink

5.4.1.16.1.1. Transport channel parameters

~~5.4.1.16.1.1~~ 5.4.1.16.1.1.1. Transport channel parameters for Streaming / unknown / UL:28.8 kbps / CS RAB

Higher layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		TM
	Payload sizes, bit		576
	Max data rate, bps		28800
	RLC header, bit		0
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		576
	TFS	TF0, bits	0x576
		TF1, bits	1x576
		TF2, bits	2x576
	TTI, ms		40
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		3564
	Uplink: Max number of bits/radio frame before rate matching		891
	RM attribute		135-175

~~5.4.1.16.1.2~~ 5.4.1.16.1.1.2. Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See 5.4.1.2.1.1.1

5.4.1.16.1.1.3. TFCS

TFCS size	6
TFCS	(28.8kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1)

~~5.4.1.16.1.3~~ 5.4.1.16.1.2. Physical channel parameters

DPCH Uplink	Min spreading factor	32
	Max number of DPDCH data bits/radio frame	1200
	Puncturing Limit	1

5.4.1.16.2. Downlink

5.4.1.16.2.1. Transport channel parameters

~~5.4.1.16.2.1~~ 5.4.1.16.2.1.1. Transport channel parameters for Streaming / unknown / DL:28.8 kbps / CS RAB

Higher layer	RAB/Signalling RB	**RAB**
RLC	Logical channel type	DTCH
	RLC mode	TM

	Payload sizes, bit		576
	Max data rate, bps		28800
	RLC header, bit		0
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		576
	TFS	TF0, bits	0x576
		TF1, bits	1x576
		TF2, bits	2x576
	TTI, ms		40
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		3564
	RM attribute		135-175

~~5.4.1.16.2.2.~~5.4.1.16.2.1.2. Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See 5.4.1.2.2.1.1

5.4.1.16.2.1.3. TFCS

TFCS size	6
TFCS	(28.8kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1)

~~5.4.1.16.2.3.~~5.4.1.16.2.2. Physical channel parameters

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

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

5.4.1.17.1. Uplink

5.4.1.17.1.1. Transport channel parameters

~~5.4.1.17.1.1~~ 5.4.1.17.1.1.1. Transport channel parameters for Streaming / unknown / UL:57.6 kbps / CS RAB

Higher layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		TM
	Payload sizes, bit		576
	Max data rate, bps		57600
	RLC header, bit		0
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		576
	TFS	TF0, bits	0x576
		TF1, bits	1x576
		TF2, bits	2x576
		TF3, bits	3x576
		TF4, bits	4x576
	TTI, ms		40
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		7116
	Uplink: Max number of bits/radio frame before rate matching		1779
	RM attribute		125-165

~~5.4.1.17.1.2~~ 5.4.1.17.1.1.2. Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See 5.4.1.2.1.1.1

5.4.1.17.1.1.3. TFCS

TFCS size	10
TFCS	(57.6 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1)

~~5.4.1.17.1.3~~ 5.4.1.17.1.2. Physical channel parameters

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

5.4.1.17.2. Downlink

5.4.1.17.2.1. Transport channel parameters

~~5.4.1.17.2.1~~ 5.4.1.17.2.1.1. Transport channel parameters for Streaming / unknown / DL:57.6 kbps / CS RAB

Higher layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		TM
	Payload sizes, bit		576
	Max data rate, bps		57600
	RLC header, bit		0
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		576
	TFS	TF0, bits	0x576
		TF1, bits	1x576
		TF2, bits	2x576
		TF3, bits	3x576
		TF4, bits	4x576
	TTI, ms		40
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		7116
	RM attribute		125-165

~~5.4.1.17.2.2.~~5.4.1.17.2.1.2. Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See 5.4.1.2.2.1.1

5.4.1.17.2.1.3. TFCS

TFCS size	10
TFCS	(57.6 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1)

~~5.4.1.17.2.3.~~5.4.1.17.2.2. Physical channel parameters

DPCH Downlink	DTX position		Flexible
	Spreading factor		32
	DPCCH	Number of TFCI bits/slot	8
		Number of TPC bits/slot	4
		Number of Pilot bits/slot	8
	DPDCH	Number of data bits/slot	140
		Number of data bits/frame	2100

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

5.4.1.18.1. Uplink

5.4.1.18.1.1. Transport channel parameters

~~5.4.1.18.1.1~~5.4.1.18.1.1.1. **Transport channel parameters for Streaming / unknown / UL:0 kbps / CS or PS RAB**

N/A

~~5.4.1.18.1.2~~5.4.1.18.1.1.2. **Transport channel parameters for UL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.1.1.1

5.4.1.18.1.1.3. TFCS

See 5.4.1.2.1.1.2

~~5.4.1.18.1.3~~5.4.1.18.1.2. **Physical channel parameters**

See 5.4.1.2.1.2

5.4.1.18.2. Downlink

5.4.1.18.2.1. Transport channel parameters

~~5.4.1.18.2.1~~5.4.1.18.2.1.1. **Transport channel parameters for Streaming / unknown / DL:64 kbps / CS or PS RAB**

Higher layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		TM
	Payload sizes, bit		320
	Max data rate, bps		64000
	RLC header, bit		0
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		320
	TFS	TF0, bits	0x320
		TF1, bits	1x320
		TF2, bits	2x320
		TF3, bits	4x320
		TF4, bits	8x320
	TTI, ms		40
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		8076
	RM attribute		125-165~~TBD~~

~~5.4.1.18.2.2~~5.4.1.18.2.1.2. **Transport channel parameters for DL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.1.18.2.1.3. TFCS

TFCS size	10
TFCS	(64 kbps RAB, DCCH)=

	(TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1)

~~5.4.1.18.2.3.~~5.4.1.18.2.2. Physical channel parameters

DPCH Downlink	DTX position		Flexible
	Spreading factor		32
	DPCCH	Number of TFCI bits/slot	8
		Number of TPC bits/slot	4
		Number of Pilot bits/slot	8
	DPDCH	Number of data bits/slot	140
		Number of data bits/frame	2100

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

5.4.1.19.1. Uplink

5.4.1.19.1.1. Transport channel parameters

~~5.4.1.19.1.1~~ 5.4.1.19.1.1.1. Transport channel parameters for Streaming / unknown / UL:64 kbps / CS or PS RAB

Higher layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		TM
	Payload sizes, bit		320
	Max data rate, bps		64000
	RLC header, bit		0
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		320
	TFS	TF0, bits	0x320
		TF1, bits	1x320
		TF2, bits	2x320
		TF3, bits	4x320
		TF4, bits	8x320
	TTI, ms		40
	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		2019
	RM attribute		125-165~~TBD~~

~~5.4.1.19.1.2~~ 5.4.1.19.1.1.2. Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See 5.4.1.2.1.1.1

5.4.1.19.1.1.3. TFCS

TFCS size	10
TFCS	(64 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1)

~~5.4.1.19.1.3~~ 5.4.1.19.1.2. Physical channel parameters

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

5.4.1.19.2. Downlink

5.4.1.19.2.1. Transport channel parameters

~~5.4.1.19.2.1~~ 5.4.1.19.2.1.1. Transport channel parameters for Streaming / unknown / DL:0 kbps / CS or PS RAB

N/A

~~5.4.1.19.2.2.~~5.4.1.19.2.1.2. **Transport channel parameters for DL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.1.19.2.1.3. TFCS

See 5.4.1.2.2.1.2

~~5.4.1.19.2.3.~~5.4.1.19.2.2. **Physical channel parameters**

See 5.4.1.2.2.2

5.4.1.20. Streaming / unknown / UL:0 DL:128 kbps / CS or PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

5.4.1.20.1. Uplink

5.4.1.20.1.1. Transport channel parameters

~~5.4.1.20.1.1~~5.4.1.20.1.1.1. **Transport channel parameters for Streaming / unknown / UL:0 kbps / CS or PS RAB**

N/A

~~5.4.1.20.1.2~~5.4.1.20.1.1.2. **Transport channel parameters for UL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.1.1.1

5.4.1.20.1.1.3. TFCS

See 5.4.1.2.1.1.2

~~5.4.1.20.1.3~~5.4.1.20.1.2. **Physical channel parameters**

See 5.4.1.2.1.2

5.4.1.20.2. Downlink

5.4.1.20.2.1. Transport channel parameters

~~5.4.1.20.2.1~~5.4.1.20.2.1.1. **Transport channel parameters for Streaming / unknown / DL:128 kbps / CS or PS RAB**

Higher layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		TM
	Payload sizes, bit		320
	Max data rate, bps		128000
	RLC header, bit		0
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		320
	TFS	TF0, bits	0x320
		TF1, bits	1x320
		TF2, bits	2x320
		TF3, bits	4x320
		TF4, bits	8x320
		TF5, bits	16x320
	TTI, ms		40
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		16152
	RM attribute		125-165~~TBD~~

~~5.4.1.20.2.2~~5.4.1.20.2.1.2. **Transport channel parameters for DL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.1.20.2.1.3. TFCS

TFCS size	12
TFCS	(128 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0) (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1)

~~5.4.1.20.2.3.~~5.4.1.20.2.2. Physical channel parameters

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

5.4.1.21. Streaming / unknown / UL:128 DL:0 kbps / CS or PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

5.4.1.21.1. Uplink

5.4.1.21.1.1. Transport channel parameters

~~5.4.1.21.1.1.~~5.4.1.21.1.1.1. **Transport channel parameters for Streaming / unknown / UL:128 kbps / CS or PS RAB**

Higher layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		TM
	Payload sizes, bit		320
	Max data rate, bps		128000
	RLC header, bit		0
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		320
	TFS	TF0, bits	0x320
		TF1, bits	1x320
		TF2, bits	2x320
		TF3, bits	4x320
		TF4, bits	8x320
		TF5, bits	16x320
	TTI, ms		40
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		16152
	Uplink: Max number of bits/radio frame before rate matching		4038
	RM attribute		125-165~~TBD~~

~~5.4.1.21.1.2.~~5.4.1.21.1.1.2. **Transport channel parameters for UL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.1.1.1

5.4.1.21.1.1.3. TFCS

TFCS size	12
TFCS	(128 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0) (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1)

~~5.4.1.21.1.3.~~5.4.1.21.1.2. **Physical channel parameters**

DPCH Uplink	Min spreading factor	8
	Max number of DPDCH data bits/radio frame	4800
	Puncturing Limit	1

5.4.1.21.2. Downlink

5.4.1.21.2.1. Transport channel parameters

~~5.4.1.21.2.1.~~5.4.1.21.2.1.1. **Transport channel parameters for Streaming / unknown / DL:0 kbps / CS or PS RAB**

N/A

~~5.4.1.21.2.2.~~5.4.1.21.2.1.2. **Transport channel parameters for DL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.1.21.2.1.3. TFCS

See 5.4.1.2.2.1.1

~~5.4.1.21.2.3.~~5.4.1.21.2.2. **Physical channel parameters**

See 5.4.1.2.2.2

5.4.1.22. Streaming / unknown / UL:0 DL:384 kbps / CS or PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

5.4.1.22.1. Uplink

5.4.1.22.1.1. Transport channel parameters

~~5.4.1.22.1.1.~~5.4.1.22.1.1.1. **Transport channel parameters for Streaming / unknown / UL:0 kbps / CS or PS RAB**

N/A

~~5.4.1.22.1.2.~~5.4.1.22.1.1.2. **Transport channel parameters for UL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.1.1.1

5.4.1.22.1.1.3. TFCS

See 5.4.1.2.1.1.2

~~5.4.1.22.1.3.~~5.4.1.22.1.2. **Physical channel parameters**

See 5.4.1.2.1.2

5.4.1.22.2. Downlink

5.4.1.22.2.1. Transport channel parameters

~~5.4.1.22.2.1.~~5.4.1.22.2.1.1. **Transport channel parameters for Streaming / unknown / DL:384 kbps / CS or PS RAB**

Higher layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		TM
	Payload sizes, bit		320
	Max data rate, bps		384000
	RLC header, bit		0
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		320
	TFS	TF0, bits	0x320
		TF1, bits	1x320
		TF2, bits	2x320
		TF3, bits	4x320
		TF4, bits	8x320
		TF5, bits	16x320
		TF6, bits	32x320
		TF7, bits	48x320
	TTI, ms		40
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		48432
	RM attribute		110-150~~TBD~~

~~5.4.1.22.2.2.~~5.4.1.22.2.1.2. **Transport channel parameters for DL:3.4 kbps SRBs for DCCH**

5.4.1.2.2.1.1

5.4.1.22.2.1.3. TFCS

TFCS size	16
TFCS	(384 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0), (TF7, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF1)

~~5.4.1.22.2.3.~~5.4.1.22.2.2. Physical channel parameters

DPCH Downlink	DTX position		Flexible
	Spreading factor		8
	Number od DPDCH		1
	DPCCH	Number of TFCI bits/slot	8
		Number of TPC bits/slot	8
		Number of Pilot bits/slot	16
	DPDCH	Number of data bits/slot	608
		Number of data bits/frame	9120

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

5.4.1.23.1. Uplink

5.4.1.23.1.1. Transport channel parameters

~~5.4.1.23.1.1~~ 5.4.1.23.1.1.1. Transport channel parameters for Interactive or background / UL:32 kbps / PS RAB

Higher layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		AM
	Payload sizes, bit		320
	Max data rate, bps		32000
	RLC header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336
	TFS	TF0, bits	0x336
		TF1, bits	1x336
		TF2, bits	2x336 (alt. ~~TF2 is~~ N/A)
	TTI, ms		20 (alt. 10)
	Coding type		TC (alt. CC 1/3)
	CRC, bit		16
	Max number of bits/TTI after channel coding		2124 (alt. 1080)
	Uplink: Max number of bits/radio frame before rate matching		1062 (alt. 1080)
	RM attribute		135-175

~~5.4.1.23.1.2~~ 5.4.1.23.1.1.2. Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See 5.4.1.2.1.1.1

5.4.1.23.1.1.3. TFCS

TFCS size	6 (alt. 4)
TFCS	(32 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1) (alt. (TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1))

~~5.4.1.23.1.3~~ 5.4.1.23.1.2. Physical channel parameters

DPCH Uplink	Min spreading factor	32
	Max number of DPDCH data bits/radio frame	1200
	Puncturing Limit	0.96~~1~~

5.4.1.23.2. Downlink

5.4.1.23.2.1. Transport channel parameters

~~5.4.1.23.2.1~~ 5.4.1.23.2.1.1. Transport channel parameters for Interactive or background / DL:8 kbps / PS RAB

Higher layer	RAB/Signalling RB	**RAB**
RLC	Logical channel type	DTCH

	RLC mode		AM
	Payload sizes, bit		320
	Max data rate, bps		8000
	RLC header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336
	TFS	TF0, bits	0x336
		TF1, bits	1x336
	TTI, ms		40
	Coding type		TC (alt. CC 1/3)
	CRC, bit		16
	Max number of bits/TTI after channel coding		1068 (alt. 1080)
	RM attribute		135-175~~TBD~~

~~5.4.1.23.2.2.~~5.4.1.23.2.1.2. Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See 5.4.1.2.2.1.1

5.4.1.23.2.1.3. TFCS

TFCS size	4
TFCS	(8 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1)

~~5.4.1.23.2.3.~~5.4.1.23.2.2. Physical channel parameters

DPCH Downlink	DTX position		Flexible
	Spreading factor		128
	DPCCH	Number of TFCI bits/slot	2
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	4
	DPDCH	Number of data bits/slot	32
		Number of data bits/frame	480

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

5.4.1.24.1. Uplink

5.4.1.24.1.1. Transport channel parameters

~~5.4.1.24.1.1~~ 5.4.1.24.1.1.1. Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB

Higher layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		AM
	Payload sizes, bit		320
	Max data rate, bps		64000
	RLC header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336
	TFS	TF0, bits	0x336
		TF1, bits	1x336
		TF2, bits	2x336
		TF3, bits	3x336
		TF4, bits	4x336
	TTI, ms		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		4236
	Uplink: Max number of bits/radio frame before rate matching		2118
	RM attribute		130-170

~~5.4.1.24.1.2~~ 5.4.1.24.1.1.2. Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See 5.4.1.2.1.1.1

5.4.1.24.1.1.3. TFCS

TFCS size	10
TFCS	(64 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1)

~~5.4.1.24.1.3~~ 5.4.1.24.1.2. Physical channel parameters

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

5.4.1.24.2. Downlink

See 5.4.1.23.2

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

5.4.1.25.1. Uplink

See 5.4.1.23.1

5.4.1.25.2. Downlink

5.4.1.25.2.1. Transport channel parameters

~~5.4.1.25.2.1.~~5.4.1.25.2.1.1. **Transport channel parameters for Interactive or background / DL:64 kbps / PS RAB**

Higher layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		AM
	Payload sizes, bit		320
	Max data rate, bps		64000
	RLC header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336
	TFS	TF0, bits	0x336
		TF1, bits	1x336
		TF2, bits	2x336
		TF3, bits	3x336
		TF4, bits	4x336
	TTI, ms		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		4236
	RM attribute		130-170

~~5.4.1.25.2.2.~~5.4.1.25.2.1.2. **Transport channel parameters for ~~U~~DL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.1.25.2.1.3. TFCS

TFCS size	10
TFCS	(64 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1)

~~5.4.1.25.2.3.~~5.4.1.25.2.2. **Physical channel parameters**

DPCH Downlink	DTX position		Flexible
	Spreading factor		32
	DPCCH	Number of TFCI bits/slot	8
		Number of TPC bits/slot	4
		Number of Pilot bits/slot	8
	DPDCH	Number of data bits/slot	140
		Number of data bits/frame	2100

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

5.4.1.26.1. Uplink

See 5.4.1.24.1

5.4.1.26.2. Downlink

See 5.4.1.25.2

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

5.4.1.27.1. Uplink

See 5.4.1.24.1

5.4.1.27.2. Downlink

5.4.1.27.2.1. Transport channel parameters

~~5.4.1.27.2.1.~~5.4.1.27.2.1.1. **Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB**

Higher layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		AM
	Payload sizes, bit		320
	Max data rate, bps		128000
	RLC header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336
	TFS	TF0, bits	0x336
		TF1, bits	1x336
		TF2, bits	2x336
		TF3, bits	4 x336
		TF4, bits	8 x336
	TTI, ms		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		8460
	RM attribute		120-160

~~5.4.1.27.2.2.~~5.4.1.27.2.1.2. **Transport channel parameters for DL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1.

5.4.1.27.2.1.3. TFCS

TFCS size	10
TFCS	(128 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1)

~~5.4.1.27.2.3.~~5.4.1.27.2.2. **Physical channel parameters**

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

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

5.4.1.28.1. Uplink

5.4.1.28.1.1. Transport channel parameters

~~5.4.1.28.1.1~~ 5.4.1.28.1.1.1. Transport channel parameters for Interactive or background / UL:128 kbps / PS RAB

Higher layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		AM
	Payload sizes, bit		320
	Max data rate, bps		128000
	RLC header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336
	TFS	TF0, bits	0x336
		TF1, bits	1x336
		TF2, bits	2x336
		TF3, bits	4 x336
		TF4, bits	8 x336
	TTI, ms		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		8460
	Uplink: Max number of bits/radio frame before rate matching		4230
	RM attribute		120-160

~~5.4.1.28.1.2~~ 5.4.1.28.1.1.2. Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See 5.4.1.2.1.1.1

5.4.1.28.1.1.3. TFCS

TFCS size	10
TFCS	(128 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1)

~~5.4.1.28.1.3~~ 5.4.1.28.1.2. Physical channel parameters

DPCH Uplink	Min spreading factor	8
	Max number of DPDCH data bits/radio frame	4800
	Puncturing Limit	1

5.4.1.28.2. Downlink

See 5.4.1.27.2

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

5.4.1.29.1. Uplink

See 5.4.1.24.1

5.4.1.29.2. Downlink

5.4.1.29.2.1. Transport channel parameters

~~5.4.1.29.2.1.~~5.4.1.29.2.1.1. **Transport channel parameters for Interactive or background / DL:144 kbps / PS RAB**

Higher layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		AM
	Payload sizes, bit		320
	Max data rate, bps		144000
	RLC header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336
	TFS	TF0, bits	0x336
		TF1, bits	1x336
		TF2, bits	2x336
		TF3, bits	4 x336
		TF4, bits	8 x336
		TF5, bits	9x336
	TTI, ms		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		9516
	RM attribute		140-180~~TBD~~

~~5.4.1.29.2.2.~~5.4.1.29.2.1.2. **Transport channel parameters for DL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.1.29.2.1.3. TFCS

TFCS size	12
TFCS	(144 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0) (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1)

~~5.4.1.29.2.3.~~5.4.1.29.2.2. **Physical channel parameters**

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

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

5.4.1.30.1. Uplink

5.4.1.30.1.1. Transport channel parameters

~~5.4.1.30.1.1~~5.4.1.30.1.1.1. Transport channel parameters for Interactive or background / UL:144 kbps / PS RAB

Higher layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		AM
	Payload sizes, bit		320
	Max data rate, bps		144000
	RLC header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336
	TFS	TF0, bits	0x336
		TF1, bits	1x336
		TF2, bits	2x336
		TF3, bits	4 x336
		TF4, bits	8 x336
		TF5, bits	9 x336
	TTI, ms		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		9516
	Uplink: Max number of bits/radio frame before rate matching		4758
	RM attribute		140-180~~TBD~~

~~5.4.1.30.1.2~~5.4.1.30.1.1.2. Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See 5.4.1.2.1.1.1

5.4.1.30.1.1.3. TFCS

TFCS size	12
TFCS	(144 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0) (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1)

~~5.4.1.30.1.3~~5.4.1.30.1.2. Physical channel parameters

DPCH Uplink	Min spreading factor	8
	Max number of DPDCH data bits/radio frame	4800
	Puncturing Limit	0.96

5.4.1.30.2. Downlink

See 5.4.1.29.2

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

5.4.1.31.1. Uplink

See 5.4.1.24.1

5.4.1.31.2. Downlink

5.4.1.31.2.1. Transport channel parameters

~~5.4.1.31.2.1.~~5.4.1.31.2.1.1. **Transport channel parameters for Interactive or background / DL:256 kbps / PS RAB**

Higher layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		AM
	Payload sizes, bit		320
	Max data rate, bps		384000
	RLC header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336
	TFS	TF0, bits	0x336
		TF1, bits	1x336
		TF2, bits	2x336
		TF3, bits	4 x336
		TF4, bits	8 x336
		~~(alt.~~ TF5, bits~~)~~	N/A (alt. 12x336)
		~~(alt.~~ TF6, bits~~)~~	N/A (alt. 16x336)
	TTI, ms		10 (alt. 20)
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		8460(alt. 16920)
	RM attribute		135-175~~TBD~~

~~5.4.1.31.2.2.~~5.4.1.31.2.1.2. **Transport channel parameters for UL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.1.31.2.1.3. TFCS

TFCS size	10 (alt.14)
TFCS	(256 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1) (alt. (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0) (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1))

~~5.4.1.31.2.3.~~5.4.1.31.2.2. **Physical channel parameters**

DPCH Downlink	DTX position		Flexible
	Spreading factor		8
	Number od DPDCH		1
	DPCCH	Number of TFCI bits/slot	8
		Number of TPC bits/slot	8
		Number of Pilot bits/slot	16

	DPDCH	Number of data bits/slot	608
		Number of data bits/frame	9120

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

5.4.1.32.1. Uplink

See 5.4.1.24.1

5.4.1.32.2. Downlink

5.4.1.32.2.1. Transport channel parameters

~~5.4.1.32.2.1.~~5.4.1.32.2.1.1. **Transport channel parameters for Interactive or background / DL:384 kbps / PS RAB**

Higher layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		AM
	Payload sizes, bit		320
	Max data rate, bps		384000
	RLC header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336
	TFS	TF0, bits	0x336
		TF1, bits	1x336
		TF2, bits	2x336
		TF3, bits	4 x336
		TF4, bits	8 x336
		TF5, bits	12x336
		~~(alt.~~ TF6, bits~~)~~	N/A (alt. 16x336)
		~~(alt.~~ TF7, bits~~)~~	N/A (alt. 20x336)
		~~(alt.~~ TF8, bits~~)~~	N/A (alt. 24 x336)
	TTI, ms		10(alt. 20)
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		12684(alt. 25368)
	RM attribute		110-150~~TBD~~

~~5.4.1.32.2.2.~~5.4.1.32.2.1.2. **Transport channel parameters for UL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.1.32.2.1.3. TFCS

TFCS size	12 (alt.18)
TFCS	(384 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0) (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1) (alt. (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0), (TF7, TF0), (TF8, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF1), (TF8, TF1))

~~5.4.1.32.2.3.~~5.4.1.32.2.2. **Physical channel parameters**

DPCH Downlink	DTX position	Flexible
	Spreading factor	8

	Number od DPDCH		1
	DPCCH	Number of TFCI bits/slot	8
		Number of TPC bits/slot	8
		Number of Pilot bits/slot	16
	DPDCH	Number of data bits/slot	608
		Number of data bits/frame	9120

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

5.4.1.33.1. Uplink

See 5.4.1.28.1

5.4.1.33.2. Downlink

See 5.4.1.32.2

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

5.4.1.34.1. Uplink

5.4.1.34.1.1. Transport channel parameters

~~5.4.1.34.1.1~~ 5.4.1.34.1.1.1. **Transport channel parameters for Interactive or background / UL:384 kbps / PS RAB**

Higher layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		AM
	Payload sizes, bit		320
	Max data rate, bps		384000
	RLC header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336
	TFS	TF0, bits	0x336
		TF1, bits	1x336
		TF2, bits	2x336
		TF3, bits	4 x336
		TF4, bits	8 x336
		TF5, bits	12x336
		TF6, bits	16x336 (alt. N/A)
		TF7, bits	20x336 (alt. N/A)
		TF8, bits	24 x336 (alt. N/A)
	TTI, ms		20 (alt. 10)
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		25368
	Uplink: Max number of bits/radio frame before rate matching		12684
	RM attribute		110-150~~TBD~~

~~5.4.1.34.1.2~~ 5.4.1.34.1.1.2. **Transport channel parameters for UL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.1.1.1

5.4.1.34.1.1.3. TFCS

TFCS size	18 (alt.12)
TFCS	(384 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0), (TF7, TF0), (TF8, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF1), (TF8, TF1) (alt. (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0) (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1))

~~5.4.1.34.1.3~~ 5.4.1.34.1.2. **Physical channel parameters**

DPCH Uplink	Min spreading factor	4
	Max number of DPDCH data bits/radio frame	9600
	Number of DPDCH	1
	Puncturing Limit	0.72

5.4.1.34.2. Downlink

See 5.4.1.32.2

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

5.4.1.35.1. Uplink

See 5.4.1.24.1

5.4.1.35.2. Downlink

5.4.1.35.2.1. Transport channel parameters

~~5.4.1.35.2.1.~~5.4.1.35.2.1.1. **Transport channel parameters for Interactive or background / DL:2048 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		2048000
	RLC 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	4 x656
		TF4, bits	8 x656
		TF5, bits	12x656
		TF6, bits	16x656
		TF7, bits	20x656
		TF8, bits	24x656
		TF9, bits	28x656
		TF10, bits	32x656
		~~(alt.~~ TF11, bits~~)~~	N/A (alt. 36x656)
		~~(alt.~~ TF12, bits~~)~~	N/A (alt. 40x656)
		~~(alt.~~ TF13, bits~~)~~	N/A (alt. 44x656)
		~~(alt.~~ TF14, bits~~)~~	N/A (alt. 48x656)
		~~(alt.~~ TF15, bits~~)~~	N/A (alt. 52x656)
		~~(alt.~~ TF16, bits~~)~~	N/A (alt. 56x656)
		~~(alt.~~ TF17, bits~~)~~	N/A (alt. 60x656)
		~~(alt.~~ TF18, bits~~)~~	N/A (alt. 64x656)
	TTI, ms		10(alt. 20)
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		64572 (alt. 129132)
	RM attribute		130-170~~TBD~~

~~5.4.1.35.2.2.~~5.4.1.35.2.1.2. **Transport channel parameters for DL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.1.35.2.1.3. TFCS

TFCS size	22 (alt.38)

TFCS	(2048 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0), (TF7, TF0), (TF8, TF0), (TF9, TF0), (TF10, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF1), (TF8, TF1), (TF9, TF1), (TF10, TF1) (alt. TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0), (TF7, TF0), (TF8, TF0), (TF9, TF0), (TF10, TF0),(TF11, TF0), (TF12, TF0), (TF13, TF0), (TF14, TF0), (TF15, TF0), (TF16, TF0), (TF17, TF0), (TF18, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF1), (TF8, TF1), (TF9, TF1), (TF10, TF1),(TF11, TF0), (TF12, TF0), (TF13, TF0), (TF14, TF0), (TF15, TF0), (TF16, TF0), (TF17, TF0), (TF18, TF0))

~~5.4.1.35.2.3.~~5.4.1.35.2.2. **Physical channel parameters**

DPCH Downlink	DTX position		Flexible
	Spreading factor		4
	Number of DPCH		3
	DPCCH	Number of TFCI bits/slot	8
		Number of TPC bits/slot	8
		Number of Pilot bits/slot	16
	DPDCH	Number of data bits/slot	1248
		Number of data bits/frame	18720

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

5.4.1.36.1. Uplink

See 5.4.1.28.1

5.4.1.36.2. Downlink

See 5.4.1.35.2

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

5.4.1.37.1. Uplink

See 5.4.1.34.1

5.4.1.37.2. Downlink

See 5.4.1.35.2

5.4.1.38. 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

5.4.1.38.1. Uplink

5.4.1.38.1.1. Transport channel parameters

~~5.4.1.38.1.1~~5.4.1.38.1.1.1. **Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB**

See 5.4.1.4.1.1.1

~~5.4.1.38.1.2~~5.4.1.38.1.1.2. **Transport channel parameters for Interactive or background / UL:32 kbps / PS RAB**

See 5.4.1.23.1.1.1

~~5.4.1.38.1.3~~5.4.1.38.1.1.3. **Transport channel parameters for UL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.1.1.1

5.4.1.38.1.1.4. TFCS

TFCS size	18 (alt. 12)
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 32kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1) (alt. (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1))

~~5.4.1.38.1.4~~5.4.1.38.1.2. **Physical channel parameters**

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

5.4.1.38.2. Downlink

5.4.1.38.2.1. Transport channel parameters

~~5.4.1.38.2.1~~5.4.1.38.2.1.1. **Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB**

See 5.4.1.4.2.1.1

~~5.4.1.38.2.2~~5.4.1.38.2.1.2. **Transport channel parameters for Interactive or background / DL:8 kbps / PS RAB**

See 5.4.1.23.2.1.1

~~5.4.1.38.2.3~~5.4.1.38.2.1.3. **Transport channel parameters for DL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1

5.4.1.38.2.1.4. TFCS

TFCS size	12
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, kbps RAB, DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1)

~~5.4.1.38.2.4.~~5.4.1.38.2.2. Physical channel parameters

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

5.4.1.39. 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

5.4.1.39.1. Uplink

See 5.4.1.38.1

5.4.1.39.2. Downlink

5.4.1.39.2.1. Transport channel parameters

~~5.4.1.39.2.1.~~5.4.1.39.2.1.1. **Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB**

See 5.4.1.4.2.1.1

~~5.4.1.39.2.2.~~5.4.1.39.2.1.2. **Transport channel parameters for Interactive or background / DL:64 kbps / PS RAB**

See 5.4.1.25.2.1.1

~~5.4.1.39.2.3.~~5.4.1.39.2.1.3. **Transport channel parameters for DL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.1.39.2.1.4. TFCS

TFCS size	30
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1)

~~5.4.1.39.2.4.~~5.4.1.39.2.2. **Physical channel parameters**

DPCH Downlink	DTX position		Flexible
	Spreading factor		32
	DPCCH	Number of TFCI bits/slot	8
		Number of TPC bits/slot	4
		Number of Pilot bits/slot	8
	DPDCH	Number of data bits/slot	140
		Number of data bits/frame	2100

5.4.1.40. 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

5.4.1.40.1. Uplink

5.4.1.40.1.1. Transport channel parameters

~~5.4.1.40.1.1~~5.4.1.40.1.1.1. Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See 5.4.1.4.1.1.1

~~5.4.1.40.1.2~~5.4.1.40.1.1.2. Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB

See 5.4.1.24.1.1.1

~~5.4.1.40.1.3~~5.4.1.40.1.1.3. Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See 5.4.1.2.1.1.1

5.4.1.40.1.1.4. TFCS

TFCS size	30
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1)

~~5.4.1.40.1.4~~5.4.1.40.1.2. Physical channel parameters

DPCH Uplink	Min spreading factor	16
	Max number of DPDCH data bits/radio frame	2400
	Puncturing Limit	0.76~~0.88~~

5.4.1.40.2. Downlink

See 5.4.1.39.2

5.4.1.41. 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

5.4.1.41.1. Uplink

See 5.4.1.40.1

5.4.1.41.2. Downlink

5.4.1.41.2.1. Transport channel parameters

~~5.4.1.41.2.1.~~5.4.1.41.2.1.1. **Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB**

See 5.4.1.4.2.1.1

~~5.4.1.41.2.2.~~5.4.1.41.2.1.2. **Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB**

See 5.4.1.27.2.1.1

~~5.4.1.41.2.3.~~5.4.1.41.2.1.3. **Transport channel parameters for DL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.1.41.2.1.4. TFCS

TFCS size	30
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 128 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1)

~~5.4.1.41.2.4.~~5.4.1.41.2.2. **Physical channel parameters**

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

5.4.1.42. 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

5.4.1.42.1. Uplink

See 5.4.1.40.1

5.4.1.42.2. Downlink

5.4.1.42.2.1. Transport channel parameters

~~5.4.1.42.2.1.~~5.4.1.42.2.1.1. **Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB**

See 5.4.1.4.2.1.1

~~5.4.1.42.2.2.~~5.4.1.42.2.1.2. **Transport channel parameters for Interactive or background / DL:256 kbps / PS RAB**

See 5.4.1.31.2.1.1

~~5.4.1.42.2.3.~~5.4.1.42.2.1.3. **Transport channel parameters for DL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.1.42.2.1.4. TFCS

TFCS size	30 (alt. 42)
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 256 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1) (alt. (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF5, TF0), (TF1, TF0, TF0, TF5, TF0), (TF2, TF1, TF1, TF5, TF0), (TF0, TF0, TF0, TF6, TF0), (TF1, TF0, TF0, TF6, TF0), (TF2, TF1, TF1, TF6, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1) (TF0, TF0, TF0, TF5, TF1), (TF1, TF0, TF0, TF5, TF1), (TF2, TF1, TF1, TF5, TF1), (TF0, TF0, TF0, TF6, TF1), (TF1, TF0, TF0, TF6, TF1), (TF2, TF1, TF1, TF6, TF1))

~~5.4.1.42.2.4.~~5.4.1.42.2.2. **Physical channel parameters**

DPCH Downlink	DTX position		Flexible
	Spreading factor		8
	Number of DPDCH		1
	DPCCH	Number of TFCI bits/slot	8
		Number of TPC bits/slot	8

		Number of Pilot bits/slot	16
	DPDCH	Number of data bits/slot	608
		Number of data bits/frame	9120

5.4.1.43. 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

5.4.1.43.1. Uplink

See 5.4.1.40.1

5.4.1.43.2. Downlink

5.4.1.43.2.1. Transport channel parameters

~~5.4.1.43.2.1.~~5.4.1.43.2.1.1. **Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB**

See 5.4.1.4.2.1.1

~~5.4.1.43.2.2.~~5.4.1.43.2.1.2. **Transport channel parameters for Interactive or background / DL:384 kbps / PS RAB**

See 5.4.1.32.2.1.1

~~5.4.1.43.2.3.~~5.4.1.43.2.1.3. **Transport channel parameters for DL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.1.43.2.1.4. TFCS

TFCS size	36 (alt. 54)
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 384 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF5, TF0), (TF1, TF0, TF0, TF5, TF0), (TF2, TF1, TF1, TF5, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1) (TF0, TF0, TF0, TF5, TF1), (TF1, TF0, TF0, TF5, TF1), (TF2, TF1, TF1, TF5, TF1), (alt. (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF5, TF0), (TF1, TF0, TF0, TF5, TF0), (TF2, TF1, TF1, TF5, TF0), (TF0, TF0, TF0, TF6, TF0), (TF1, TF0, TF0, TF6, TF0), (TF2, TF1, TF1, TF6, TF0), (TF0, TF0, TF0, TF7, TF0), (TF1, TF0, TF0, TF7, TF0), (TF2, TF1, TF1, TF7, TF0), (TF0, TF0, TF0, TF8, TF0), (TF1, TF0, TF0, TF8, TF0), (TF2, TF1, TF1, TF8, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1) (TF0, TF0, TF0, TF5, TF1), (TF1, TF0, TF0, TF5, TF1), (TF2, TF1, TF1, TF5, TF1) (TF0, TF0, TF0, TF6, TF1), (TF1, TF0, TF0, TF6, TF1), (TF2, TF1, TF1, TF6, TF1), (TF0, TF0, TF0, TF7, TF1), (TF1, TF0, TF0, TF7, TF1), (TF2, TF1, TF1, TF7, TF1) (TF0, TF0, TF0, TF8, TF1), (TF1, TF0, TF0, TF8, TF1), (TF2, TF1, TF1, TF8, TF1))

~~5.4.1.43.2.4.~~5.4.1.43.2.2. **Physical channel parameters**

DPCH Downlink	DTX position		Flexible
	Spreading factor		8
	Number of DPDCH		1
	DPCCH	Number of TFCI bits/slot	8
		Number of TPC bits/slot	8
		Number of Pilot bits/slot	16
	DPDCH	Number of data bits/slot	608
		Number of data bits/frame	9120

5.4.1.44. 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

5.4.1.44.1. Uplink

5.4.1.44.1.1. Transport channel parameters

~~5.4.1.44.1.1~~5.4.1.44.1.1.1. **Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB**

See 5.4.1.4.1.1.1

~~5.4.1.44.1.2~~5.4.1.44.1.1.2. **Transport channel parameters for Interactive or background / UL:128 kbps / PS RAB**

See 5.4.1.28.1.1.1

~~5.4.1.44.1.3~~5.4.1.44.1.1.3. **Transport channel parameters for UL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.1.1.1

5.4.1.44.1.1.4. TFCS

TFCS size	30
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 128 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1)

~~5.4.1.44.1.4~~5.4.1.44.1.2. **Physical channel parameters**

DPCH Uplink	Min spreading factor	8
	Max number of DPDCH data bits/radio frame	4800
	Puncturing Limit	0.92~~1~~

5.4.1.44.2. Downlink

5.4.1.44.2.1. Transport channel parameters

~~5.4.1.44.2.1~~5.4.1.44.2.1.1. **Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB**

See 5.4.1.4.2.1.1

~~5.4.1.44.2.2~~5.4.1.44.2.1.2. **Transport channel parameters for Interactive or background / DL:2048 kbps / PS RAB**

See 5.4.1.35.2.1.1

~~5.4.1.44.2.3~~5.4.1.44.2.1.3. **Transport channel parameters for DL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.1.44.2.1.4. TFCS

TFCS size	66 (alt. 114)
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 384 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF5, TF0), (TF1, TF0, TF0, TF5, TF0), (TF2, TF1, TF1, TF5, TF0), (TF0, TF0, TF0, TF6, TF0), (TF1, TF0, TF0, TF6, TF0), (TF2, TF1, TF1, TF6, TF0), (TF0, TF0, TF0, TF7, TF0), (TF1, TF0, TF0, TF7, TF0), (TF2, TF1, TF1, TF7, TF0), (TF0, TF0, TF0, TF8, TF0), (TF1, TF0, TF0, TF8, TF0), (TF2, TF1, TF1, TF8, TF0), (TF0, TF0, TF0, TF9, TF0), (TF1, TF0, TF0, TF9, TF0), (TF2, TF1, TF1, TF9, TF0), (TF0, TF0, TF0, TF10, TF0), (TF1, TF0, TF0, TF10, TF0), (TF2, TF1, TF1, TF10, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1) (TF0, TF0, TF0, TF5, TF1), (TF1, TF0, TF0, TF5, TF1), (TF2, TF1, TF1, TF5, TF1), TF0, TF0, TF0, TF6, TF1), (TF1, TF0, TF0, TF6, TF1), (TF2, TF1, TF1, TF6, TF1), (TF0, TF0, TF0, TF7, TF1), (TF1, TF0, TF0, TF7, TF1), (TF2, TF1, TF1, TF7, TF1), (TF0, TF0, TF0, TF8, TF1), (TF1, TF0, TF0, TF8, TF1), (TF2, TF1, TF1, TF8, TF1), (TF0, TF0, TF0, TF9, TF1), (TF1, TF0, TF0, TF9, TF1), (TF2, TF1, TF1, TF9, TF1) (TF0, TF0, TF0, TF10, TF1), (TF1, TF0, TF0, TF10, TF1), (TF2, TF1, TF1, TF10, TF1) (alt. (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF5, TF0), (TF1, TF0, TF0, TF5, TF0), (TF2, TF1, TF1, TF5, TF0), (TF0, TF0, TF0, TF6, TF0), (TF1, TF0, TF0, TF6, TF0), (TF2, TF1, TF1, TF6, TF0), (TF0, TF0, TF0, TF7, TF0), (TF1, TF0, TF0, TF7, TF0), (TF2, TF1, TF1, TF7, TF0), (TF0, TF0, TF0, TF8, TF0), (TF1, TF0, TF0, TF8, TF0), (TF2, TF1, TF1, TF8, TF0), (TF0, TF0, TF0, TF9, TF0), (TF1, TF0, TF0, TF9, TF0), (TF2, TF1, TF1, TF9, TF0), (TF0, TF0, TF0, TF10, TF0), (TF1, TF0, TF0, TF10, TF0), (TF2, TF1, TF1, TF10, TF0), (TF0, TF0, TF0, TF11, TF0), (TF1, TF0, TF0, TF11, TF0), (TF2, TF1, TF1, TF11, TF0), (TF0, TF0, TF0, TF12, TF0), (TF1, TF0, TF0, TF12, TF0), (TF2, TF1, TF1, TF12, TF0), (TF0, TF0, TF0, TF13, TF0), (TF1, TF0, TF0, TF13, TF0), (TF2, TF1, TF1, TF13, TF0), (TF0, TF0, TF0, TF14, TF0), (TF1, TF0, TF0, TF14, TF0), (TF2, TF1, TF1, TF14, TF0), (TF0, TF0, TF0, TF15, TF0), (TF1, TF0, TF0, TF15, TF0), (TF2, TF1, TF1, TF15, TF0), (TF0, TF0, TF0, TF16, TF0), (TF1, TF0, TF0, TF16, TF0), (TF2, TF1, TF1, TF16, TF0), (TF0, TF0, TF0, TF17, TF0), (TF1, TF0, TF0, TF17, TF0), (TF2, TF1, TF1, TF17, TF0), (TF0, TF0, TF0, TF18, TF0), (TF1, TF0, TF0, TF18, TF0), (TF2, TF1, TF1, TF18, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1), (TF0, TF0, TF0, TF5, TF1), (TF1, TF0, TF0, TF5, TF1), (TF2, TF1, TF1, TF5, TF1), (TF0, TF0, TF0, TF6, TF1), (TF1, TF0, TF0, TF6, TF1), (TF2, TF1, TF1, TF6, TF1), (TF0, TF0, TF0, TF7, TF1), (TF1, TF0, TF0, TF7, TF1), (TF2, TF1, TF1, TF7, TF1), (TF0, TF0, TF0, TF8, TF1), (TF1, TF0, TF0, TF8, TF1), (TF2, TF1, TF1, TF8, TF1), (TF0, TF0, TF0, TF9, TF1), (TF1, TF0, TF0, TF9, TF1), (TF2, TF1, TF1, TF9, TF1), (TF0, TF0, TF0, TF10, TF1), (TF1, TF0, TF0, TF10, TF1), (TF2, TF1, TF1, TF10, TF1), (TF0, TF0, TF0, TF11, TF1), (TF1, TF0, TF0, TF11, TF1), (TF2, TF1, TF1, TF11, TF1), (TF0, TF0, TF0, TF12, TF1), (TF1, TF0, TF0, TF12, TF1), (TF2, TF1, TF1, TF12, TF1), (TF0, TF0, TF0, TF13, TF1), (TF1, TF0, TF0, TF13, TF1), (TF2, TF1, TF1, TF13, TF1), (TF0, TF0, TF0, TF14, TF1), (TF1, TF0, TF0, TF14, TF1), (TF2, TF1, TF1, TF14, TF1), (TF0, TF0, TF0, TF15, TF1), (TF1, TF0, TF0, TF15, TF1), (TF2, TF1, TF1, TF15, TF1), (TF0, TF0, TF0, TF16, TF1), (TF1, TF0, TF0, TF16, TF1), (TF2, TF1, TF1, TF16, TF1), (TF0, TF0, TF0, TF17, TF1), (TF1, TF0, TF0, TF17, TF1), (TF2, TF1, TF1, TF17, TF1),

	(TF0, TF0, TF0, TF18, TF1), (TF1, TF0, TF0, TF18, TF1), (TF2, TF1, TF1, TF18, TF1))

~~5.4.1.44.2.4.~~5.4.1.44.2.2. Physical channel parameters

DPCH Downlink	DTX position		Flexible
	Spreading factor		4
	Number of DPDCH		3
	DPCCH	Number of TFCI bits/slot	8
		Number of TPC bits/slot	8
		Number of Pilot bits/slot	16
	DPDCH	Number of data bits/slot	1248
		Number of data bits/frame	18720

5.4.1.45. 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

5.4.1.45.1. Uplink

5.4.1.45.1.1. Transport channel parameters

~~5.4.1.45.1.1.~~5.4.1.45.1.1.1. **Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB**

See 5.4.1.4.1.1.1

~~5.4.1.45.1.2.~~5.4.1.45.1.1.2. **Transport channel parameters for Streaming / unknown / UL:57.6 kbps / CS RAB**

See 5.4.1.17.1.1.1

~~5.4.1.45.1.3.~~5.4.1.45.1.1.3. **Transport channel parameters for UL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.1.1.1

5.4.1.45.1.1.4. TFCS

TFCS size	30
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 57.6 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1)

~~5.4.1.45.1.4.~~5.4.1.45.1.2. **Physical channel parameters**

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

5.4.1.45.2. Downlink

5.4.1.45.2.1. Transport channel parameters

~~5.4.1.45.2.1.~~5.4.1.45.2.1.1. **Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB**

See 5.4.1.4.2.1.1

~~5.4.1.45.2.2.~~5.4.1.45.2.1.2. **Transport channel parameters for Streaming / unknown / DL:57.6 kbps / CS RAB**

See 5.4.1.17.2.1.1

~~5.4.1.45.2.3.~~5.4.1.45.2.1.3. **Transport channel parameters for UL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.1.45.2.1.4. TFCS

TFCS size	30
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 57.6 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1)

~~5.4.1.45.2.4.~~5.4.1.45.2.2. Physical channel parameters

DPCH Uplink	DTX position		Flexible
	Spreading factor		32
	DPCCH	Number of TFCI bits/slot	8
		Number of TPC bits/slot	4
		Number of Pilot bits/slot	8
	DPDCH	Number of data bits/slot	140
		Number of data bits/frame	2100

5.4.1.46. 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

5.4.1.46.1. Uplink

See 5.4.1.4.1.

5.4.1.46.2. Downlink

5.4.1.46.2.1. Transport channel parameters

~~5.4.1.46.2.1.~~5.4.1.46.2.1.1. **Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB**

See 5.4.1.4.2.1.1

~~5.4.1.46.2.2.~~5.4.1.46.2.1.2. **Transport channel parameters for Streaming / unknown / DL:64 kbps / CS or PS RAB**

See 5.4.1.18.2.1.1

~~5.4.1.46.2.3.~~5.4.1.46.2.1.3. **Transport channel parameters for DL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.1.46.2.1.4. TFCS

TFCS size	30
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1)

~~5.4.1.46.2.4.~~5.4.1.46.2.2. **Physical channel parameters**

DPCH Downlink	DTX position		Flexible
	Spreading factor		32
	DPCCH	Number of TFCI bits/slot	8
		Number of TPC bits/slot	4
		Number of Pilot bits/slot	8
	DPDCH	Number of data bits/slot	140
		Number of data bits/frame	2100

5.4.1.47. Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming / unknown / UL:0 DL:128 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

5.4.1.47.1. Uplink

See 5.4.1.4.1

5.4.1.47.2. Downlink

5.4.1.47.2.1. Transport channel parameters

~~5.4.1.47.2.1.~~5.4.1.47.2.1.1. **Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB**

See 5.4.1.4.2.1.1

~~5.4.1.47.2.2.~~5.4.1.47.2.1.2. **Transport channel parameters for Streaming / unknown / DL:128 kbps / CS or PS RAB**

See 5.4.1.20.2.1.1

~~5.4.1.47.2.3.~~5.4.1.47.2.1.3. **Transport channel parameters for DL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.1.47.2.1.4. TFCS

TFCS size	36
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 128 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF5, TF0), (TF1, TF0, TF0, TF5, TF0), (TF2, TF1, TF1, TF5, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1), (TF0, TF0, TF0, TF5, TF1), (TF1, TF0, TF0, TF5, TF1), (TF2, TF1, TF1, TF5, TF1)

~~5.4.1.47.2.4.~~5.4.1.47.2.2. **Physical channel parameters**

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

5.4.1.48. Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming / unknown / UL:0 DL:384 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

5.4.1.48.1. Uplink

See 5.4.1.4.1

5.4.1.48.2. Downlink

5.4.1.48.2.1. Transport channel parameters

~~5.4.1.48.2.1.~~5.4.1.48.2.1.1. **Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB**

See 5.4.1.4.2.1.1

~~5.4.1.48.2.2.~~5.4.1.48.2.1.2. **Transport channel parameters for Streaming / unknown / DL:384 kbps / CS or PS RAB**

See 5.4.1.22.2.1.1

~~5.4.1.48.2.3.~~5.4.1.48.2.1.3. **Transport channel parameters for DL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.1.48.2.1.4. TFCS

TFCS size	48
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 384 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF5, TF0), (TF1, TF0, TF0, TF5, TF0), (TF2, TF1, TF1, TF5, TF0), (TF0, TF0, TF0, TF6, TF0), (TF1, TF0, TF0, TF6, TF0), (TF2, TF1, TF1, TF6, TF0), (TF0, TF0, TF0, TF7, TF0), (TF1, TF0, TF0, TF7, TF0), (TF2, TF1, TF1, TF7, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1), (TF0, TF0, TF0, TF5, TF1), (TF1, TF0, TF0, TF5, TF1), (TF2, TF1, TF1, TF5, TF1), (TF0, TF0, TF0, TF6, TF1), (TF1, TF0, TF0, TF6, TF1), (TF2, TF1, TF1, TF6, TF1), (TF0, TF0, TF0, TF7, TF1), (TF1, TF0, TF0, TF7, TF1), (TF2, TF1, TF1, TF7, TF1)

~~5.4.1.48.2.4.~~5.4.1.48.2.2. **Physical channel parameters**

DPCH Downlink	DTX position		Flexible
	Spreading factor		8
	DPCCH	Number of TFCI bits/slot	8
		Number of TPC bits/slot	8
		Number of Pilot bits/slot	16
	DPDCH	Number of data bits/slot	608
		Number of data bits/frame	9120

5.4.1.49. 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

5.4.1.49.1. Uplink

5.4.1.49.1.1. Transport channel parameters

~~5.4.1.49.1.1.~~5.4.1.49.1.1.1. **Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB**

See 5.4.1.4.1.1.1

~~5.4.1.49.1.2.~~5.4.1.49.1.1.2. **Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB**

See 5.4.1.13.1.1.1

~~5.4.1.49.1.3.~~5.4.1.49.1.1.3. **Transport channel parameters for UL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.1.1.1

5.4.1.49.1.1.4. TFCS

TFCS size	12
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1)

~~5.4.1.49.1.4.~~5.4.1.49.1.2. **Physical channel parameters**

DPCH Uplink	Min spreading factor	16
	Max number of DPDCH data bits/radio frame	2400
	Puncturing Limit	0.72~~0.92~~

5.4.1.49.2. Downlink

5.4.1.49.2.1. Transport channel parameters

~~5.4.1.49.2.1.~~5.4.1.49.2.1.1. **Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB**

See 5.4.1.4.2.1.1

~~5.4.1.49.2.2.~~5.4.1.49.2.1.2. **Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB**

See 5.4.1.13.2.1.1

~~5.4.1.49.2.3.~~5.4.1.49.2.1.3. **Transport channel parameters for DL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.1.49.2.1.4. TFCS

TFCS size	12
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1)

~~5.4.1.49.2.4.~~5.4.1.49.2.2. Physical channel parameters

DPCH Downlink	DTX position		Flexible
	Spreading factor		32
	DPCCH	Number of TFCI bits/slot	8
		Number of TPC bits/slot	4
		Number of Pilot bits/slot	8
	DPDCH	Number of data bits/slot	140
		Number of data bits/frame	2100

5.4.1.50. 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

5.4.1.50.1. Uplink

5.4.1.50.1.1. Transport channel parameters

~~5.4.1.50.1.1~~ 5.4.1.50.1.1.1. **Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB**

See 5.4.1.13.1.1.1

~~5.4.1.50.1.2~~ 5.4.1.50.1.1.2. **Transport channel parameters for UL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.1.1.1

5.4.1.50.1.1.3. TFCS

TFCS size	8
TFCS	(64 kbps RAB, 64 kbps RAB, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0) (TF0, TF0, TF1), (TF1, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1)

~~5.4.1.50.1.3~~ 5.4.1.50.1.2. **Physical channel parameters**

DPCH Uplink	Min spreading factor	8
	Max number of DPDCH data bits/radio frame	4800
	Puncturing Limit	0.92~~1~~

5.4.1.50.2. Downlink

5.4.1.50.2.1. Transport channel parameters

~~5.4.1.50.2.1~~ 5.4.1.50.2.1.1. **Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB**

See 5.4.1.13.2.1.1

~~5.4.1.50.2.2~~ 5.4.1.50.2.1.2. **Transport channel parameters for DL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.1.50.2.1.3. TFCS

TFCS size	8
TFCS	(64 kbps RAB, 64 kbps RAB, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0) (TF0, TF0, TF1), (TF1, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1)

~~5.4.1.50.2.3~~ 5.4.1.50.2.2. **Physical channel parameters**

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

5.4.1.51. 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

5.4.1.51.1. Uplink

5.4.1.51.1.1. Transport channel parameters

~~5.4.1.51.1.1.~~5.4.1.51.1.1.1. **Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB**

See 5.4.1.13.1.1.1

~~5.4.1.51.1.2.~~5.4.1.51.1.1.2. **Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB**

See 5.4.1.24.1.1.1

~~5.4.1.51.1.3.~~5.4.1.51.1.1.3. **Transport channel parameters for UL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.1.1.1

5.4.1.51.1.4. TFCS

TFCS size	20
TFCS	(Conv. 64 kbps RAB, I/B 64 kbps RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF2, TF0), (TF0, TF3, TF0), (TF0, TF4, TF0), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF2, TF0), (TF1, TF3, TF0), (TF1, TF4, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF0, TF2, TF1), (TF0, TF3, TF1), (TF0, TF4, TF1), (TF1, TF0, TF1), (TF1, TF1, TF1), (TF1, TF2, TF1), (TF1, TF3, TF1), (TF1, TF4, TF1)

~~5.4.1.51.1.4.~~5.4.1.51.1.2. **Physical channel parameters**

DPCH Uplink	Min spreading factor	8
	Max number of DPDCH data bits/radio frame	4800
	Puncturing Limit	0.88~~1~~

5.4.1.51.2. Downlink

5.4.1.51.2.1. Transport channel parameters

~~5.4.1.51.2.1.~~5.4.1.51.2.1.1. **Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB**

See 5.4.1.13.2.1.1

~~5.4.1.51.2.2.~~5.4.1.51.2.1.2. **Transport channel parameters for Interactive or background / DL:64 kbps / PS RAB**

See 5.4.1.25.2.1.1

~~5.4.1.51.2.3.~~5.4.1.51.2.1.3. **Transport channel parameters for DL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.1.51.2.1.4. TFCS

TFCS size	20
TFCS	(Conv. 64 kbps RAB, I/B 64 kbps RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF2, TF0), (TF0, TF3, TF0), (TF0, TF4, TF0), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF2, TF0), (TF1, TF3, TF0), (TF1, TF4, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF0, TF2, TF1), (TF0, TF3, TF1), (TF0, TF4, TF1), (TF1, TF0, TF1), (TF1, TF1, TF1), (TF1, TF2, TF1), (TF1, TF3, TF1), (TF1, TF4, TF1)

~~5.4.1.51.2.4.~~5.4.1.51.2.2. Physical channel parameters

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

5.4.1.52. 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

5.4.1.52.1. Uplink

See 5.4.1.51.1

5.4.1.52.2. Downlink

5.4.1.52.2.1. Transport channel parameters

~~5.4.1.52.2.1.~~5.4.1.52.2.1.1. **Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB**

See 5.4.1.13.2.1.1

~~5.4.1.52.2.2.~~5.4.1.52.2.1.2. **Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB**

See 5.4.1.27.2.1.1

~~5.4.1.52.2.3.~~5.4.1.52.2.1.3. **Transport channel parameters for DL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.1.52.2.1.4. TFCS

TFCS size	20
TFCS	(Conv. 64 kbps RAB, I/B 128 kbps RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF2, TF0), (TF0, TF3, TF0), (TF0, TF4, TF0), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF2, TF0), (TF1, TF3, TF0), (TF1, TF4, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF0, TF2, TF1), (TF0, TF3, TF1), (TF0, TF4, TF1), (TF1, TF0, TF1), (TF1, TF1, TF1), (TF1, TF2, TF1), (TF1, TF3, TF1), (TF1, TF4, TF1)

~~5.4.1.52.2.4.~~5.4.1.52.2.2. **Physical channel parameters**

DPCH Downlink	DTX position		Flexible
	Spreading factor		8
	DPCCH	Number of TFCI bits/slot	8
		Number of TPC bits/slot	8
		Number of Pilot bits/slot	16
	DPDCH	Number of data bits/slot	608
		Number of data bits/frame	9120

5.4.1.53. 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

5.4.1.53.1. Uplink

5.4.1.53.1.1. Transport channel parameters

~~5.4.1.53.1.1~~5.4.1.53.1.1.1. **Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB**

See 5.4.1.13.1.1.1

~~5.4.1.53.1.2~~5.4.1.53.1.1.2. **Transport channel parameters for Interactive or background / UL:128 kbps / PS RAB**

See 5.4.1.28.1.1.1

~~5.4.1.53.1.3~~5.4.1.53.1.1.3. **Transport channel parameters for DL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.1.1.1

5.4.1.53.1.1.4. TFCS

TFCS size	20
TFCS	(Conv. 64 kbps RAB, I/B 128kbps RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF2, TF0), (TF0, TF3, TF0), (TF0, TF4, TF0), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF2, TF0), (TF1, TF3, TF0), (TF1, TF4, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF0, TF2, TF1), (TF0, TF3, TF1), (TF0, TF4, TF1), (TF1, TF0, TF1), (TF1, TF1, TF1), (TF1, TF2, TF1), (TF1, TF3, TF1), (TF1, TF4, TF1)

~~5.4.1.53.1.4~~5.4.1.53.1.2. **Physical channel parameters**

DPCH Uplink	Min spreading factor	4
	Max number of DPDCH data bits/radio frame	9600
	Puncturing Limit	1

5.4.1.53.2. Downlink

See 5.4.1.52.2

5.4.1.54. 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:3.4 kbps SRBs for DCCH

5.4.1.54.1. Uplink

See 5.4.1.24.1

5.4.1.54.2. Downlink

5.4.1.54.2.1. Transport channel parameters

~~5.4.1.54.2.1.~~5.4.1.54.2.1.1. **Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB**

See 5.4.1.27.2.1.1

~~5.4.1.54.2.2.~~5.4.1.54.2.1.2. **Transport channel parameters for Streaming / unknown / DL:64 kbps / CS or PS RAB**

See 5.4.1.18.2.1.1

~~5.4.1.54.2.3.~~5.4.1.54.2.1.3. **Transport channel parameters for DL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.1.54.2.1.4. TFCS

TFCS size	50
TFCS	(I/B 128 kbps RAB, Str. 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)

~~5.4.1.54.2.4.~~5.4.1.54.2.2. **Physical channel parameters**

DPCH Downlink	DTX position		Flexible
	Spreading factor		8
	DPCCH	Number of TFCI bits/slot	8
		Number of TPC bits/slot	8
		Number of Pilot bits/slot	16
	DPDCH	Number of data bits/slot	608
		Number of data bits/frame	9120

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

5.4.1.55.1. Uplink

See 5.4.1.24.1

5.4.1.55.2. Downlink

5.4.1.55.2.1. Transport channel parameters

~~5.4.1.55.2.1.~~5.4.1.55.2.1.1. **Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB**

See 5.4.1.27.2.1.1

~~5.4.1.55.2.2.~~5.4.1.55.2.1.2. **Transport channel parameters for Streaming / unknown / DL:128 kbps / CS or PS RAB**

See 5.4.1.20.2.1.1

~~5.4.1.55.2.3.~~5.4.1.55.2.1.3. **Transport channel parameters for DL:3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.1.55.2.1.4. TFCS

TFCS size	60
TFCS	(I/B 128 kbps RAB, Str. 128 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, TF5, TF0), (TF1, TF5, TF0), (TF2, TF5, TF0), (TF3, TF5, TF0), (TF4, TF5, 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) (TF0, TF5, TF1), (TF1, TF5, TF1), (TF2, TF5, TF1), (TF3, TF5, TF1), (TF4, TF5, TF1)

~~5.4.1.55.2.4.~~5.4.1.55.2.2. **Physical channel parameters**

DPCH Downlink	DTX position		Flexible
	Spreading factor		8
	DPCCH	Number of TFCI bits/slot	8
		Number of TPC bits/slot	8
		Number of Pilot bits/slot	16
	DPDCH	Number of data bits/slot	608
		Number of data bits/frame	9120

5.4.2. Combinations on PDSCH and DPCH

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

5.4.2.1.1. Uplink

See 5.4.1.24.1

5.4.2.1.2. Downlink

5.4.2.1.2.1. Transport channel parameters

~~5.4.2.1.2.1.~~5.4.2.1.2.1.1. Transport channel parameters for Interactive or background / DL:256 kbps / PS RAB

See 5.4.1.31.2.1.1

~~5.4.2.1.2.2.~~5.4.2.1.2.1.2. Transport channel parameters for DL:3.4 DL: 3.4 kbps SRBs for DCCH

See 5.4.1.2.2.1.1

5.4.2.1.2.1.3. TFCS

PDSCH	TFCS size	5 (alt.7)
	TFCS	256 kbps RAB =TF0, TF1, TF2, TF3, TF4 (alt. TF0, TF1, TF2, TF3, TF4, TF5, TF6)
DPCH Downlink associated with PDSCH	TFCS size	2
	TFCS	SRBs for DCCH = TF0, TF1

~~5.4.2.1.2.3.~~5.4.2.1.2.2. Physical channel parameters

PDSCH	RAB or SRB, TrCh		**Interactive or background / 256 kbps / PS RAB, DSCH**
	DTX position		N/A (SingleTrCH)
	Spreading factor		8
DPCH Downlink associated with PDSCH	RAB or SRB, TrCh		**3.4 kbps SRB for DCCH, DCH**
	DTX position		N/A (SingleTrCH)
	Minimum spreading factor		256
	DPCCH	Number of TFCI bits/slot	0
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	8
	DPDCH	Number of data bits/slot	10
		Number of data bits/frame	150

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

5.4.2.2.1. Uplink

See 5.4.1.24.1

5.4.2.2.2. Downlink

5.4.2.2.2.1. Transport channel parameters

~~5.4.2.2.2.1.~~5.4.2.2.2.1.1. **Transport channel parameters for Interactive or background / DL:384 kbps / PS RAB**

See 5.4.1.32.2.1.1

~~5.4.2.2.2.2.~~5.4.2.2.2.1.2. **Transport channel parameters for DL:3.4 DL: 3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.2.2.2.1.3. TFCS

PDSCH	TFCS size	6 (alt.9)
	TFCS	384 kbps RAB = TF0, TF1, TF2, TF3, TF4, TF5 (alt. TF0, TF1, TF2, TF3, TF4, TF5, TF6, TF7, TF8)
DPCH Downlink associated with PDSCH	TFCS size	2
	TFCS	SRBs for DCCH = TF0, TF1

~~5.4.2.2.2.3.~~5.4.2.2.2.2. **Physical channel parameters**

PDSCH	RAB or SRB, TrCh		**Interactive or background / 384 kbps / PS RAB, DSCH**
	DTX position		N/A (SingleTrCH)
	Spreading factor		8
DPCH Downlink associated with PDSCH	RAB or SRB, TrCh		**3.4 kbps SRB for DCCH, DCH**
	DTX position		N/A (SingleTrCH)
	Minimum spreading factor		256
	DPCCH	Number of TFCI bits/slot	0
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	8
	DPDCH	Number of data bits/slot	10
		Number of data bits/frame	150

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

5.4.2.3.1. Uplink

See 5.4.1.24.1.

5.4.2.3.2. Downlink

5.4.2.3.2.1. Transport channel parameters

~~5.4.2.3.2.1.~~5.4.2.3.2.1.1. **Transport channel parameters for Interactive or background / DL:2048 kbps / PS RAB**

See 5.4.1.35.2.1.1

~~5.4.2.3.2.2.~~5.4.2.3.2.1.2. **Transport channel parameters for DL:3.4 DL: 3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.2.3.2.1.3. TFCS

PDSCH	TFCS size	11 (alt.19)
	TFCS	2048 kbps RAB = TF0, TF1, TF2, TF3, TF4, TF5, TF6, TF7, TF8, TF9, TF10 (alt. TF0, TF1, TF2, TF3, TF4, TF5, TF6, TF7, TF8, TF9, TF10, TF11, TF12, TF13, TF14, TF15, TF16, TF17, TF18)
DPCH Downlink associated with PDSCH	TFCS size	2
	TFCS	SRBs for DCCH = TF0, TF1

~~5.4.2.3.2.3.~~5.4.2.3.2.2. **Physical channel parameters**

PDSCH	RAB or SRB, TrCh		**Interactive or background / 2048 kbps / PS RAB, DSCH**
	DTX position		N/A (SingleTrCH)
	Spreading factor		4
DPCH Downlink associated with PDSCH	RAB or SRB, TrCh		**3.4 kbps SRB for DCCH, DCH**
	DTX position		N/A (SingleTrCH)
	Minimum spreading factor		256
	DPCCH	Number of TFCI bits/slot	0
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	8
	DPDCH	Number of data bits/slot	10
		Number of data bits/frame	150

5.4.2.4. 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

5.4.2.4.1. Uplink

See 5.4.1.40.1

5.4.2.4.2. Downlink

5.4.2.4.2.1. Transport channel parameters

~~5.4.2.4.2.1.~~5.4.2.4.2.1.1. Transport channel parameters for Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB

See 5.4.1.4.2.1.1

~~5.4.2.4.2.2.~~5.4.2.4.2.1.2. Transport channel parameters for Interactive or background / DL:256 kbps / PS RAB

See 5.4.1.31.2.1.1

~~5.4.2.4.2.3.~~5.4.2.4.2.1.3. Transport channel parameters for DL:3.4 DL: 3.4 kbps SRBs for DCCH

See 5.4.1.2.2.1.1

5.4.2.4.2.1.4. TFCS

PDSCH	TFCS size	5 (alt.7)
	TFCS	256 kbps RAB = TF0, TF1, TF2, TF3, TF4 (alt. TF0, TF1, TF2, TF3, TF4, TF5, TF6)
DPCH Downlink associated with PDSCH	TFCS size	6
	TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, DCCH) = (TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0), (TF2, TF1, TF1, TF0), (TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF1), (TF2, TF1, TF1, TF1)

~~5.4.2.4.2.4.~~5.4.2.4.2.2. Physical channel parameters

PDSCH	RAB or SRB, TrCh		**Interactive or background / 256 kbps / PS RAB, DSCH**
	DTX position		N/A (SingleTrCH)
	Spreading factor		8~~4~~
DPCH Downlink	RAB or SRB, TrCh		**Conversational / speech / 12.2 kbps / CS RAB, DCH + 3.4 kbps SRBs for DCCH. DCH**
	DTX position		Fixed
	Spreading factor		128
	DPCCH	Number of TFCI bits/slot	0
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	4
	DPDCH	Number of data bits/slot	34
		Number of data bits/frame	510

5.4.2.5. 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

5.4.2.5.1. Uplink

See 5.4.1.40.1

5.4.2.5.2. Downlink

5.4.2.5.2.1. Transport channel parameters

~~5.4.2.5.2.1.~~5.4.2.5.2.1.1. **Transport channel parameters for Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB**

See 5.4.1.4.2.1.1

~~5.4.2.5.2.2.~~5.4.2.5.2.1.2. **Transport channel parameters for Interactive or background / DL:384 kbps / PS RAB**

See 5.4.1.32.2.1.1

~~5.4.2.5.2.3.~~5.4.2.5.2.1.3. **Transport channel parameters for DL:3.4 DL: 3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.2.5.2.1.4. TFCS

PDSCH	TFCS size	6 (alt.9)
	TFCS	384 kbps RAB = TF0, TF1, TF2, TF3, TF4, TF5 (alt. TF0, TF1, TF2, TF3, TF4, TF5, TF6, TF7, TF8)
DPCH Downlink associated with PDSCH	TFCS size	6
	TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, DCCH) = (TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0), (TF2, TF1, TF1, TF0), (TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF1), (TF2, TF1, TF1, TF1)

~~5.4.2.5.2.4.~~5.4.2.5.2.2. **Physical channel parameters**

PDSCH	RAB or SRB, TrCh		**Interactive or background / 384 kbps / PS RAB, DSCH**
	DTX position		N/A (SingleTrCH)
	Spreading factor		8
DPCH Downlink	RAB or SRB, TrCh		**Conversational / speech / 12.2 kbps / CS RAB, DCH + 3.4 kbps SRBs for DCCH. DCH**
	DTX position		Fixed
	Spreading factor		128
	DPCCH	Number of TFCI bits/slot	0
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	4
	DPDCH	Number of data bits/slot	34
		Number of data bits/frame	510

5.4.2.6. 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

5.4.2.6.1. Uplink

See 5.4.1.40.1

5.4.2.6.2. Downlink

5.4.2.6.2.1. Transport channel parameters

~~5.4.2.6.2.1.~~5.4.2.6.2.1.1. **Transport channel parameters for Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB**

See 5.4.1.4.2.1.1

~~5.4.2.6.2.2.~~5.4.2.6.2.1.2. **Transport channel parameters for Interactive or background / DL:2048 kbps / PS RAB**

See 5.4.1.35.2.1.1

~~5.4.2.6.2.3.~~5.4.2.6.2.1.3. **Transport channel parameters for DL:3.4 DL: 3.4 kbps SRBs for DCCH**

See 5.4.1.2.2.1.1

5.4.2.6.2.1.4. TFCS

PDSCH	TFCS size	11 (alt.19)
	TFCS	2048 kbps RAB =TF0, TF1, TF2, TF3, TF4, TF5, TF6, TF7, TF8, TF9, TF10 (alt. TF0, TF1, TF2, TF3, TF4, TF5, TF6, TF7, TF8, TF9, TF10, TF11, TF12, TF13, TF14, TF15, TF16, TF17, TF18)
DPCH Downlink associated with PDSCH	TFCS size	6
	TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, DCCH) = (TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0), (TF2, TF1, TF1, TF0), (TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF1), (TF2, TF1, TF1, TF1)

~~5.4.2.6.2.4.~~5.4.2.6.2.2. **Physical channel parameters**

PDSCH	RAB or SRB, TrCh		**Interactive or background / 2048 kbps / PS RAB, DSCH**
	DTX position		N/A (SingleTrCH)
	Spreading factor		4
DPCH Downlink	RAB or SRB, TrCh		**Conversational / speech / 12.2 kbps / CS RAB, DCH + 3.4 kbps SRBs for DCCH. DCH**
	DTX position		Fixed
	Spreading factor		128
	DPCCH	Number of TFCI bits/slot	0
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	4
	DPDCH	Number of data bits/slot	34
		Number of data bits/frame	510

5.4.3. Combinations on SCCPCH

5.4.3.1. Stand-alone signalling RB for PCCH

5.4.3.1.1. Transport channel parameters

~~5.4.3.1.1.~~5.4.3.1.1.1. Transport channel parameter of SRB for PCCH

Higher layer	RAB/signalling RB		**SRB**
	User of Radio Bearer		RRC
RLC	Logical channel type		PCCH
	RLC mode		TM
	Payload sizes, bit		240 (alt. 80)
	Max data rate, bps		24000 (alt. 8000)
	RLC header, bit		0
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		PCH
	TB sizes, bit		240 (alt. 80)
	TFS	TF0~~1~~, bts	0x240 (alt. 0x80)
		TF1~~0~~, bits	1x240 (alt. 1x80)
	TTI, ms		10
	Coding type		CC 1/2
	CRC, bit		16
	Max number of bits/TTI before rate matching		528 (alt. 208)
	RM attribute		210-250~~TBD~~

5.4.3.1.1.2. TFCS

TFCS size	2
TFCS	SRBs for PCCH = TF0, TF1

5.4.3.1.2. Physical channel parameters

SCCPCH	DTX position		N/A (SingleTrCH)
	Spreading factor		128(alt. 256)
	DPCCH	Number of TFCI bits/slot	0
		Number of Pilot bits/slot	0
	DPDCH	Number of data bits/slot	40(alt. 20)
		Number of data bits/frame	600(alt. 300)

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

5.4.3.2.1. Transport channel parameters

~~5.4.3.2.1.~~5.4.3.2.1.1. Transport channel parameters for Interactive/Background 32 kbps PS RAB

Higher layer	RAB/signalling RB		**RAB**
	User of Radio Bearer		Interactive/ Background RAB
RLC	Logical channel type		DTCH
	RLC mode		AM
	Payload sizes, bit		320
	Max data rate, bps		32000
	RLC header, bit		16
MAC	MAC header, bit		24
	MAC multiplexing		N/A
Layer 1	TrCH type		FACH
	TB sizes, bit		360
	TFS	TF0, bits	0x360
		TF1, bits	1x360
	TTI, ms		10
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI before rate matching		1140
	RM attribute		110-150~~TBD~~

~~5.4.3.2.2.~~5.4.3.2.1.2. Transport channel parameters of SRBs for CCCH, SRB for DCCH, and SRB for BCCH

			SRB#1	**SRB#2**	**SRB#3**	**SRB#4**	**SRB#5**	**SRB#6**
Higher layer	RAB/signalling RB		RRC	RRC	RRC	NAS_DT High prio	NAS_DT Low prio	RRC
	User of Radio Bearer							
RLC	Logical channel type		CCCH	DCCH	DCCH	DCCH	DCCH	BCCH
	RLC mode		UM	UM	AM	AM	AM	TM
	Payload sizes, bit		152	136 or 120*	128	128	128	166
	Max data rate, bps		30400 (alt. 45600)	27200 or 2400 (alt. 40800 or 36000)	25600 (alt. 38400)	25600 (alt. 38400)	25600 (alt. 38400)	33200 (alt. 49800)
	RLC header, bit		8	8	16	16	16	0
MAC	MAC header, bit		8	24 or 40	24	24	24	2
	MAC multiplexing		6 logical channel multiplexing					
Layer 1	TrCH type		FACH					
	TB sizes, bit		168					
	TFS	TF0, bits	0x168					
		TF1, bits	1x168					
		TF2, bits	2x168					
		~~(alt.~~ TF3, bits~~)~~	N/A (alt. 3x168)					
	TTI, ms		10					
	Coding type		CC 1/2					
	CRC, bit		16					
	Max number of bits/TTI before rate matching		752 (alt. 1136)					
	RM attribute		200-240~~TBD~~					

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

5.4.3.2.1.3. TFCS

TFCS size	4, 5, or 6

TFCS	(32kbps RAB, SRBs for CCCH/DCCH/BCCH) = (TF0, TF0), (TF0, TF1), (TF0, TF2), [TF0, TF3]*, (TF1, TF0), [TF1, TF1]*

* These TFCs are available only if SCCPCH can be allocated bigger Tx power than required Tx power for TFC of 1x360 + 0x168.

~~5.4.3.2.3.~~5.4.3.2.2. Physical channel parameters

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

~~* These TFCs are available only if SCCPCH is allocated bigger Tx power than required Tx power for TFC of 1x360 + 0x168.~~

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

5.4.3.3.1. Transport channel parameters

~~5.4.3.3.1.~~5.4.3.3.1.1. Transport channel parameters of SRB for Interactive/Background 32 kbps RAB

See 5.4.3.2.1

~~5.4.3.3.2.~~5.4.3.3.1.2. Transport channel parameters of SRB for PCCH

See 5.4.3.1.1

~~5.4.3.3.3.~~5.4.3.3.1.3. Transport channel parameters of SRBs for CCCH, SRB for DCCH, and SRB for BCCH

See 5.4.3.2.1.2

5.4.3.3.1.4. TFCS

TFCS size	6 or 7 for 240 bits PCH TrBlk size (alt. 6, 7, 8, 9, 10, or 11 for 80 bits PCH TrBlk size)
TFCS	(32 kbps RAB, SRB for PCCH, SRBs for CCCH/ DCCH/ BCCH) = (TF0, TF0, TF0), (TF0, TF0, TF1), (TF0, TF0, TF2), [TF0, TF0, TF3]*, (TF0, TF1, TF0), (TF0, TF1, TF1), [TF0, TF1, TF2]*, (TF1, TF0, TF0), [TF1, TF0, TF1]* (alt. (TF0, TF0, TF0), (TF0, TF0, TF1), (TF0, TF0, TF2), [TF0,TF0, TF3]*, (TF0, TF1, TF0), (TF0, TF1, TF1), [TF0, TF1, TF2]*, [TF0, TF1, TF3]*, (TF1, TF0, TF0), [TF1, TF0, TF1]*, [TF1. TF1. TF0]*)

* These TFCs are available only if SCCPCH can be allocated bigger Tx power than required Tx power for TFC of 1x360 + 0x168.

~~5.4.3.3.4.~~5.4.3.3.2. Physical channel parameters

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

~~* These TFCs are available only if SCCPCH is allocated bigger Tx power than required Tx power for TFC of 1x360 + 0x168.~~

5.4.4. Combinations on PRACH

5.4.4.1. Interactive/Background 32 kbps PS RAB + SRB for CCCH + SRB for DCCH

5.4.4.1.1. Transport channel parameters

~~5.4.4.1.1~~5.4.4.1.1.1. **Transport channel parameter for Interactive/Background 32 kbps PS RAB, SRB for CCCH, SRB for DCCH**

Higher layer	RAB/signalling RB	**RAB**	**SRB#1**	**SRB#2**	**SRB#3**	**SRB#4**	**SRB#5**
	User of Radio Bearer	Interactive/ Background RAB	RRC	RRC	RRC	NAS_DT High prio	NAS_DT Low prio
RLC	Logical channel type	DTCH	CCCH	DCCH	DCCH	DCCH	DCCH
	RLC mode	AM	TM	UM	AM	AM	AM
	Payload sizes, bit	320	166	136~~ or 120*~~	128	128	128
	Max data rate, bps	32000	16600	13600~~ or 12000*~~	12800	12800	12800
	RLC header, bit	16	0	8	16	16	16
MAC	MAC header, bit	24	2	24~~ or 40*~~	24	24	24
	MAC multiplexing	6 logical channel multiplexing					
Layer 1	TrCH type	RACH					
	TB sizes, bit	360	168	168	168	168	168
	TFS TF0, bits	1x168					
	TFS TF1, bits	1x360					
	TTI, ms	20 (alt. 10)					
	Coding type	CC 1/2					
	CRC, bit	16					
	Max number of bits/TTI after channel coding	768	384	384	384	384	384
	Max number of bits/Radio frame before rate matching	384 (alt. 768)	192 (alt. 384)	192 (alt. 384)	192 (alt. 384)	192 (alt. 384)	192 (alt. 384)

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

5.4.4.1.1.2. TFCS

TFCS size	2
TFCS	32 kbps + SRBs for CCCH/ DCCH = TF0, TF1

5.4.4.1.2. Physical channel parameters

PRACH	Minimum Spreading factor	64 (alt. 32)
	Max number of DPDCH data bits/radio frame	600 (alt. 1200)
	Puncturing Limit	1

<Appendix>

Overview of Typical Radio Interface Parameter Sets version 1.3

This appendix describes major changes from the Typical radio interface parameter sets version 1.2 to version 1.3 as following.

1. Stand-alone UL:3.4 DL:3.4 kbps SRBs for DCCH

Numbers of pilot bits of the slot format was changed from 8 bits to 4 bits to use shorter (1 slot) adjustment delay of feedback command for closed loop mode Tx diversity in as a big cell as possible.

2. Cprrections of TFs for AMR RAB subflow #2 and #3

In the version 1.2, AMR RAB subflow #2 and #3 have three TFs. These are error since AMR RAB subflow #2 and #3 have two TFs. These errors were corrected in the version 1.3.

3. Note *1 under the transport channel parameter tables for AMR

Note *1 under the transport channel parameter tables for AMR were changed to explain TFC detection scheme for AMR clearly.

4. CRC parity bits attachment for 0 TrBlk in UL

In the version 1.2, CRC attachment for 0 TrBlk size is applied to both UL and DL for conversational speech RAB for better outer-loop TPC performance. On the other hand, there is a concern on overhead caused by CRC OK/NG transmission during DTX on Iub if this function is applied to UL. Considering this concern, CRC attachment for 0 TrBlk size was changed to optional in the version 1.3.

5. Clarification of TFCS

A new section for TFCS was added in all RAB/SRB combinations of the version 1.3 to clarify TFCS size and TFCS. This new section was described under section “Transport channel parameters” which was also added in the version 1.3.

6. SF for PDSCH in section 5.4.2.4.2

SF for PDSCH was corrected to 8 in section 5.4.2.4.2.

7. Rate mattching attributes

Ranges of RM attributes for all RAB/SRB combinations were clarified according to simulation results. There is no TBD in the version 1.3.

8. Addition of 10 ms TTI alternative for I/B UL 384 kbps PS RAB

According to comments from 3GPP TSG RAN WG2, 10ms TTI was revived as an alternative for Interactive or Background UL 384 kbps PS RAB.

9. Addition of a new MAC header size for UM DCCH on SCCPCH

In the version 1.2, there was a mistake to revise that this addition was done in PRACH. In the version 1.3, this addition was applied to SCCPCH correctly, and the mistake in PRACH was corrected in the version 1.3.