Source: **T1**

Title: **CR's to TS 34.108 v3.14.0 and v4.9.0 for approval**

Agenda item: **5.1.3**

Document for: **Approval**

This document contains the CRs to TS 34.108 v3.14.0 and v4.9.0. These CRs have been agreed by T1 and are put forward to TSG T for approval.

CR #	Rev	Rel	Title	cat	Version in	Version out	Tdoc #
286	-	Rel-99	Corrections to default message contents of RRC Connection Setup message	F	3.14.0	3.15.0	T1-040079
287	-	Rel-4	Corrections to default message contents of RRC Connection Setup message	A	4.9.0	4.10.0	T1-040080
288	-	Rel-99	Correction to Default parameters for Cells 1 to 8 in MultiPLMN cell environments – R99	F	3.14.0	3.15.0	T1-040094
289	-	Rel-4	Correction to Default parameters for Cells 1 to 8 in MultiPLMN cell environments – Rel-4	A	4.9.0	4.10.0	T1-040095
290	-	Rel-99	Corrections to TDD HCR RABs	F	3.14.0	3.15.0	T1-040102
291	-	Rel-4	Corrections to TDD HCR RABs	A	4.9.0	4.10.0	T1-040103
292	-	Rel-5	New I/B UL:64 DL:768 kbps PS RAB misplaced	F	4.9.0	5.0.0	T1-040109
293	-	Rel-99	DL physical channel configuration in Default message contents for RF	F	3.14.0	3.15.0	T1-040147
294	-	Rel-5	Generic setup procedure and default message contents for HSDPA (as of T1-040069rev1)	F	4.10.0	5.0.0	T1-040271
295	-	Rel-5	Baseline radio bearer combination for HSDPA support	B	4.10.0	5.0.0	T1-040273
296	-	Rel-4	LCR Corrections to TDD RABs merge of T1-040104 , T1-040201 and T1-040203	F	4.9.0	4.10.0	T1-040299
297	-	Rel-99	Correction to handling of Entered Parameter IE in default contents for	F	3.14.0	3.15.0	T1-040307

			Initial Direct Transfer				
300	-	Rel-4	The diverse operation in TDD mode updating according to the core specification	F	4.9.0	4.10.0	T1-040368
301	-	Rel-99	The diverse operation in TDD mode updating according to the core specification	A	3.d.0	3.15.0	T1-040369
302	-	Rel-4	correction of measurement control default message contents for TDD	F	4.9.0	4.10.0	T1-040370
303	-	Rel-4	correction of RADIO BEARER SETUP default message contents for 1.28 Mcps TDD	F	4.9.0	4.10.0	T1-040371
304	-	Rel-4	Correction of RADIO BEARER RELEASE default message contents for TDD: AM or UM (1.28 Mcps TDD)	A	4.9.0	4.10.0	T1-040372
305	-	Rel-4	Contents of RRC CONNECTION SETUP message: UM (Transition to CELL_DCH) (1.28 Mcps TDD)	F	4.9.0	4.10.0	T1-040373
298	-	Rel-4	Correction to handling of Entered Parameter IE in default contents for Initial Direct Transfer	A	4.9.0	4.10.0	T1-040411
299	-	Rel-99	New Radio Bearer Setup (FDD) message for RF (Revision of T1-040257)	F	3.e.0	3.15.0	T1-040416
284	-	Rel-4	New Radio Bearer Setup (FDD) message for RF (Revision of T1-040258)	F	4.9.0	4.10.0	T1-040417

T1⌘040079

CR-Form-v7

CHANGE REQUEST

⌘ **34.108** **CR** **286** ⌘ **rev** **--** ⌘ Current version: **3.d.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	Corrections to default message contents of RRC Connection Setup message
Source:	⌘	Nokia
Work item code:	⌘	TEI
Date:	⌘	10/12/2003
Category:	⌘	**F**
Release:	⌘	Rel-99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	The default message contents of the RRC Connection Setup message for transition to states DCH and FACH are changed from containing “TFCS representation Addition” to “TFCS representation Complete”. It is more reasonable to see a complete TFCS when establishing an RRC Connection that it is to see an Addition of a TFCS. Test cases should not assume that any TFCS are already in place when establishing an RRC Connection, therefore a complete configuration should be given, not an addition.
Summary of change:	⌘	TFCS Representation is changed from Addition to Complete
Consequences if not approved:	⌘	If this change is not made, the default message contents will not represent the “default”

Clauses affected:	⌘	9.1.1			
Other specs affected:	⌘	**Y**	**N**		
			X	Other core specifications	⌘
		X		Test specifications	34.108 v4.8.0
			X	O&M Specifications	
Other comments:	⌘				

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

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Contents of RRC CONNECTION SETUP message: UM (Transition to CELL_DCH)

Information Element	Value/remark
Message Type	
Initial UE identity	Select the same identity as in the IE "Initial UE Identity" in received RRC CONNECTION REQUEST" message
RRC transaction identifier	Arbitrarily selects an integer between 0 and 3
Activation time	Not Present(Now)
New U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
New C-RNTI	Not present
RRC State Indicator	CELL_DCH
UTRAN DRX cycle length coefficient	9
Capability update requirement	
- UE radio access FDD capability update requirement	TRUE
- UE radio access TDD capability update requirement	FALSE
- System specific capability update requirement list	Gsm
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	Not present
- CHOICE RLC info type	
- RLC info	
- CHOICE Uplink RLC mode	UM RLC
- Transmission RLC discard	Not present
- CHOICE Downlink RLC mode	UM RLC
- RB mapping info	
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- Logical channel identity	1
- CHOICE RLC size list	Configured
- MAC logical channel priority	1
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	1
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	1
- CHOICE RLC size list	Explicit List
- RLC size index	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- MAC logical channel priority	1
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	Not Present
- CHOICE RLC info type	
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	32
- Timer_RST	500
- Max_RST	1

Information Element	Value/remark
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	32
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- Logical channel identity	2
- CHOICE RLC size list	Configured
- MAC logical channel priority	2
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	2
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	2
- CHOICE RLC size list	Explicit List
- RLC size index	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- MAC logical channel priority	2
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	Not Present
- CHOICE RLC info type	
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	32
- Timer_RST	500
- Max_RST	1
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present

Information Element	Value/remark
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	32
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- Logical channel identity	3
- CHOICE RLC size list	Configured
- MAC logical channel priority	3
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	3
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	3
- CHOICE RLC size list	Explicit List
- RLC size index	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- MAC logical channel priority	3
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	Not present
- CHOICE RLC info type	
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	32
- Timer_RST	500
- Max_RST	1
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	32
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	

Information Element	Value/remark
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- Logical channel identity	4
- CHOICE RLC size list	Configured
- MAC logical channel priority	4
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	4
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	4
- CHOICE RLC size list	Explicit List
- RLC size index	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- MAC logical channel priority	4
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	4
UL Transport channel information for all transport channels	
- PRACH TFCS	Not Present
- CHOICE Mode	FDD
- TFC subset	Not Present
- UL DCH TFCS	
- CHOICE TFCI signalling	Normal
- TFCI Field 1 information	
- CHOICE TFCS representation	~~Addition~~ Complete
- TFCS complete reconfigure	
- CHOICE CTFC Size	2bit CTFC
- CTFC information	This IE is repeated for TFC numbers according to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- CTFC	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- Power offset information	
- CHOICE Gain Factors	Computed Gain Factors (The last TFC is set to Signalled Gain Factors)
- Gain factor ßc	11 (below 64 kbps) 9 (higher than 64 kbps) (Not Present if the above is set to Computed Gain Factors)
- Gain factor ßd	15 (Not Present if the above is set to Computed Gain Factors)
- Reference TFC ID	0
- CHOICE mode	FDD
- Power offset Pp-m	Not Present
Added or Reconfigured UL TrCH information	
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- TFS	
- CHOICE Transport channel type	Dedicated transport channels
- Dynamic Transport format information	
- RLC size	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- Number of TBs and TTI lists	(This IE is repeated for TFI number)
- Transmission Time Interval	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)

Information Element	Value/remark
- Number of Transport blocks	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- CHOICE Logical channel list	All
- Semi-static Transport Format information	
- Transmission time interval	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- Type of channel coding	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- Coding Rate	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- Rate matching attribute	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- CRC size	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- CHOICE mode	FDD
- CHOICE DL parameters	Same as UL
Added or Reconfigured DL TrCH information	
- Downlink transport channel type	DCH
- DL Transport channel identity	10
- CHOICE DL parameters	Same as UL
- Uplink transport channel type	DCH
- UL TrCH Identity	5
- DCH quality target	
- BLER Quality value	-2.0
Frequency info	Not Present
Maximum allowed UL TX power	Not Present
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	1 frame
- SRB delay	7 frames
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- Spreading factor	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- TFCI existence	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- Number of FBI bit	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- Puncturing Limit	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indication	Initialise
- CFN-targetSFN frame offset	Not Present
- CHOICE mode	FDD
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Power offset $P_{Pilot\text{-}DPDCH}$	0
- DL rate matching restriction information	Not Present
- Spreading factor	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- Fixed or Flexible Position	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- TFCI existence	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- CHOICE SF	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- DPCH compressed mode info	Not Present
- TX Diversity mode	None
- SSDT information	Not Present

Information Element	Value/remark
- Default DPCH Offset Value	Arbitrary set to value 0..306688 by step of 512
Downlink information for each radio links list	
- Downlink information for each radio links	
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Reference to clause 6.1 "Default settings (FDD)"
- PDSCH with SHO DCH info	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	Set to value: Default DPCH Offset Value mod 38400
- Secondary CPICH info	Not Present
- DL channelisation code	
- Secondary scrambling code	1
- Spreading factor	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- Code number	0
- Scrambling code change	Not Present
- TPC combination index	0
- SSDT Cell Identity	Not Present
- Closed loop timing adjustment mode	Not Present
- SCCPCH information for FACH	Not Present

Contents of RRC CONNECTION SETUP message: UM (Transition to CELL_FACH)

Information Element	Value/remark
Message Type	
Initial UE identity	Select the same identity as in the IE "Initial UE Identity" in received RRC CONNECTION REQUEST" message
RRC transaction identifier	Arbitrarily selects an integer between 0 and 3
Activation time	Not Present (Now)
New U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
New C-RNTI	0000 0000 0000 0001B
RRC state indicator	CELL_FACH
UTRAN DRX cycle length coefficient	9
Capability update requirement	Not Present
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	Not present
- CHOICE RLC info type	RLC info
- CHOICE Uplink RLC mode	UM RLC
- Transmission RLC discard	Not present
- SDU discard mode	Not present
- CHOICE Downlink RLC mode	UM RLC
- RB mapping info	
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- Logical channel identity	1
- CHOICE RLC size list	Configured
- MAC logical channel priority	1
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	1
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present

Information Element	Value/remark
- Logical channel identity	1
- CHOICE RLC size list	Explicit list
- RLC size index	According to TS34.108 clause 6.10.2.4.4.1
- MAC logical channel priority	1
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	Not Present
- CHOICE RLC info type	RLC info
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No Discard
- MAX_DAT	15
- Transmission window size	32
- Timer_RST	500
- Max_RST	1
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_PDU	Not Present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Windows	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	32
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- Logical channel identity	2
- CHOICE RLC size list	Configured
- MAC logical channel priority	2
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	2
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	2
- CHOICE RLC size list	Explicit list
- RLC size index	According to TS34.108 clause 6.10.2.4.4.1
- MAC logical channel priority	2
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)

Information Element	Value/remark
- RB identity	Not present
- CHOICE RLC info type	RLC info
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No Discard
- MAX_DAT	15
- Transmission window size	32
- Timer_RST	500
- Max_RST	1
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_PDU	Not Present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Windows	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	32
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- Logical channel identity	3
- CHOICE RLC size list	Configured
- MAC logical channel priority	3
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	3
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	RACH
- UL DCH Transport channel identity	Not Present
- Logical channel identity	3
- CHOICE RLC size list	Explicit list
- RLC size index	According to TS34.108 clause 6.10.2.4.4.1
- MAC logical channel priority	3
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	Not Present
- CHOICE RLC info type	RLC info
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No Discard
- MAX_DAT	15
- Transmission window size	32
- Timer_RST	500
- Max_RST	1
- Polling info	
- Timer_poll_prohibit	200

Information Element	Value/remark
- Timer_poll	200
- Poll_PDU	Not Present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Windows	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	32
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- Logical channel identity	4
- CHOICE RLC size list	Configured
- MAC logical channel priority	4
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	4
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	4
- CHOICE RLC size list	Explicit list
- RLC size index	According to TS34.108 clause 6.10.2.4.4.1
- MAC logical channel priority	4
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	4
UL Transport channel information for all transport channels	
- PRACH TFCS	Not Present
- CHOICE Mode	FDD
- TFC subset	Not Present
- UL DCH TFCS	
- CHOICE TFCI signalling	Normal
- TFCI Field 1 information	
- CHOICE TFCS representation	~~Addition~~ Complete
- TFCS complete reconfigure	
- CHOICE CTFC Size	2bit CTFC
- CTFC information	This IE is repeated for TFC numbers according to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- CTFC	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- Power offset information	
- CHOICE Gain Factors	Computed Gain Factors (The last TFC is set to Signalled Gain Factors)
- Gain factor ßc	11 (below 64 kbps) 9 (higher than 64 kbps) (Not Present if the above is set to Computed Gain Factors)

Information Element	Value/remark
- Gain factor ßd	15 (Not Present if the above is set to Computed Gain Factors)
- Reference TFC ID	0
- CHOICE mode	FDD
- Power offset Pp-m	Not Present
Added or Reconfigured TrCH information list	TS 25.331 specifies that "Although this IE is not required when the IE "RRC state indicator" is set to "CELL_FACH", need is MP to align with ASN.1"
- Added or Reconfigured UL TrCH information	
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- TFS	
- CHOICE Transport channel type	Delicated transport channels
- Dynamic Transport format information	
- RLC Size	Value 16 results in an RLC size of 144 bits; OctetModeType1 ((8*sizeType1)+16).
- Number of TBs and TTI List	List with single entry
- Transmission Time Interval	Not Present
- Number of Transport blocks	0
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	
- Transmission time interval	40 ms
- Type of channel coding	Convolutional
- Coding Rate	1/3
- Rate matching attribute	160
- CRC size	16
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- CHOICE mode	FDD
- CHOICE DL parameters	Same as UL
Added or Reconfigured TrCH information list	TS 25.331 specifies that "Although this IE is not required when the IE "RRC state indicator" is set to "CELL_FACH", need is MP to align with ASN.1"
- Added or Reconfigured DL TrCH information	
- Downlink transport channel type	DCH
- DL Transport channel identity	10
- CHOICE DL parameters	Same as UL
- Uplink Transport channel type	DCH
- UL TrCH identity	5
- DCH quality target	Not Present
Frequency info	Not present
Maximum allowed UL TX power	Not present
CHOICE channel requirement	Not Present
Downlink information common for all radio links	Not Present
Downlink information for each radio link list	Not present

3GPP TSG T1 Meeting #22
Hyderabad, India, 2nd – 6th February 2004

T1-040417 ⌘

CR-Form-v7

CHANGE REQUEST

⌘ **TS 34.108 CR** 284 ⌘ **rev** - ⌘ Current version: **4.9.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	New Radio Bearer Setup (FDD) message for RF (Revision of T1-040258)
Source:	⌘	Panasonic
Work item code:	⌘	TEI
Date:	⌘	6/2/04
Category:	⌘	**F**
Release:	⌘	Rel-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change: ⌘ In clause 7.3.2.3, the procedure for UE supporting CS or UE supporting PS only are specified. However, in clause 9.2, only Radio Bearer Setup message to set up CS RAB is provided. Radio Bearer Setup message to set up PS RAB is missing.

Revision 1:

At present, RF SWG has not decided which PS RAB would be used for RF testing. It is then proposed to refers some of the physical channel parameters to TS 34.108 at the moment and then to revise in future when suitable PS RAB has been decided.

Revision 2:

Secondary scrambling code should not be present, as it is not used in RF test cases.

Code number should not be defined as it depends on the radio bearer used.

Summary of change: ⌘ This CR proposes to add Radio Bearer Setup message to set up PS RAB in clause 9.2 of TS 34.108.

Revision 1:

Some of the physical channel information elements are set to refer to TS 34.108 clause 6.10 parameter set.

Revision 2:
IE “Secondary scrambling code” is set to “Not present”.

IE “Code Number” is set to “Depends on the radio bearer used.”

Consequences if not approved:	⌘	It is not possible to perform RF testing using PS RAB.

Clauses affected:	⌘	9.2			
Other specs affected:	⌘	Y / N	Other core specifications	⌘	
		N: X	Test specifications		
		N: X	O&M Specifications		
Other comments:	⌘				

How to create CRs using this form:

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

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

9.2.1 Default Message Contents for RF (FDD)

Contents of RADIO BEARER SETUP message: AM or UM (UE supports CS RAB)

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects an integer between 0 and 3
Integrity check info	
- message authentication code	SS calculates the value of MAC-I for this message and writes to this IE. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC message sequence number	SS provides the value of this IE, from its internal counter.
Integrity protection mode info	Not Present
Ciphering mode info	Not Present
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Signalling RB information to setup	Not Present
RAB information for setup list	
- RAB information for setup	
- RAB info	
- RAB identity	0000 0001B The first/ leftmost bit of the bit string contains the most significant bit of the RAB identity.
- CN domain identity	CS domain
- NAS Synchronization Indicator	Not Present
- Re-establishment timer	UseT314
- RB information to setup list	
- RB information to setup	
- RB identity	10
- PDCP info	Not Present
- CHOICE RLC info type	RLC info
- CHOICE Uplink RLC mode	TM RLC
- Transmission RLC discard	Not Present
- Segmentation indication	FALSE
- CHOICE Downlink RLC mode	TM RLC
- Segmentation indication	FALSE
- RB mapping info	
- Information for each multiplexing option	
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	1
- Logical channel identity	Not Present
- CHOICE RLC size list	Configured
- MAC logical channel priority	7
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	6
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	Not Present
RB information to be affected list	Not Present
Downlink counter synchronisation info	Not Present
UL Transport channel information for all transport channels	
- PRACH TFCS	Not Present
- CHOICE mode	FDD
- TFC subset	Not Present
- UL DCH TFCS	

Information Element	Value/remark
- CHOICE TFCI signalling	Normal
- TFCI Field 1 information	
- CHOICE TFCS representation	Complete reconfiguration
- TFCS complete reconfigure information	
- CHOICE CTFC Size	2 bit CTFC
- CTFC information	4 TFCs
- 2bit CTFC	0
- Power offset Information	
- CHOICE Gain Factors	Computed Gain Factors
- Reference TFC ID	0
- CHOICE mode	FDD
- Power offset P_{p-m}	Not Present
- 2bit CTFC	2
- Power offset Information	
- CHOICE Gain Factors	Computed Gain Factors
- Reference TFC ID	0
- CHOICE mode	FDD
- Power offset P_{p-m}	Not Present
- 2bit CTFC	1
- Power offset Information	
- CHOICE Gain Factors	Computed Gain Factors
- Reference TFC ID	0
- CHOICE mode	FDD
- Power offset P_{p-m}	Not Present
- 2bit CTFC	3
- Power offset Information	
- CHOICE Gain Factors	Signalled Gain Factors
- CHOICE mode	FDD
- Gain factor ßc	8
- Gain factor ßd	15
- Reference TFC ID	0
- CHOICE mode	FDD
- Power offset P_{p-m}	Not Present
Deleted UL TrCH information list	Not Present
Added or Reconfigured UL TrCH information list	1
- Added or Reconfigured UL TrCH information	
- Uplink transport channel type	DCH
- UL Transport channel identity	1
- TFS	
- CHOICE Transport channel type	Dedicated transport channels
- Dynamic Transport Format Information	
- RLC size	244 bits
- Number of TBs and TTI List	2
- Transmission Time Interval	Not Present
- Number of Transport blocks	0
- Transmission Time Interval	Not Present
- Number of Transport blocks	1
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format Information	
- Transmission time interval	20
- Type of channel coding	Convolutional
- Coding Rate	1/3
- Rate matching attribute	256
- CRC size	16
CHOICE mode	FDD
- CPCH set ID	Not Present
- Added or Reconfigured TrCH information for DRAC list	Not Present
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- CHOICE mode	FDD
- CHOICE DL parameters	Same as UL
Deleted DL TrCH information list	Not Present
Added or Reconfigured DL TrCH information list	1
- Added or Reconfigured DL TrCH information	
- Downlink transport channel type	DCH

Information Element	Value/remark
- DL Transport channel identity	6
- CHOICE DL parameters	Same as UL
- Uplink transport channel type	DCH
- UL TrCH identity	1
- DCH quality target	
- BLER Quality value	-2.0
Frequency info	Not Present
Maximum allowed UL TX power	33dBm
CHOICE channel requirement	Uplink DPCH info
- Uplink DPCH power control info	
- CHOICE mode	FDD
- DPCCH power offset	-6dB
- PC Preamble	1 frame
- SRB delay	7 frames
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- CHOICE mode	FDD
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	1
- spreading factor	64
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	1
CHOICE Mode	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing indicator	Maintain
- CFN-targetSFN frame offset	Not Present
- Downlink DPCH power control information	
- CHOICE mode	FDD
- DPC mode	0 (single)
- CHOICE mode	FDD
- Power offset $P_{Pilot-DPDCH}$	0
- DL rate matching restriction information	Not Present
- Spreading factor	128
- Fixed or Flexible Position	Fixed
- TFCI existence	TRUE
- CHOICE SF	128
- Number of bits for Pilot bits	8
- CHOICE mode	FDD
- DPCH compressed mode info	Not Present
- TX Diversity mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for per radio link list	
- Downlink information for each radio link	
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	Set to value Default DPCH Offset Value (as currently stored in SS) mod 38400
- Secondary CPICH info	Not Present
- DL channelisation code	
- Secondary scrambling code	1
- Spreading factor	128
- Code number	0
- Scrambling code change	No change
- TPC combination index	0
- SSDT Cell Identity	Not Present
- Closed loop timing adjustment mode	Not Present

Information Element	Value/remark
- SCCPCH information for FACH	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (UE supports PS RAB only)

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects an integer between 0 and 3
Integrity check info	
- message authentication code	SS calculates the value of MAC-I for this message and writes to this IE. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC message sequence number	SS provides the value of this IE, from its internal counter.
Integrity protection mode info	Not Present
Ciphering mode info	Not Present
Activation time	Not Present
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Signalling RB information to setup	Not Present
RAB information for setup list	
- RAB information for setup	
- RAB info	(AM DTCH for PS domain)
- RAB identity	0000 0101B The first/ leftmost bit of the bit string contains the most significant bit of the RAB identity.
- CN domain identity	PS domain
- NAS Synchronization Indicator	Not Present
- Re-establishment timer	useT315
- RB information to setup	
- RB identity	20
- PDCP info	
- Support for lossless SRNS relocation	FALSE
- Max PDCP SN window size	Not present
- PDCP PDU header	Absent
- Header compression information	Not present
- CHOICE RLC info type	RLC info
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- CHOICE SDU discard mode	No Discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_PDU	Not Present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Windows	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE

Information Element	Value/remark
- Timer_STATUS_periodic	Not Present
- RB mapping info	
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	1
- Logical channel identity	Not Present
- CHOICE RLC size list	Configured
- MAC logical channel priority	8
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	6
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	Not Present
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	7
- CHOICE RLC size list	Explicit list
- RLC size index	Reference to TS34.108 clause 6 Parameter Set
- MAC logical channel priority	8
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	7
RB information to be affected list	Not Present
Downlink counter synchronisation info	Not Present
UL Transport channel information for all transport channels	
- PRACH TFCS	Not Present
- CHOICE mode	FDD
- TFC subset	Not Present
- UL DCH TFCS	
- CHOICE TFCI signalling	Normal
- TFCI Field 1 information	
- CHOICE TFCS representation	Complete reconfiguration
- TFCS complete reconfigure information	
- CHOICE CTFC Size	Number of bits used must be enough to cover all combinations of CTFC from TS34.108 clause 6.10.2.4 Parameter Set.
- CTFC information	This IE is repeated for TFC numbers and reference to TS34.108 clause 6.10.2.4 Parameter Set
- CTFC	Reference to TS34.108 clause 6.10.2.4 Parameter Set
- Power offset information	
- CHOICE Gain Factors	Computed Gain Factors(The last TFC is set to Signalled Gain Factors)
- Gain factor βc	11 (below 64 kbps) 9 (higher than 64 kbps) (Not Present if the CHOICE Gain Factors is set to Computed Gain Factors)
- Gain factor βd	15 (Not Present if the CHOICE Gain Factors is set to Computed Gain Factors)
- Reference TFC ID	0
- CHOICE mode	FDD
- Power offset P p-m	Not Present
Deleted UL TrCH information list	Not Present
Added or Reconfigured UL TrCH information list	1
Added or Reconfigured UL TrCH information	1 DCH added, 1 DCH reconfigured

Information Element	Value/remark
- Uplink transport channel type	DCH
- UL Transport channel identity	1
- TFS	
- CHOICE Transport channel type	Dedicated transport channels
- Dynamic Transport format information	
- RLC Size	Reference to TS34.108 clause 6.10 Parameter Set
- Number of TBs and TTI List	(This IE is repeated for TFI number.)
- Transmission Time Interval	Not Present
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- CHOICE Logical Channel list	All
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- TFS	
- CHOICE Transport channel type	Dedicated transport channels
- Dynamic Transport format information	
- RLC Size	Reference to TS34.108 clause 6.10 Parameter Set
- Number of TBs and TTI List	(This IE is repeated for TFI number.)
- Transmission Time Interval	Not Present
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- CHOICE Logical Channel list	All
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
CHOICE mode	FDD
- CPCH set ID	Not Present
- Added or Reconfigured TrCH information for DRAC list	Not Present
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- CHOICE mode	FDD
- CHOICE DL parameters	Explicit
- DL DCH TFCS	
- CHOICE TFCI Signalling	Normal
- TFCI Field 1 Information	
- CHOICE TFCS representation	Complete reconfiguration
- TFCS complete reconfigure	
- CHOICE CTFC Size	Number of bits used must be enough to cover all combinations of CTFC from clause TS34.108 clause 6.10.2.4 Parameter Set.
- CTFC information	This IE is repeated for TFC numbers and reference to TS34.108 clause 6.10.2.4
- CTFC	Reference to TS34.108 clause 6.10.2.4 Parameter Set

Information Element	Value/remark
- Power offset information	Not Present
Added or Reconfigured DL TrCH information list	1
Added or Reconfigured DL TrCH information	2 TrCHs(DCH for DCCH and DCH for DTCH)
- Downlink transport channel type	DCH
- DL Transport channel identity	10
- CHOICE DL parameters	Same as UL
- Uplink transport channel type	DCH
- UL TrCH identity	5
- DCH quality target	
- BLER Quality value	-2.0
- Downlink transport channel type	DCH
- DL Transport channel identity	6
- CHOICE DL parameters	Explicit
- TFS	
- CHOICE Transport channel type	Dedicated transport channel
- Dynamic transport format information	
- RLC Size	Reference to TS34.108 clause 6.10 Parameter Set
- Number of TBs and TTI List	(This IE is repeated for TFI number.)
- Dynamic transport format information	
- Transmission Time Interval	Not Present
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- CHOICE Logical Channel list	All
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	-2.0
Frequency info	Not Present
Maximum allowed UL TX power	33dBm
CHOICE channel requirement	Uplink DPCH info
- Uplink DPCH power control info	
- CHOICE mode	FDD
- DPCCH power offset	-6dB
- PC Preamble	1 frame
- SRB delay	7 frames
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- CHOICE mode	FDD
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	1
- spreading factor	64
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	1
CHOICE Mode	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing indicator	Maintain
- CFN-targetSFN frame offset	Not Present
- Downlink DPCH power control information	
- CHOICE mode	FDD
- DPC mode	0 (single)
- CHOICE mode	FDD
- Power offset $P_{Pilot\text{-}DPDCH}$	0
- DL rate matching restriction information	Not Present

Information Element	Value/remark
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	Reference to TS34.108 clause 6.10 Parameter Set
- CHOICE SF	Reference to TS34.108 clause 6.10 Parameter Set
- CHOICE mode	FDD
- DPCH compressed mode info	Not Present
- TX Diversity mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for per radio link list	
- Downlink information for each radio link	
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	Set to value Default DPCH Offset Value (as currently stored in SS) mod 38400
- Secondary CPICH info	Not Present
- DL channelisation code	
- Secondary scrambling code	Not present
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Code number	Depends upon radio bearer used.
- Scrambling code change	No change
- TPC combination index	0
- SSDT Cell Identity	Not Present
- Closed loop timing adjustment mode	Not Present
- SCCPCH information for FACH	Not Present

3GPP TSG T1 Meeting #22
Hyderabad, India, 2nd – 6th February 2004

T1-040416 ⌘

CR-Form-v7

CHANGE REQUEST

⌘ **TS 34.108 CR 299** ⌘**rev** **-** ⌘ Current version: **3.e.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	New Radio Bearer Setup (FDD) message for RF (Revision of T1-040257)
Source:	⌘	Panasonic
Work item code:	⌘	TEI
Date:	⌘	6/2/04
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change: ⌘ In clause 7.3.2.3, the procedure for UE supporting CS or UE supporting PS only are specified. However, in clause 9.2, only Radio Bearer Setup message to set up CS RAB is provided. Radio Bearer Setup message to set up PS RAB is missing.

Revision 1:

At present, RF SWG has not decided which PS RAB would be used for RF testing. It is then proposed to refers some of the physical channel parameters to TS 34.108 at the moment and then to revise in future when suitable PS RAB has been decided.

Revision 2:

Secondary scrambling code should not be present, as it is not used in RF test cases.

Code number should not be defined as it depends on the radio bearer used.

Summary of change: ⌘ This CR proposes to add Radio Bearer Setup message to set up PS RAB in clause 9.2 of TS 34.108.

Revision 1:

Some of the physical channel information elements are set to refer to TS 34.108 clause 6.10 parameter set.

Revision 2:
IE “Secondary scrambling code” is set to “Not present”.

		IE “Code Number” is set to “Depends on the radio bearer used.”
Consequences if not approved:	⌘	It is not possible to perform RF testing using PS RAB.

Clauses affected:	⌘	9.2			
		Y	**N**		
Other specs affected:	⌘		**X**	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

How to create CRs using this form:

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

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

9.2.1 Default Message Contents for RF (FDD)

Contents of RADIO BEARER SETUP message: AM or UM (UE supports CS RAB)

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects an integer between 0 and 3
Integrity check info	
- message authentication code	SS calculates the value of MAC-I for this message and writes to this IE. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC message sequence number	SS provides the value of this IE, from its internal counter.
Integrity protection mode info	Not Present
Ciphering mode info	Not Present
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Signalling RB information to setup	Not Present
RAB information for setup list	
- RAB information for setup	
- RAB info	
- RAB identity	0000 0001B The first/ leftmost bit of the bit string contains the most significant bit of the RAB identity.
- CN domain identity	CS domain
- NAS Synchronization Indicator	Not Present
- Re-establishment timer	UseT314
- RB information to setup list	
- RB information to setup	
- RB identity	10
- PDCP info	Not Present
- CHOICE RLC info type	RLC info
- CHOICE Uplink RLC mode	TM RLC
- Transmission RLC discard	Not Present
- Segmentation indication	FALSE
- CHOICE Downlink RLC mode	TM RLC
- Segmentation indication	FALSE
- RB mapping info	
- Information for each multiplexing option	
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	1
- Logical channel identity	Not Present
- CHOICE RLC size list	Configured
- MAC logical channel priority	7
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	6
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	Not Present
RB information to be affected list	Not Present
Downlink counter synchronisation info	Not Present
UL Transport channel information for all transport channels	
- PRACH TFCS	Not Present
- CHOICE mode	FDD
- TFC subset	Not Present
- UL DCH TFCS	

Information Element	Value/remark
- CHOICE TFCI signalling	Normal
- TFCI Field 1 information	
- CHOICE TFCS representation	Complete reconfiguration
- TFCS complete reconfigure information	
- CHOICE CTFC Size	2 bit CTFC
- CTFC information	4 TFCs
- 2bit CTFC	0
- Power offset Information	
- CHOICE Gain Factors	Computed Gain Factors
- Reference TFC ID	0
- CHOICE mode	FDD
- Power offset P_{p-m}	Not Present
- 2bit CTFC	2
- Power offset Information	
- CHOICE Gain Factors	Computed Gain Factors
- Reference TFC ID	0
- CHOICE mode	FDD
- Power offset P_{p-m}	Not Present
- 2bit CTFC	1
- Power offset Information	
- CHOICE Gain Factors	Computed Gain Factors
- Reference TFC ID	0
- CHOICE mode	FDD
- Power offset P_{p-m}	Not Present
- 2bit CTFC	3
- Power offset Information	
- CHOICE Gain Factors	Signalled Gain Factors
- CHOICE mode	FDD
- Gain factor ßc	8
- Gain factor ßd	15
- Reference TFC ID	0
- CHOICE mode	FDD
- Power offset P_{p-m}	Not Present
Deleted UL TrCH information list	Not Present
Added or Reconfigured UL TrCH information list	1
- Added or Reconfigured UL TrCH information	
- Uplink transport channel type	DCH
- UL Transport channel identity	1
- TFS	
- CHOICE Transport channel type	Dedicated transport channels
- Dynamic Transport Format Information	
- RLC size	244 bits
- Number of TBs and TTI List	2
- Transmission Time Interval	Not Present
- Number of Transport blocks	0
- Transmission Time Interval	Not Present
- Number of Transport blocks	1
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format Information	
- Transmission time interval	20
- Type of channel coding	Convolutional
- Coding Rate	1/3
- Rate matching attribute	256
- CRC size	16
CHOICE mode	FDD
- CPCH set ID	Not Present
- Added or Reconfigured TrCH information for DRAC list	Not Present
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- CHOICE mode	FDD
- CHOICE DL parameters	Same as UL
Deleted DL TrCH information list	Not Present
Added or Reconfigured DL TrCH information list	1
- Added or Reconfigured DL TrCH information	
- Downlink transport channel type	DCH

Information Element	Value/remark
- DL Transport channel identity	6
- CHOICE DL parameters	Same as UL
- Uplink transport channel type	DCH
- UL TrCH identity	1
- DCH quality target	
- BLER Quality value	-2.0
Frequency info	Not Present
Maximum allowed UL TX power	33dBm
CHOICE channel requirement	Uplink DPCH info
- Uplink DPCH power control info	
- CHOICE mode	FDD
- DPCCH power offset	-6dB
- PC Preamble	1 frame
- SRB delay	7 frames
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- CHOICE mode	FDD
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	1
- spreading factor	64
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	1
CHOICE Mode	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing indicator	Maintain
- CFN-targetSFN frame offset	Not Present
- Downlink DPCH power control information	
- CHOICE mode	FDD
- DPC mode	0 (single)
- CHOICE mode	FDD
- Power offset $P_{Pilot-DPDCH}$	0
- DL rate matching restriction information	Not Present
- Spreading factor	128
- Fixed or Flexible Position	Fixed
- TFCI existence	TRUE
- CHOICE SF	128
- Number of bits for Pilot bits	8
- CHOICE mode	FDD
- DPCH compressed mode info	Not Present
- TX Diversity mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for per radio link list	
- Downlink information for each radio link	
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	Set to value Default DPCH Offset Value (as currently stored in SS) mod 38400
- Secondary CPICH info	Not Present
- DL channelisation code	
- Secondary scrambling code	1
- Spreading factor	128
- Code number	0
- Scrambling code change	No change
- TPC combination index	0
- SSDT Cell Identity	Not Present
- Closed loop timing adjustment mode	Not Present

Information Element	Value/remark
- SCCPCH information for FACH	Not Present

Contents of RADIO BEARER SETUP message: AM or UM (UE supports PS RAB only)

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects an integer between 0 and 3
Integrity check info	
- message authentication code	SS calculates the value of MAC-I for this message and writes to this IE. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC message sequence number	SS provides the value of this IE, from its internal counter.
Integrity protection mode info	Not Present
Ciphering mode info	Not Present
Activation time	Not Present
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Signalling RB information to setup	Not Present
RAB information for setup list	
- RAB information for setup	
- RAB info	(AM DTCH for PS domain)
- RAB identity	0000 0101B The first/ leftmost bit of the bit string contains the most significant bit of the RAB identity.
- CN domain identity	PS domain
- NAS Synchronization Indicator	Not Present
- Re-establishment timer	useT315
- RB information to setup	
- RB identity	20
- PDCP info	
- Support for lossless SRNS relocation	FALSE
- Max PDCP SN window size	Not present
- PDCP PDU header	Absent
- Header compression information	Not present
- CHOICE RLC info type	RLC info
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- CHOICE SDU discard mode	No Discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_PDU	Not Present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Windows	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE

Information Element	Value/remark
- Timer_STATUS_periodic	Not Present
- RB mapping info	
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	1
- Logical channel identity	Not Present
- CHOICE RLC size list	Configured
- MAC logical channel priority	8
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	6
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	Not Present
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	7
- CHOICE RLC size list	Explicit list
- RLC size index	Reference to TS34.108 clause 6 Parameter Set
- MAC logical channel priority	8
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	7
RB information to be affected list	Not Present
Downlink counter synchronisation info	Not Present
UL Transport channel information for all transport channels	
- PRACH TFCS	Not Present
- CHOICE mode	FDD
- TFC subset	Not Present
- UL DCH TFCS	
- CHOICE TFCI signalling	Normal
- TFCI Field 1 information	
- CHOICE TFCS representation	Complete reconfiguration
- TFCS complete reconfigure information	
- CHOICE CTFC Size	Number of bits used must be enough to cover all combinations of CTFC from TS34.108 clause 6.10.2.4 Parameter Set.
- CTFC information	This IE is repeated for TFC numbers and reference to TS34.108 clause 6.10.2.4 Parameter Set
- CTFC	Reference to TS34.108 clause 6.10.2.4 Parameter Set
- Power offset information	
- CHOICE Gain Factors	Computed Gain Factors(The last TFC is set to Signalled Gain Factors)
- Gain factor βc	11 (below 64 kbps) 9 (higher than 64 kbps) (Not Present if the CHOICE Gain Factors is set to Computed Gain Factors)
- Gain factor βd	15 (Not Present if the CHOICE Gain Factors is set to Computed Gain Factors)
- Reference TFC ID	0
- CHOICE mode	FDD
- Power offset P p-m	Not Present
Deleted UL TrCH information list	Not Present
Added or Reconfigured UL TrCH information list	1
Added or Reconfigured UL TrCH information	1 DCH added, 1 DCH reconfigured

Information Element	Value/remark
- Uplink transport channel type	DCH
- UL Transport channel identity	1
- TFS	
- CHOICE Transport channel type	Dedicated transport channels
- Dynamic Transport format information	
- RLC Size	Reference to TS34.108 clause 6.10 Parameter Set
- Number of TBs and TTI List	(This IE is repeated for TFI number.)
- Transmission Time Interval	Not Present
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- CHOICE Logical Channel list	All
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- TFS	
- CHOICE Transport channel type	Dedicated transport channels
- Dynamic Transport format information	
- RLC Size	Reference to TS34.108 clause 6.10 Parameter Set
- Number of TBs and TTI List	(This IE is repeated for TFI number.)
- Transmission Time Interval	Not Present
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- CHOICE Logical Channel list	All
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
CHOICE mode	FDD
- CPCH set ID	Not Present
- Added or Reconfigured TrCH information for DRAC list	Not Present
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- CHOICE mode	FDD
- CHOICE DL parameters	Explicit
- DL DCH TFCS	
- CHOICE TFCI Signalling	Normal
- TFCI Field 1 Information	
- CHOICE TFCS representation	Complete reconfiguration
- TFCS complete reconfigure	
- CHOICE CTFC Size	Number of bits used must be enough to cover all combinations of CTFC from clause TS34.108 clause 6.10.2.4 Parameter Set.
- CTFC information	This IE is repeated for TFC numbers and reference to TS34.108 clause 6.10.2.4
- CTFC	Reference to TS34.108 clause 6.10.2.4 Parameter Set

Information Element	Value/remark
- Power offset information	Not Present
Added or Reconfigured DL TrCH information list	1
Added or Reconfigured DL TrCH information	2 TrCHs(DCH for DCCH and DCH for DTCH)
- Downlink transport channel type	DCH
- DL Transport channel identity	10
- CHOICE DL parameters	Same as UL
- Uplink transport channel type	DCH
- UL TrCH identity	5
- DCH quality target	
- BLER Quality value	-2.0
- Downlink transport channel type	DCH
- DL Transport channel identity	6
- CHOICE DL parameters	Explicit
- TFS	
- CHOICE Transport channel type	Dedicated transport channel
- Dynamic transport format information	
- RLC Size	Reference to TS34.108 clause 6.10 Parameter Set
- Number of TBs and TTI List	(This IE is repeated for TFI number.)
- Dynamic transport format information	
- Transmission Time Interval	Not Present
- Number of Transport blocks	Reference to TS34.108 clause 6.10 Parameter Set
- CHOICE Logical Channel list	All
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.10 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.10 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.10 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.10 Parameter Set
- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	-2.0
Frequency info	Not Present
Maximum allowed UL TX power	33dBm
CHOICE channel requirement	Uplink DPCH info
- Uplink DPCH power control info	
- CHOICE mode	FDD
- DPCCH power offset	-6dB
- PC Preamble	1 frame
- SRB delay	7 frames
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- CHOICE mode	FDD
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	1
- spreading factor	64
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	1
CHOICE Mode	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing indicator	Maintain
- CFN-targetSFN frame offset	Not Present
- Downlink DPCH power control information	
- CHOICE mode	FDD
- DPC mode	0 (single)
- CHOICE mode	FDD
- Power offset $P_{Pilot\text{-}DPDCH}$	0
- DL rate matching restriction information	Not Present

Information Element	Value/remark
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	Reference to TS34.108 clause 6.10 Parameter Set
- CHOICE SF	Reference to TS34.108 clause 6.10 Parameter Set
- CHOICE mode	FDD
- DPCH compressed mode info	Not Present
- TX Diversity mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for per radio link list	
- Downlink information for each radio link	
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	Set to value Default DPCH Offset Value (as currently stored in SS) mod 38400
- Secondary CPICH info	Not Present
- DL channelisation code	
- Secondary scrambling code	Not present
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Code number	Depends upon radio bearer used.
- Scrambling code change	No change
- TPC combination index	0
- SSDT Cell Identity	Not Present
- Closed loop timing adjustment mode	Not Present
- SCCPCH information for FACH	Not Present

3GPP TSG-T1 Meeting #22
Hyderabad, India, 2-6 Feb 2004

Tdoc ⌘T1-040411

CR-Form-v7

CHANGE REQUEST

⌘ **34.108** **CR** **298** ⌘**rev** **-** ⌘ Current version: **4.9.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	CR to 34.108 R4: Correction to handling of Entered Parameter IE in default contents for Initial Direct Transfer
Source:	⌘	Qualcomm
Work item code:	⌘	TEI
Date:	⌘	4/2/2003
Category:	⌘	**F**
Release:	⌘	Rel-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	Core spec imposes no clear requirement on the value of Entered Parameter sent by the UE. RAN2 and SA2 have indicated that this value is not used by the network and should not be checked.
Summary of change:	⌘	Entered Parameter IE changed from “False” to “Not checked” in default.
Consequences if not approved:	⌘	Good UE could fail test cases.

Clauses affected:	⌘	9.1.1			
Other specs Affected:	⌘	**Y**	**N**		
			X	Other core specifications	⌘
		X		Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

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

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

9.1.1 Default RRC Message Contents (FDD)

…

Contents of INITIAL DIRECT TRANSFER message: AM

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
CN domain identity	Checked to see if set to supported CN domain as specified in the IXIT statements.
Intra Domain NAS Node Selector	
- CHOICE version	R99
- CHOICE CN type	GSM-MAP
- CHOICE Routing basis	Local (P)TMSI
- Routing parameter	If the IE "CN domain identity" is equal to "CS domain", this bit string is set to to bits b14 through b23 of the TMSI. If the IE "CN domain identity" is equal to "PS domain", this bit string is set to to bits b14 through b23 of the P-TMSI. The TMSI/P-TMSI consists of 4 octets (32bits). This can be represented by a string of bits numbered from b0 to b31, with bit b0 being the least significant. The "Routing parameter" bit string consists of bits b14 through b23 of the TMSI/ PTMSI. The first/ leftmost/ most significant bit of the bit string contains bit b23 of the TMSI/ PTMSI.
- Entered parameter	~~FALSE~~Not checked
NAS message	Set according to that indicated in specific message content for each test case
START	Not checked
Measured results on RACH	Not checked

3GPP TSG–T1 Meeting #22
Hyderabad, India, 2nd – 6th February 2004

Tdoc ⌘T1-040373

CR-Form-v7

CHANGE REQUEST

⌘ **34.108** **CR** **305** ⌘ **rev** **-** ⌘ Current version: **4.9.0** ⌘

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

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

Title:	⌘	Contents of RRC CONNECTION SETUP message: UM (Transition to CELL_DCH) (1.28 Mcps TDD)
Source:	⌘	CCSA
Work item code:	⌘	LCR TDD
Date:	⌘	12/01/2004
Category:	⌘	**F**
Release:	⌘	Rel-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	1. Transport channel identity IE format should follow 25.331 2. IE “Number of Transport blocks” level is wrong. 3. “Downlink information for each radio link list” IE name error and has no value
Summary of change:	⌘	Change its level to be accurate.
Consequences if not approved:	⌘	The message will not be used correctly.

Clauses affected:	⌘	9.1.2			
Other specs affected:	⌘	**Y**	**N**	Other core specifications	⌘
		☐	☐	Test specifications	
		☐	☐	O&M Specifications	
Other comments:	⌘				

- UL Transport channel identity Transport channel identity	~~5~~ 5

- Number of Transport blocks	Reference to TS34.108 clause 6.11 Parameter Set

Downlink information ~~for each~~per radio link list - Downlink information for each radio link - Choice mode - Primary CCPCH info - CHOICE *mode* - CHOICE TDD option - TSTD indicator	 TDD TDD 1.28 Mcps TDD FALSE

3GPP TSG–T1 Meeting #22
Hyderabad, India, 2nd – 6th February 2004

Tdoc ⌘T1-040372

CR-Form-v7

CHANGE REQUEST

⌘ **34.108** **CR** **304** ⌘**rev** **-** ⌘ Current version: **4.9.0** ⌘

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

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

Title:	⌘	Correction of RADIO BEARER RELEASE default message contents for TDD: AM or UM (1.28 Mcps TDD)
Source:	⌘	CCSA
Work item code:	⌘	LCR TDD
Date:	⌘	12/01/2004
Category:	⌘	**F**
Release:	⌘	*Rel-4*

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change: ⌘
1. In Rel4 2002-12 version, no New H-RNTI IE
2. Downlink HS-PDSCH Information IE doesn't exist.
3. The value of 'CHOICE codes representation' *is missed.*
4. The IE ' Maximum allowed UL TX power' in conditions A5 A6 should has a value because this IE is MD. It can not be 'Not present'.
5. If UL CCTrCH TPC List is ignored, It is no meaning to list the value of IEs.
6. The name of IE ' UL Transport channel information for all transport channels ' in Uplink transport channels part was error.
7. The name of IE ' DL Transport channel information for all transport channels ' in Downlink transport channels part was error.
8. Downlink information common for all radio links IE, In condition A7, A8, there should be no Radio link exist in CELL_FACH state.

Summary of change: ⌘
1. This IE is belong to Rel-5, Delete the IE
2. This IE is belong to Rel-5, Delete the IE
3. Add ' Bitmap' value
4. This IE is MD, Change 'not present' to 'using the default value '
5. Deleted the sub IEs
6. Change it to 'UL Transport channel information common for all transport channels'
7. Change it to 'DL Transport channel information common for all transport channels'
8. A7, A8 add to in condition A5, A6

Consequences if not approved: ⌘ The message will not be used correctly.

Clauses affected:	⌘	34.108-9.1.2			
Other specs affected:	⌘	**Y** / **N**	Other core specifications Test specifications O&M Specifications	⌘	
Other comments:	⌘				

How to create CRs using this form:

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

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Contents of RADIO BEARER RELEASE message: AM or UM (1.28 Mcps TDD)

Information Element		Value/remark
Message Type	A1, A2, A3, A4, A5, A6, A7, A8	
RRC transaction identifier		Arbitrarily selects an integer between 0 and 3
Integrity check info		
- message authentication code		SS calculates the value of MAC-I for this message and writes to this IE. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC message sequence number		SS provides the value of this IE, from its internal counter.
Integrity protection mode info		Not Present
Ciphering mode info		Not Present
Activation time	A1, A2, A3, A7, A8	(256+CFN-(CFN MOD 8 + 8))MOD 256
Activation time	A4, A5, A6	Not Present
New U-RNTI		Not Present
New C-RNTI	A1,A2,A3, A4	Not Present
New C-RNTI	A5, A6, A7, A8	'1010 1010 1010 1010'
New DSCH-RNTI	A1, A2, A3, A4, A5, A6, A7, A8	Not Present
~~New H-RNTI~~	~~A1, A2, A3, A4, A5, A6, A7, A8~~	~~Not Present~~
RRC State indicator	A1,A2, A3, A4	CELL_DCH
RRC State indicator	A5, A6, A7, A8	CELL_FACH
UTRAN DRX cycle length coefficient	A1,A2,A3, A4,A5,A6, A7, A8	Not Present
CN information info		Not Present
Signalling Connection release indication		Not Present
URA identity		Not Present
RAB information to reconfigure list		Not Present
RB information to release list	A1, A7	
RB information to release - RB identity		10
RB information to release list	A2, A8	
RB information to release - RB identity		10
RB information to release - RB identity		11
RB information to release - RB identity		12
RB information to release list	A3, A4, A5, A6	
RB information to release - RB identity		20
RB information to be affected list	A1,A2, A3,A4,A5, A6, A7, A8	Not Present
Downlink counter synchronisation info	A1,A2,A3, A4,A5,A6, A7, A8	Not Present

Information Element		Value/remark
UL Transport channel information common for all transport channels	A1, A2, A3, A4	TFCS reconfigured to fit the new transport channel configuration.
UL Transport channel information common for all transport channels	A5, A6, A7, A8	Not Present
Deleted TrCH information list	A1,A2, A3, A5, A7, A8	
Deleted UL TrCH Information - Uplink transport channel type - Transport channel identity	A1,A2, A3, A5, A7, A8	 DCH 1
Deleted UL TrCH Information - Uplink transport channel type - Transport channel identity	A2, A8	 DCH 2
Deleted UL TrCH Information - Uplink transport channel type - Transport channel identity	A2, A8	 DCH 3
Deleted TrCH information list	A4, A6	Not Present
Added or Reconfigured TrCH information list	A5, A6, A7, A8	Not Present
Added or Reconfigured TrCH information list	A1, A2, A3, A4	TrCHs (DCH for DCCH)
Added or Reconfigured UL TrCH information		
- Uplink transport channel type		DCH
- UL Transport channel identity		5
- TFS		
- CHOICE Transport channel type		Dedicated transport channels
- Dynamic Transport format information		
- RLC Size		Reference to TS34.108 clause 6.11 Parameter Set
- Number of TBs and TTI List		(This IE is repeated for TFI number.)
- Transmission Time Interval		Not present
- Number of Transport blocks		Reference to TS34.108 clause 6.11 Parameter Set
- CHOICE Logical Channel list		All (NULL)
- Semi-static Transport Format information		
- Transmission time interval		Reference to TS34.108 clause 6.11 Parameter Set
- Type of channel coding		Reference to TS34.108 clause 6.11 Parameter Set
- Coding Rate		Reference to TS34.108 clause 6.11 Parameter Set
- Rate matching attribute		Reference to TS34.108 clause 6.11 Parameter Set
- CRC size		Reference to TS34.108 clause 6.11 Parameter Set
CHOICE *mode*		TDD (No data)
DL Transport channel information common for all transport channels	A1, A2, A3, A4,	TFCS reconfigured to fit the new transport channel configuration.
DL Transport channel information common for all transport channels	A5, A6, A7, A8	Not Present
Deleted TrCH information list		
- Deleted DL TrCH Information - Downlink transport channel type - Transport channel identity	A1, A2, A3, A5,A7, A8	 DCH 6
- Deleted DL TrCH Information - Downlink transport channel type - Transport channel identity	A2, A8	 DCH 7
- Deleted DL TrCH Information - Downlink transport channel type - Transport channel identity	A2, A8	 DCH 8
Deleted TrCH information list	A4, A6	Not Present
Added or Reconfigured TrCH information list		
- Added or Reconfigured DL TrCH information	A5, A6, A7, A8	Not Present

Information Element		Value/remark
- Added or Reconfigured DL TrCH information	A1, A2, A3, A4	1 TrCHs (DCH for DCCH)
- Downlink transport channel type		DCH
- DL Transport channel identity		10
- CHOICE DL parameters		Same as UL
- Uplink transport channel type		DCH
- UL TrCH identity		5
- DCH quality target		
- BLER Quality value		-2.0 Real(-6.3..0 by step of 0.1)
Frequency info - Choice mode - UARFCN (Nt)	A1, A2, A3, A4, A5, A7, A8	 TDD Reference to clause 5.1 Test frequencies
Frequency info	A6	Not Present
Maximum allowed UL TX power	A1, A2, A3, A4, A7, A8	33dBm
Maximum allowed UL TX power	A5, A6	~~Not Present~~ using the default value
CHOICE *channel requirement*	A5, A6 , A7, A8	Not Present
CHOICE *channel requirement* - Uplink DPCH power control info - CHOICE mode - Uplink Timing Advance Control	A1, A2, A3, A4	Uplink DPCH info Not Present TDD Not Present
- UL CCTrCH List - TFCS ID		 1
- UL Target SIR		Real (-11 .. 20 by step of 0.5dB) Reference to TS34.108 Parameter set.
- Time info - Activation time - Duration - Common timeslot info - 2nd interleaving mode - TFCI coding - Puncturing limit - Repetition period - Repetition length - Uplink DPCH timeslots and code - Dynamic SF usage - First individual timeslot info - Timeslot number - CHOICE TDD option - Timeslot number - TFCI existence - Midamble shift and burst type		 (256+CFN-(CFN MOD 8 + 8))MOD 256 Infinite Default value is "Frame" Reference to TS34.108 clause 6 Parameter set Reference to TS34.108 clause 6 Parameter set 1 FALSE 1.28 Mcps TDD 1 OR 2 OR 3 TRUE
- CHOICE TDD option - Midamble allocation mode - Midamble configuration - Midamble Shift - CHOICE TDD option - Modulation - SS-TPC Symbols - Additional TPC-SS Symbols - First timeslot Code List - channelisation codes		1.28 Mcps TDD Default midamble 16 Not Present 1.28 Mcps TDD QPSK 1 Not present Repeated (1,2) for each channelisation code assigned in the slot to meet the needs of TS34.108 clause 6 Parameter Set. (SF/ i) where i denotes an unassigned code matching the SF specified in TS34.108 clause 6 Parameter Set.

Information Element		Value/remark
- CHOICE more timeslots		No more timeslots
- UL CCTrCH List to Remove		Not present
CHOICE Mode	A1, A2, A3, A4, A5, A6, A7, A8	TDD
Downlink information common for all radio links	A5, A6, A7, A8	Not Present
Downlink information common for all radio links	A1, A2, A3	
- Downlink DPCH info common for all RL		
- Timing indication		Maintain
- CFN-targetSFN frame offset		Not Present
- Downlink DPCH power control information		
- CHOICE mode		TDD
- TPC Step Size		1
- MAC-d HFN initial value		Not Present
- CHOICE mode		TDD
- CHOICE mode		TDD
- CHOICE TDD option		1.28 Mcps TDD
- TSTD indicator		FALSE
- Default DPCH Offset Value		Not Present
Downlink information common for all radio links	A4, ~~A7, A8~~	
- Downlink DPCH info common for all RL		
- Timing indication		Initialise
- CFN-targetSFN frame offset		Not Present
- Downlink DPCH power control information		
- CHOICE mode		TDD
- TPC Step Size		1
- MAC-d HFN initial value		Not Present
- CHOICE mode		TDD
- CHOICE mode		TDD
- CHOICE TDD option		1.28 Mcps TDD
- TSTD indicator		FALSE
- Default DPCH Offset Value		
- CHOICE mode		TDD
- Default DPCH Offset Value		0 Integer(0..7)
Downlink information per radio link list	A1, A2, A3, A4,	
- Downlink information for each radio link		
- Choice mode		TDD
- Primary CCPCH info		
- Choice mode		TDD
- Choice TDD Option		1.28 Mcps TDD
- TSTD indicator		FALSE
- Cell parameters ID		Ref. to the Default setting in TS34.108 clause 6.1 (TDD) Integer(0..127)
- SCTD indicator		FALSE
- Downlink DPCH info for each RL		
- CHOICE mode		TDD
- DL CCTrCh List		
- TFCS ID		2 Integer(1.8)
- Time info		
- Activation time		Now
- Duration		Infinite
- Common timeslot info		
- 2nd interleaving mode		Default value is "Frame"
- TFCI coding		Reference to TS34.108 clause 6 Parameter set
- Puncturing limit		Reference to TS34.108 clause 6 Parameter set
- Repetition period		1
- Repetition length		NULL
- Downlink DPCH timeslots and codes		
- First individual timeslot info		
- Timeslot number		

Information Element		Value/remark
- CHOICE TDD option		1.28 Mcps TDD
- Timeslot number		4 OR 5 OR 6
- TFCI existence		TRUE
- Midamble shift and burst type		
- CHOICE TDD option		1.28 Mcps TDD
- Midamble allocation mode		Default midamble
- Midamble configuration		16
- Midamble Shift		Not Present
- CHOICE TDD option		1.28 Mcps TDD
- Modulation		QPSK
- SS-TPC Symbols		1
- Additional TPC-SS Sysbols		Not present
- First timeslot channelisation codes		Repeated (1,2) for each channelisation code assigned in the slot to meet the needs of TS34.108 clause 6 Parameter Set.
- CHOICE codes representation		Bitmap
- Channelisation codes bitmap		Reference to TS34.108 clause 6.10 Parameter Set
- CHOICE more timeslots		No more timeslots
- UL CCTrCH TPC List		This list is not required for 1.28 Mcps TDD and is to be ignored by the UE.
~~- UL TPC TFCS Identity~~		
~~- TFCS ID~~		~~1~~
~~- Shared Channel Indicator~~		~~FALSE~~
- DL CCTrCH List to Remove		Not present
- SCCPCH Information for FACH		Not Present
Downlink information per radio link list	A5 ,A7, A8	
- Downlink information for each radio link		
- Choice mode		TDD
- Primary CCPCH info		
- Choice mode		TDD
- Choice TDD Option		1.28 Mcps TDD
- TSTD indicator		FALSE
- Cell parameters ID		Ref. to the Default setting in TS34.108 clause 6.1 (TDD) Integer(0..127)
- SCTD indicator		FALSE
- Downlink DPCH info for each RL		Not Present
- SCCPCH Information for FACH		Not Present
Downlink information per radio link list	A6	Not Present

Condition	Explanation
A1	This IE need for "Non speech in CS"
A2	This IE need for "Speech in CS"
A3	This IE need for "Packet to CELL_DCH from CELL_DCH in PS"
A4	This IE need for "Packet to CELL_DCH from CELL_FACH in PS"
A5	This IE need for "Packet to CELL_FACH from CELL_DCH in PS"
A6	This IE need for "Packet to CELL_FACH from CELL_FACH in PS"
A7	This IE need for "Non speech to CELL_FACH from CELL_DCH in CS"
A8	This IE need for "Speech to CELL_FACH from CELL_DCH in CS"

3GPP TSG–T1 Meeting #22
Hyderabad, India, 2nd – 6th February 2004

Tdoc ⌘T1-040371

CR-Form-v7

CHANGE REQUEST

⌘ **34.108** **CR** **303** ⌘ **rev** **-** ⌘ Current version: **4.9.0** ⌘

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

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

Title:	⌘	correction of RADIO BEARER SETUP default message contents for 1.28 Mcps TDD
Source:	⌘	CCSA
Work item code:	⌘	LCR TDD
Date:	⌘	dd/mm/yyyy
Category:	⌘	**F**
Release:	⌘	REL-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
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Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	1. The IE 'New H-RNTI' that does not exist in this message (Rel4 25.331 v480) 2. The value of IE 'MAC logical channel priority' is different from FDD message 3. The name of IE ' UL Transport channel information for all transport channels ' of Uplink transport channels was error. 4. 'Added or Reconfigured DL TrCH information' does not include IE 'Transparent mode signalling info'. There are 8 places like this 5. The IE 'Downlink HS-PDSCH Information 'does not exist in Downlink radio resources part
Summary of change:	⌘	1. Delete this IE 2. Change the value from 7 to 6 3. Change the name to 'UL Transport channel information common for all transport channels' 4. Delete this IE 5. Delete this IE
Consequences if not approved:	⌘	The message will not be used correctly.

Clauses affected:	⌘	34.108-9.1.2
Other specs affected:	⌘	Y N ☐ ☐ Other core specifications ☐ ☐ Test specifications ☐ ☐ O&M Specifications
	⌘	
Other comments:	⌘	

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3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Contents of RADIO BEARER SETUP message: AM or UM (1.28 Mcps TDD)

Information Element	Condition	Value/remark
Message Type	A1, A2, A3, A4, A5, A6, A7, A8	
RRC transaction identifier		Arbitrarily selects an integer between 0 and 3
Integrity check info		
- message authentication code		SS calculates the value of MAC-I for this message and writes to this IE. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC message sequence number		SS provides the value of this IE, from its internal counter.
Integrity protection mode info		Not Present
Ciphering mode info		Not Present
Activation time	A1, A2, A3, A7, A8	(256+CFN-(CFN MOD 8 + 8))MOD 256
Activation time	A4, A5, A6	Now
New U-RNTI	A1, A2, A3, A4, A5, A6, A7, A8	Not Present
New C-RNTI	A1, A2, A3, A4, A7, A8	Not Present
New C-RNTI	A5, A6	'1010 1010 1010 1010'
New DSCH-RNTI	A1, A2, A3, A4, A5, A6, A7, A8	Not Present
~~New H-RNTI~~	~~A1, A2, A3, A4, A5, A6, A7, A8~~	~~Not Present~~
RRC State indicator	A1, A2, A3, A4, A7, A8	CELL_DCH
RRC State indicator	A5, A6	CELL_FACH
UTRAN DRX cycle length coefficient	A1, A2, A3, A4, A5, A6, A7, A8	Not Present
CN information info		Not Present
URA identity		Not Present
Signalling RB information to setup list		Not Present
RAB information for setup list	A1, A7	
- RAB info		
- RAB identity		
- CHOICE RAB identity type		RAB identity (GSM-MAP)
- RAB identity		0000 0001B The first/ leftmost bit of the bit string contains the most significant bit of the RAB identity.
- CN domain identity		CS domain
- NAS Synchronization Indicator		Not Present
- Re-establishment timer		useT314
- RB information to setup list		
- RB information to setup		
- RB identity		10
- PDCP info		Not Present
- CHOICE RLC info type		RLC info
- CHOICE Uplink RLC mode		TM RLC
- Transmission RLC discard		Not Present
- Segmentation indication		FALSE
- CHOICE Downlink RLC mode		TM RLC
- Segmentation indication		FALSE
- RB mapping info		
- Information for each multiplexing option		
- RLC logical channel mapping indicator		Not Present
- Number of uplink RLC logical channels		1
- Uplink transport channel type		DCH
- UL Transport channel identity		1
- Logical channel identity		Not Present

Information Element	Condition	Value/remark
- CHOICE *RLC size list*		Configured
- MAC logical channel priority		7
- Downlink RLC logical channel info		
- Number of downlink RLC logical channels		1
- Downlink transport channel type		DCH
- DL DCH Transport channel identity		6
- DL DSCH Transport channel identity		Not Present
- Logical channel identity		Not Present
RAB information to setup list	A2, A8	
- RAB info		
- RAB identity		
- CHOICE RAB identity type		RAB identity (GSM-MAP)
- RAB identity		0000 0001B The first/ leftmost bit of the bit string contains the most significant bit of the RAB identity.
- CN domain identity		CS domain
- NAS Synchronization Indicator		Not Present
- Re-establishment timer		useT314
- RB information to setup list		
- RB information to setup		
- RB identity		10
- PDCP info		Not Present
- CHOICE RLC info type		RLC info
- CHOICE Uplink RLC mode		TM RLC
- Transmission RLC discard		Not Present
- Segmentation indication		FALSE
- CHOICE Downlink RLC mode		TM RLC
- Segmentation indication		FALSE
- RB mapping info		
- Information for each multiplexing option		
- RLC logical channel mapping indicator		Not Present
- Number of uplink RLC logical channels		1
- Uplink transport channel type		DCH
- UL Transport channel identity		1
- Logical channel identity		Not Present
- CHOICE *RLC size list*		Configured
- MAC logical channel priority		~~7~~6
- Downlink RLC logical channel info		
- Number of downlink RLC logical channels		1
- Downlink transport channel type		DCH
- DL DCH Transport channel identity		6
- DL DSCH Transport channel identity		Not Present
- Logical channel identity		Not Present
- RB identity		11
- PDCP info		Not Present
- CHOICE RLC info type		RLC info
- CHOICE Uplink RLC mode		TM RLC
- Transmission RLC discard		Not Present
- Segmentation indication		FALSE
- CHOICE Downlink RLC mode		TM RLC
- Segmentation indication		FALSE
- RB mapping info		
- Information for each multiplexing option		
- RLC logical channel mapping indicator		Not Present
- Number of uplink RLC logical channels		1
- Uplink transport channel type		DCH
- UL Transport channel identity		2
- Logical channel identity		Not Present
- CHOICE *RLC size list*		Configured
- MAC logical channel priority		~~7~~6
- Downlink RLC logical channel info		
- Number of downlink RLC logical channels		1
- Downlink transport channel type		DCH
- DL DCH Transport channel identity		7
- DL DSCH Transport channel identity		Not Present
- Logical channel identity		Not Present
- RB identity		12

Information Element	Condition	Value/remark
- PDCP info		Not Present
- CHOICE RLC info type		RLC info
- CHOICE Uplink RLC mode		TM RLC
- Transmission RLC discard		Not Present
- Segmentation indication		FALSE
- CHOICE Downlink RLC mode		TM RLC
- Segmentation indication		FALSE
- RB mapping info		
- Information for each multiplexing option		
- RLC logical channel mapping indicator		Not Present
- Number of uplink RLC logical channels		1
- Uplink transport channel type		DCH
- UL Transport channel identity		3
- Logical channel identity		Not Present
- CHOICE *RLC size list*		Configured
- MAC logical channel priority		~~7~~6
- Downlink RLC logical channel info		
- Number of downlink RLC logical channels		1
- Downlink transport channel type		DCH
- DL DCH Transport channel identity		8
- DL DSCH Transport channel identity		Not Present
- Logical channel identity		Not Present
RAB information for setup list	A3, A4, A5, A6	
- RAB info		
- RAB identity		
- CHOICE RAB identity type		RAB identity (GSM-MAP)
- RAB identity		0000 0101B The first/ leftmost bit of the bit string contains the most significant bit of the RAB identity.
- CN domain identity		PS domain
- NAS Synchronization Indicator		Not Present
- Re-establishment timer		useT315
- RB information to setup list		
- RB information to setup		
- RB identity		20
- PDCP info		
- Support for lossless SRNS relocation		FALSE
- Max PDCP SN window size		Not present
- PDCP PDU header		Not present
- Header compression information		Not present
- CHOICE RLC info type		RLC info
- CHOICE Uplink RLC mode		AM RLC
- Transmission RLC discard		
- CHOICE *SDU Discard Mode*		Max DAT retransmissions
- MAX_DAT		4
- Timer_MRW		100
- MaxMRW		4
- Transmission window size		128
- Timer_RST		500
- Max_RST		4
- Polling info		
- Timer_poll_prohibit		200
- Timer_poll		200
- Poll_PDU		Not Present
- Poll_SDU		1
- Last transmission PDU poll		TRUE
- Last retransmission PDU poll		TRUE
- Poll_Windows		99
- Timer_poll_periodic		Not Present
- CHOICE Downlink RLC mode		AM RLC
- In-sequence delivery		TRUE
- Receiving window size		128
- Downlink RLC status info		
- Timer_status_prohibit		200
- Timer_EPC		200
- Missing PDU indicator		TRUE

Information Element	Condition	Value/remark
- Timer_STATUS_periodic		Not Present
- RB mapping info		
- Information for each multiplexing option		2 RBMuxOptions
- RLC logical channel mapping indicator		Not Present
- Number of uplink RLC logical channels		1
- Uplink transport channel type		DCH
- UL Transport channel identity		1
- Logical channel identity		Not Present
- CHOICE RLC size list		Configured
- MAC logical channel priority		8
- Downlink RLC logical channel info		
- Number of downlink RLC logical channels		1
- Downlink transport channel type		DCH
- DL DCH Transport channel identity		6
- DL DSCH Transport channel identity		Not Present
- Logical channel identity		Not Present
- RLC logical channel mapping indicator		Not Present
- Number of uplink RLC logical channels		1
- Uplink transport channel type		RACH
- UL Transport channel identity		Not Present
- Logical channel identity		7
- CHOICE RLC size list		Explicit list
- RLC size index		Reference to TS34.108 clause 6 Parameter Set
- MAC logical channel priority		8
- Downlink RLC logical channel info		
- Number of downlink RLC logical channels		1
- Downlink transport channel type		FACH
- DL DCH Transport channel identity		Not Present
- DL DSCH Transport channel identity		Not Present
- Logical channel identity		8
RB information to be affected list	A1, A2, A3, A4, A5, A6, A7, A8	Not Present
Downlink counter synchronisation info	A1, A2, A3, A4, A5, A6, A7, A8	Not Present
UL Transport channel information common for all transport channels	A1, A2, A3, A4, A5, A6, A7, A8	
- PRACH TFCS		Not Present
- CHOICE mode		TDD
- Individual UL CCTrCH information		
- UL TFCS Identity		
- TFCS ID		1
- Shared Channel Indicator		FALSE
- UL TFCS		
- CHOICE *TFCI signalling*		Normal
- TFCI Field 1 Information		
- CHOICE *TFCS representation*		Complete reconfiguration
- TFCS complete reconfiguration information		
- CHOICE *CTFC Size*		Number of bits used must be enough to cover all combinations of CTFC from TS34.108 clause 6.11.5.4 Parameter Set.
- CTFC information		This IE is repeated for TFC numbers and reference to TS34.108 clause 6.11.5.4 Parameter Set
- CTFC		Reference to TS34.108 clause 6.11.5.4 Parameter Set
- Power offset information		
- CHOICE Gain Factors		Computed Gain Factors(The last TFC is set to Signalled Gain Factors)
- Reference TFC ID		0 Integer(0.. 3)
- CHOICE Gain Factors		Signalled Gain Factors(Not Present if the CHOICE Gain Factors is set to ComputedGain Factors)
- CHOICE mode		TDD

Information Element	Condition	Value/remark
- Gain Factor β_d		15
- Reference TFC ID		0 Integer(0.. 3)
- CHOICE mode		TDD
- TFC subset		
- CHOICE Subset representation		Full transport format combination set
- TFC subset list		Not Present
Deleted TrCH information list	A1, A2, A3, A4, A5, A6, A7, A8	Not Present
Added or Reconfigured UL TrCH information	A1, A3 A4, A5, A6, A7	1 DCH added, 1 DCH reconfigured
- Added or Reconfigured UL TrCH information		
- Uplink transport channel type		DCH
- UL Transport channel identity		5
- TFS		
- CHOICE Transport channel type		Dedicated transport channels
- Dynamic Transport format information		
- RLC Size		Reference to TS34.108 clause 6.11 Parameter Set
- Number of TBs and TTI List	1 to maxTF	(This IE is repeated for TF number.)
- Transmission Time Interval		Not Present
- Number of Transport blocks		Reference to TS34.108 clause 6.11 Parameter Set
- CHOICE Logical Channel list		All
- Semi-static Transport Format information		
- Transmission time interval		Reference to TS34.108 clause 6.11 Parameter Set
- Type of channel coding		Reference to TS34.108 clause 6.11 Parameter Set
- Coding Rate		Reference to TS34.108 clause 6.11 Parameter Set
- Rate matching attribute		Reference to TS34.108 clause 6.11 Parameter Set
- CRC size		Reference to TS34.108 clause 6.11 Parameter Set
- Uplink transport channel type		DCH
- UL Transport channel identity		1
- TFS		
- CHOICE Transport channel type		Dedicated transport channels
- Dynamic Transport format information		
- RLC Size		Reference to TS34.108 clause 6.11 Parameter Set
- Number of TBs and TTI List	1 to maxTF	(This IE is repeated for TF number.)
- Transmission Time Interval		Not Present
- Number of Transport blocks		Reference to TS34.108 clause 6.11 Parameter Set
- CHOICE Logical Channel list		All
- Semi-static Transport Format information		
- Transmission time interval		Reference to TS34.108 clause 6.11 Parameter Set
- Type of channel coding		Reference to TS34.108 clause 6.11 Parameter Set
- Coding Rate		Reference to TS34.108 clause 6.11 Parameter Set
- Rate matching attribute		Reference to TS34.108 clause 6.11 Parameter Set
- CRC size		Reference to TS34.108 clause 6.11 Parameter Set
Added or Reconfigured TrCH information list	A2, A8	4 TrCHs(DCH for DCCH and 3DCHs for DTCH)
- Added or Reconfigured UL TrCH information		
- Uplink transport channel type		DCH
- UL Transport channel identity		5
- TFS		
- CHOICE Transport channel type		Dedicated transport channels
- Dynamic Transport format information		
- RLC Size		Reference to TS34.108 clause 6.11 Parameter

Information Element	Condition	Value/remark
		Set
- Number of TBs and TTI List	1 to maxTF	(This IE is repeated for TF number.)
- Transmission Time Interval		Not Present
- Number of Transport blocks		Reference to TS34.108 clause 6.11 Parameter Set
- CHOICE Logical Channel list		All
- Semi-static Transport Format information		
- Transmission time interval		Reference to TS34.108 clause 6.11 Parameter Set
- Type of channel coding		Reference to TS34.108 clause 6.11 Parameter Set
- Coding Rate		Reference to TS34.108 clause 6.11 Parameter Set
- Rate matching attribute		Reference to TS34.108 clause 6.11 Parameter Set
- CRC size		Reference to TS34.108 clause 6.11 Parameter Set
- Uplink transport channel type		DCH
- UL Transport channel identity		1
- TFS		
- CHOICE Transport channel type		Dedicated transport channels
- Dynamic Transport format information		
- RLC Size		Reference to TS34.108 clause 6.11 Parameter Set
- Number of TBs and TTI List	1 to maxTF	(This IE is repeated for TF number.)
- Transmission Time Interval		Not Present
- Number of Transport blocks		Reference to TS34.108 clause 6.11 Parameter Set
- CHOICE Logical Channel list		All
- Semi-static Transport Format information		
- Transmission time interval		Reference to TS34.108 clause 6.11 Parameter Set
- Type of channel coding		Reference to TS34.108 clause 6.11 Parameter Set
- Coding Rate		Reference to TS34.108 clause 6.11 Parameter Set
- Rate matching attribute		Reference to TS34.108 clause 6.11 Parameter Set
- CRC size		Reference to TS34.108 clause 6.11 Parameter Set
- Uplink transport channel type		DCH
- UL Transport channel identity		2
- TFS		
- CHOICE Transport channel type		Dedicated transport channels
- Dynamic Transport format information		
- RLC Size		Reference to TS34.108 clause 6.11 Parameter Set
- Number of TBs and TTI List	1 to maxTF	(This IE is repeated for TF number.)
- Transmission Time Interval		Not Present
- Number of Transport blocks		Reference to TS34.108 clause 6.11 Parameter Set
- CHOICE Logical Channel list		All
- Semi-static Transport Format information		
- Transmission time interval		Reference to TS34.108 clause 6.11 Parameter Set
- Type of channel coding		Reference to TS34.108 clause 6.11 Parameter Set
- Coding Rate		Reference to TS34.108 clause 6.11 Parameter Set
- Rate matching attribute		Reference to TS34.108 clause 6.11 Parameter Set
- CRC size		Reference to TS34.108 clause 6.11 Parameter Set
- Uplink transport channel type		DCH
- UL Transport channel identity		3
- TFS		
- CHOICE Transport channel type		Dedicated transport channels

Information Element	Condition	Value/remark
- Dynamic Transport format information - RLC Size - Number of TBs and TTI List - Transmission Time Interval - Number of Transport blocks - CHOICE Logical Channel list - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute	 1 to maxTF	 Reference to TS34.108 clause 6.11 Parameter Set (This IE is repeated for TF number.) Not Present Reference to TS34.108 clause 6.11 Parameter Set All Reference to TS34.108 clause 6.11 Parameter Set Reference to TS34.108 clause 6.11 Parameter Set Reference to TS34.108 clause 6.11 Parameter Set Reference to TS34.108 clause 6.11 Parameter Set
- CRC size CHOICE mode		Reference to TS34.108 clause 6.11 Parameter Set TDD (no data)
DL Transport channel information common for all transport channel - SCCPCH TFCS - CHOICE mode - Individual DL CCTrCH information - DL TFCS Identity - TFCS ID - Shared Channel Indicator - CHOICE DL parameters - UL DCH TFCS Identity - TFCS ID - Shared Channel Indicator	A1, A2, A7, A8	 Not Present TDD 2 FALSE SameAsUL 1 FALSE
DL Transport channel information common for all transport channel - SCCPCH TFCS - CHOICE mode - Individual DL CCTrCH information - DL TFCS Identity - TFCS ID - Shared Channel Indicator - CHOICE DL parameters - DL TFCS - CHOICE TFCI Signalling - TFCI Field 1 Information - CHOICE TFCS representation - TFCS complete reconfiguration information - CHOICE CTFC Size - CTFC information - CTFC - Power offset information	A3, A4, A5, A6	 Not Present TDD 2 FALSE Independent Normal Complete reconfiguration Number of bits used must be enough to cover all combinations of CTFC from clause TS34.108 clause 6.11.5.4 Parameter Set. This IE is repeated for TFC numbers and reference to TS34.108 clause 6.11.5.4 Reference to TS34.108 clause 6.11.5.4 Parameter Set Not Present
Deleted TrCH information list	A1, A2, A3, A4, A5, A6, A7, A8	Not Present
Added or Reconfigured TrCH information list - Added or Reconfigured DL TrCH information - Downlink transport channel type - DL Transport channel identity - CHOICE DL parameters - Uplink transport channel type - UL TrCH identity - DCH quality target - BLER Quality value ~~- Transparent mode signalling info~~	A1	1 DCH added, 1 DCH reconfigured DCH 10 Same as UL DCH 5 -2.0 Real(-6.3..0 by step of 0.1) ~~Not Present~~

Information Element	Condition	Value/remark
- Downlink transport channel type - DL Transport channel identity - CHOICE DL parameters - Uplink transport channel type - UL TrCH identity - DCH quality target - BLER Quality value ~~- Transparent mode signalling info~~		DCH 6 Same as UL DCH 1 -2.0 Real(-6.3..0 by step of 0.1) ~~Not Present~~
Added or Reconfigured TrCH information list - Added or Reconfigured DL TrCH information - Downlink transport channel type - DL Transport channel identity - CHOICE DL parameters - Uplink transport channel type - UL TrCH identity - DCH quality target - BLER Quality value ~~- Transparent mode signalling info~~ - Downlink transport channel type - DL Transport channel identity - CHOICE DL parameters - TFS - CHOICE Transport channel type - Dynamic transport format information - RLC Size - Number of TBs and TTI List - Transmission Time Interval - Number of Transport blocks - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value ~~- Transparent mode signalling info~~	A3, A4, A5, A6, A7	2 TrCHs(DCH for DCCH and DCH for DTCH) DCH 10 Same as UL DCH 5 -2.0 Real(-6.3..0 by step of 0.1) ~~Not Present~~ DCH 6 Explicit Dedicated transport channels Reference to TS34.108 clause 6.11 Parameter Set (This IE is repeated for TF number.) Not Present Reference to TS34.108 clause 6.11 Parameter Set Reference to TS34.108 clause 6.11 Parameter Set Reference to TS34.108 clause 6.11 Parameter Set Reference to TS34.108 clause 6.11 Parameter Set Reference to TS34.108 clause 6.11 Parameter Set Reference to TS34.108 clause 6.11 Parameter Set -2.0 ~~Not Present~~
Added or Reconfigured TrCH information list - Added or Reconfigured DL TrCH information - Downlink transport channel type - DL Transport channel identity - CHOICE DL parameters - Uplink transport channel type - UL TrCH identity - DCH quality target - BLER Quality value ~~- Transparent mode signalling info~~ - Downlink transport channel type - DL Transport channel identity - CHOICE DL parameters - TFS - CHOICE Transport channel type - Dynamic transport format information - RLC Size - Number of TBs and TTI List - Transmission Time Interval - Number of Transport blocks	A2, A8	4 TrCHs(DCH for DCCH and 3DCHs for DTCH) DCH 10 Same as UL DCH 5 -2.0 Real(-6.3..0 by step of 0.1) ~~Not Present~~ DCH 6 Explicit Dedicated transport channels Reference to TS34.108 clause 6.11 Parameter Set (This IE is repeated for TF number.) Not Present Reference to TS34.108 clause 6.11 Parameter

Information Element	Condition	Value/remark
		Set
- Semi-static Transport Format information		
- Transmission time interval		Reference to TS34.108 clause 6.11 Parameter Set
- Type of channel coding		Reference to TS34.108 clause 6.11 Parameter Set
- Coding Rate		Reference to TS34.108 clause 6.11 Parameter Set
- Rate matching attribute		Reference to TS34.108 clause 6.11 Parameter Set
- CRC size		Reference to TS34.108 clause 6.11 Parameter Set
- DCH quality target		
- BLER Quality value		-2.0
~~- Transparent mode signalling info~~		~~Not Present~~
- Downlink transport channel type		DCH
- DL Transport channel identity		7
- CHOICE DL parameters		Explicit
- TFS		
- CHOICE Transport channel type		Dedicated transport channels
- Dynamic transport format information		
- RLC Size		Reference to TS34.108 clause 6.11 Parameter Set
- Number of TBs and TTI List		(This IE is repeated for TF number.)
- Transmission Time Interval		Not Present
- Number of Transport blocks		Reference to TS34.108 clause 6.11 Parameter Set
- Semi-static Transport Format information		
- Transmission time interval		Reference to TS34.108 clause 6.11 Parameter Set
- Type of channel coding		Reference to TS34.108 clause 6.11 Parameter Set
- Coding Rate		Reference to TS34.108 clause 6.11 Parameter Set
- Rate matching attribute		Reference to TS34.108 clause 6.11 Parameter Set
- CRC size		Reference to TS34.108 clause 6.11 Parameter Set
- DCH quality target		
- BLER Quality value		-2.0
~~- Transparent mode signalling info~~		~~Not Present~~
- Downlink transport channel type		DCH
- DL Transport channel identity		8
- CHOICE DL parameters		Explicit
- TFS		
- CHOICE Transport channel type		Dedicated transport channels
- Dynamic transport format information		
- RLC Size		Reference to TS34.108 clause 6.11 Parameter Set
- Number of TBs and TTI List		(This IE is repeated for TF number.)
- Transmission Time Interval		Not Present
- Number of Transport blocks		Reference to TS34.108 clause 6.11 Parameter Set
- Semi-static Transport Format information		
- Transmission time interval		Reference to TS34.108 clause 6.11 Parameter Set
- Type of channel coding		Reference to TS34.108 clause 6.11 Parameter Set
- Coding Rate		Reference to TS34.108 clause 6.11 Parameter Set
- Rate matching attribute		Reference to TS34.108 clause 6.11 Parameter Set
- CRC size		Reference to TS34.108 clause 6.11 Parameter Set
- DCH quality target		
- BLER Quality value		-2.0
~~- Transparent mode signalling info~~		~~Not Present~~

Information Element	Condition	Value/remark
Frequency info	A1, A2, A3, A4, A5, A7, A8	
- Choice mode		TDD
- UARFCN (Nt)		Reference to clause 5.1 Test frequencies
Frequency info	A6	Not Present
Maximum allowed UL TX power	A1, A2, A3, A4, A7, A8	33dBm
Maximum allowed UL TX power	A5, A6	Not Present
CHOICE *channel requirement*	A5, A6	Not Present
CHOICE *channel requirement*	A1, A2, A3, A4, A7, A8	Uplink DPCH info
- Uplink DPCH power control info		Not Present
- CHOICE mode		TDD
- Uplink Timing Advance Control		Not Present
- UL CCTrCH List		
- TFCS ID		1
- UL Target SIR		Real (-11 .. 20 by step of 0.5dB) Reference to TS34.108 Parameter set.
- Time info		
- Activation time		(256+CFN-(CFN MOD 8 + 8))MOD 256
- Duration		Infinite
- Common timeslot info		
- 2nd interleaving mode		Default value is "Frame"
- TFCI coding		Reference to TS34.108 clause 6 Parameter set
- Puncturing limit		Reference to TS34.108 clause 6 Parameter set
- Repetition period		1
- Repetition length		
- Uplink DPCH timeslots and code		
- Dynamic SF usage		FALSE
- First individual timeslot info		
- Timeslot number		
- CHOICE TDD option		1.28 Mcps TDD
- Timeslot number		1 OR 2 OR 3
- TFCI existence		TRUE
- Midamble shift and burst type		
- CHOICE TDD option		1.28 Mcps TDD
- Midamble allocation mode		Default midamble
- Midamble configuration		16
- Midamble Shift		Not Present
- CHOICE TDD option		1.28 Mcps TDD
- Modulation		QPSK
- SS-TPC Symbols		1
- Additional TPC-SS Symbols		Not present
- First timeslot Code List		Repeated (1,2) for each channelisation code assigned in the slot to meet the needs of TS34.108 clause 6 Parameter Set.
- channelisation codes		(SF/ i) where i denotes an unassigned code matching the SF specified in TS34.108 clause 6 Parameter Set.
- CHOICE more timeslots		No more timeslots
- UL CCTrCH List to Remove		Not present
CHOICE Mode	A1, A2, A3, A4, A5, A6, A7, A8	TDD
~~Downlink HS-PDSCH Information~~	~~A1, A2, A3, A4, A5, A6, A7, A8~~	~~Not Present~~
Downlink information common for all radio links	A5, A6	Not Present
Downlink information common for all radio links	A1, A2, A3	
- Downlink DPCH info common for all RL		
- Timing indication		Maintain

Information Element	Condition	Value/remark
- CFN-targetSFN frame offset		Not Present
- Downlink DPCH power control information		
- CHOICE mode		TDD
- TPC Step Size		1
- MAC-d HFN initial value		Not Present
- CHOICE mode		TDD
- CHOICE mode		TDD
- CHOICE TDD option		1.28 Mcps TDD
- TSTD indicator		FALSE
- Default DPCH Offset Value		Not Present
Downlink information common for all radio links	A4, A7, A8	
- Downlink DPCH info common for all RL		
- Timing indication		Initialise
- CFN-targetSFN frame offset		Not Present
- Downlink DPCH power control information		
- CHOICE mode		TDD
- TPC Step Size		1
- MAC-d HFN initial value		Not Present
- CHOICE mode		TDD
- CHOICE mode		TDD
- CHOICE TDD option		1.28 Mcps TDD
- TSTD indicator		FALSE
- Default DPCH Offset Value		
- CHOICE mode		TDD
- Default DPCH Offset Value		0 Integer(0..7)
Downlink information per radio link list	A1, A2, A3, A4, A7, A8	
- Downlink information for each radio link		
- Choice mode		TDD
- Primary CCPCH info		
- Choice mode		TDD
- Choice TDD Option		1.28 Mcps TDD
- TSTD indicator		FALSE
- Cell parameters ID		Ref. to the Default setting in TS34.108 clause 6.1 (TDD) Integer(0..127)
- SCTD indicator		FALSE
- Downlink DPCH info for each RL		
- CHOICE mode		TDD
- DL CCTrCh List		
- TFCS ID		2 Integer(1.8)
- Time info		
- Activation time		Now
- Duration		Infinite
- Common timeslot info		
- 2nd interleaving mode		Default value is "Frame"
- TFCI coding		Reference to TS34.108 clause 6 Parameter set
- Puncturing limit		Reference to TS34.108 clause 6 Parameter set
- Repetition period		1
- Repetition length		NULL
- Downlink DPCH timeslots and codes		
- First individual timeslot info		
- Timeslot number		
- CHOICE TDD option		1.28 Mcps TDD
- Timeslot number		4 OR 5 OR 6
- TFCI existence		TRUE
- Midamble shift and burst type		
- CHOICE TDD option		1.28 Mcps TDD
- Midamble allocation mode		Default midamble
- Midamble configuration		16
- Midamble Shift		Not Present
- CHOICE TDD option		1.28 Mcps TDD
- Modulation		QPSK
- SS-TPC Symbols		1

Information Element	Condition	Value/remark
- Additional TPC-SS Sysbols		Not present
- First timeslot channelisation codes		Repeated (1,2) for each channelisation code assigned in the slot to meet the needs of TS34.108 clause 6 Parameter Set.
- CHOICE codes representation		
- Channelisation codes bitmap		Reference to TS34.108 clause 6.11 Parameter Set
- CHOICE more timeslots		No more timeslots
- UL CCTrCH TPC List		This list is not required for 1.28 Mcps TDD and is to be ignored by the UE.
- UL TPC TFCS Identity		
- TFCS ID		1
- Shared Channel Indicator		FALSE
- DL CCTrCH List to Remove		Not present
- SCCPCH Information for FACH		Not Present
Downlink information per radio link list	A5	
- Downlink information for each radio link		
- Choice mode		TDD
- Primary CCPCH info		
- Choice mode		TDD
- Choice TDD Option		1.28 Mcps TDD
- TSTD indicator		FALSE
- Cell parameters ID		Ref. to the Default setting in TS34.108 clause 6.1 (TDD) Integer(0..127)
- SCTD indicator		FALSE
- Downlink DPCH info for each RL		Not Present
- SCCPCH Information for FACH		Not Present
Downlink information per radio link list	A6	Not Present

Condition	Explanation
A1	This IE need for "Non speech to CELL_DCH from CELL_DCH in CS"
A2	This IE need for "Speech to CELL_DCH from CELL_DCH in CS"
A3	This IE need for "Packet to CELL_DCH from CELL_DCH in PS"
A4	This IE need for "Packet to CELL_DCH from CELL_FACH in PS"
A5	This IE need for "Packet to CELL_FACH from CELL_DCH in PS"
A6	This IE need for "Packet to CELL_FACH from CELL_FACH in PS"
A7	This IE need for "Non speech to CELL_DCH from CELL_FACH in CS"
A8	This IE need for "Speech to CELL_DCH from CELL_FACH in CS"

3GPP TSG–T1 Meeting #22
Hyderabad, India, 2nd – 6th February 2004

Tdoc ⌘T1-040370

CR-Form-v7

CHANGE REQUEST

⌘ **34.108** **CR** **302** ⌘ **rev** **-** ⌘ Current version: **4.9.0** ⌘

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

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

Title:	⌘	correction of measurement control default message contents for TDD
Source:	⌘	CCSA
Work item code:	⌘	LCR TDD
Date:	⌘	07/01/2004
Category:	⌘	**F**
Release:	⌘	REL-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change: ⌘

1. In MEASUREMENT CONTROL message: AM(Intra-frequency measurement) (1.28Mcps TDD), IE name of 'Intra-frequency measurement objects list' is wrong. 'Intra-frequency cell info list' is the type of IE Intra-frequency measurement objects list
2. in MEASUREMENT CONTROL message: AM(Inter-frequency measurement) (1.28Mcps TDD), IE name of 'Inter-frequency measurement objects list' is wrong. 'Intra-frequency cell info list' is the type of IE Intra-frequency measurement objects list
3. In MEASUREMENT CONTROL message: AM(Inter-frequency measurement) (1.28Mcps TDD), IE structure of 'Reporting cell status' is wrong.
4. In MEASUREMENT REPORT message: AM(Intra-frequency measurement) (1.28Mcps TDD), IE structure of 'Measured results' is wrong.
5. In MEASUREMENT CONTROL message: AM(Intra-frequency measurement) (1.28Mcps TDD), IE name of 'proposed TGSN reporting required' is wrong.
6. In MEASUREMENT REPORT message: AM(Inter-frequency measurement) (1.28Mcps TDD), IE value of 'measurement identity' is wrong.

Summary of change: ⌘

1. modify the name of the IE as 'Intra-frequency measurement objects list'
2. modify the name of the IE as 'Inter-frequency measurement objects list'
3. Modify the structure of IE
4. Modify the structure of IE
5. modify the name of the IE
6. modify the name of the IE

Consequences if not approved:	⌘	

Clauses affected:	⌘				
		Y	**N**		
Other specs affected:	⌘			Other core specifications	⌘
				Test specifications	
				O&M Specifications	
Other comments:	⌘				

Contents of MEASUREMENT CONTROL Message: AM (Intra-frequence measurement) (1.28 Mcps TDD)

Information Element	Value/remark
Message Type	
UE information elements	
RRC transaction identifier	Arbitrarily selects an unused integer between 0 to 3
Integrity check info	
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC message sequence number	SS provides the value of this IE, from its internal counter.
Measurement information elements	
Measurement Identity	1
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting/Event Trigger Reporting Mode	Periodical reporting
Additional measurement list	Not Present
CHOICE Measurement type	Intra-frequency measurement
- Intra-frequency measurement	
- Intra-frequency measurement objects list	
- CHOICE intra-frequency cell removal	Not present

Contents of MEASUREMENT CONTROL Message: AM (Inter-frequence measurement) (1.28 Mcps TDD)

Information Element	Value/remark
Message Type	
UE information elements	
RRC transaction identifier	Arbitrarily selects an unused integer between 0 to 3
Integrity check info	
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC message sequence number	SS provides the value of this IE, from its internal counter.
Measurement information elements	
Measurement Identity	2
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting/Event Trigger Reporting Mode	Periodical reporting
Additional measurement list	Not present
CHOICE Measurement type	Inter-frequency measurement
- Inter-frequency measurement	
- Inter-frequency measurement objects list	
- CHOICE inter-frequency cell removal	Not present

- Reporting cell status	
- choice reported cell	Within active set or within virtual active set or of the other RAT
- Maximum number of reporting cells	1

Measured Results -choice Measurement - Intra-frequency measured results - Cell measured results - Cell Identity - Cell synchronisation information - CHOICE mode - Cell parameters Id - Proposed TGSN - Primary CCPCH RSCP - Pathloss - Timeslot list	 Intra-frequency measured results list Checked that this IE is present Checked that this IE is absent TDD Different from the Default setting in TS34.108 clause 6.1 (TDD) Checked that this IE is absent Checked that this IE is absent Checked that this IE is absent Checked that this IE is absent

In page 560

- Intra-frequency reporting quantity - Reporting quantities for active set cells - Cell synchronisation information reporting indicator - Cell Identity reporting indicator - CHOICE mode - Timeslot ISCP reporting indicator - Proposed TGSN reporting required - Primary CCPCH RSCP reporting indicator - Pathloss reporting indicator	 FALSE TRUE TDD FALSE FALSE FALSE FALSE

In draft page 565

Contents of MEASUREMENT REPORT message: AM (inter-frequency measurement) (1.28 Mcps TDD)

Information Element	Value/remark
Message Type Integrity check info - Message authentication code - RRC Message sequence number Measurement identity	 This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I. This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value. 2

How to create CRs using this form:

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

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

3GPP TSG–T1 Meeting #22
Hyderabad, India, 2nd – 6th February 2004

Tdoc ⌘T1-040369

CR-Form-v7

CHANGE REQUEST

⌘ **34.108** **CR** **301** ⌘**rev** **-** ⌘ Current version: **3.d.0** ⌘

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

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	The diverse operation in TDD mode updating according to the core specification
Source:	⌘	CCSA
Work item code:	⌘	TEI
Date:	⌘	09/01/2004
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	The diverse operation in TDD mode shall be renewed according to the core specification.
Summary of change:	⌘	The diverse operation in TDD mode shall be renewed according to TS 25.221 v3.b.0 clause 5.4.
Consequences if not approved:	⌘	Test specification is not aligned with core specification.

Clauses affected:	⌘	6.7.2.2			
Other specs affected:	⌘	**Y**	**N**	Other core specifications	⌘
		[ ]	[ ]	Test specifications	
		[ ]	[ ]	O&M Specifications	
Other comments:	⌘				

How to create CRs using this form:
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Below is a brief summary:

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2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

6.7.2.2 Diverse Operation (TDD mode)

The diversity options applied to the DL channels shall be as below for all cells in the simulated network

~~Physical channel type~~	~~Open loop TxDiversity~~		~~Closed loop TxDiversity~~
	~~TSTD~~	~~SCTD~~	
~~P-CCPCH~~	~~–~~	~~X~~	~~–~~
~~SCH~~	~~X~~	~~–~~	~~–~~
~~DPCH~~	~~–~~	~~–~~	~~X~~

Table 6.7.1: Application of Tx diversity schemes on downlink physical channel types in 3.84Mcps TDD
"X" – can be applied, "–" – must not be applied

Physical channel type	Open loop TxDiversity		Closed loop TxDiversity
	TSTD	SCTD(*)	
P-CCPCH	–	X	–
S-CCPCH	--	X	--
SCH	X	–	–
DPCH	–	–	X
PDSCH	–	X	X
PICH	–	X	–

(*) Note: SCTD may only be applied to physical channels when they are allocated to beacon locations.

3GPP TSG–T1 Meeting #22
Hyderabad, India, 2nd – 6th February 2004

Tdoc ⌘T1-040368

CR-Form-v7

CHANGE REQUEST

⌘ **34.108** **CR** **300** ⌘ **rev** **-** ⌘ Current version: **4.9.0** ⌘

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

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	The diverse operation in TDD mode updating according to the core specification
Source:	⌘	CCSA
Work item code:	⌘	LCRTDD, TEI
Date:	⌘	09/01/2004
Category:	⌘	**F**
Release:	⌘	REL-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	The diverse operation in TDD mode shall be updated according to the core specification.
Summary of change:	⌘	The diverse operation in TDD mode shall be updated according to TS 25.221 v4.7.0 clause 5.4 and clause 5A.4.
Consequences if not approved:	⌘	Test specification is not aligned with core specification.

Clauses affected:	⌘	6.7.2.2			
Other specs affected:	⌘	**Y**	**N**		
		[ ]	[ ]	Other core specifications	⌘
		[ ]	[ ]	Test specifications	
		[ ]	[ ]	O&M Specifications	
Other comments:	⌘				

How to create CRs using this form:
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3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

6.7.2.2 Diverse Operation (TDD mode)

The diversity options applied to the DL channels shall be as below for all cells in the simulated network

6.7.2.2.1 3.84.Mcps option

~~Physical channel type~~	~~Open loop TxDiversity~~		~~Closed loop TxDiversity~~
	~~TSTD~~	~~SCTD~~	
~~P-CCPCH~~	~~–~~	~~X~~	~~–~~
~~SCH~~	~~X~~	~~–~~	~~–~~
~~DPCH~~	~~–~~	~~–~~	~~X~~

Table 6.7.1: Application of Tx diversity schemes on downlink physical channel types in 3.84Mcps TDD
"X" – can be applied, "–" – must not be applied

Physical channel type	Open loop TxDiversity		Closed loop TxDiversity
	TSTD	SCTD(*)	
P-CCPCH	–	X	–
S-CCPCH	--	X	--
SCH	X	–	–
DPCH	–	–	X
PDSCH	–	X	X
PICH	–	X	–

(*) Note: SCTD may only be applied to physical channels when they are allocated to beacon locations.

6.7.2.2.2 1.28 Mcps option

~~Physical channel type~~	~~Open loop TxDiversity~~		~~Closed loop TxDiversity~~
	~~TSTD~~	~~Block STTD~~	
~~P-CCPCH~~	~~X~~	~~X~~	~~–~~
~~DwPCH~~	~~X~~	~~–~~	~~–~~
~~DPCH~~	~~X~~	~~–~~	~~X~~

Table 6.7.2: Application of Tx diversity schemes on downlink physical channel types in 1.28Mcps TDD
"X" – can be applied, "–" – must not be applied

Physical channel type	Open loop TxDiversity		Closed loop TxDiversity
	TSTD	SCTD (*)	
P-CCPCH	X	X	–
S-CCPCH	X	X	–
DwPCH	X	–	–
DPCH	X	–	X
PDSCH	X	X	X
PICH	X	X	-

(*) Note: SCTD may only be applied to physical channels when they are allocated to beacon locations.

3GPP TSG-T1 Meeting #22
Hyderabad, India, 2-6 Feb 2004

Tdoc ⌘T1-040307

CR-Form-v7

CHANGE REQUEST

⌘ **34.108** **CR** **297** ⌘**rev** **-** ⌘ Current version: **3.14.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	CR to 34.108 R99: Correction to handling of Entered Parameter IE in default contents for Initial Direct Transfer
Source:	⌘	Qualcomm
Work item code:	⌘	TEI
Date:	⌘	4/2/2003
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change:	⌘	Core spec imposes no clear requirement on the value of Entered Parameter sent by the UE. RAN2 and SA2 have indicated that this value is not used by the network and should not be checked.
Summary of change:	⌘	Entered Parameter IE changed from “False” to “Not checked” in default.
Consequences if not approved:	⌘	Good UE could fail test cases.

Clauses affected:	⌘	9.1.1

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

Other comments:	⌘	

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Below is a brief summary:

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downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

9.1.1 Default RRC Message Contents (FDD)

…

Contents of INITIAL DIRECT TRANSFER message: AM

Information Element	Value/remark
Message Type	
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
CN domain identity	Checked to see if set to supported CN domain as specified in the IXIT statements.
Intra Domain NAS Node Selector	
- CHOICE version	R99
- CHOICE CN type	GSM-MAP
- CHOICE Routing basis	Local (P)TMSI
- Routing parameter	If the IE "CN domain identity" is equal to "CS domain", this bit string is set to to bits b14 through b23 of the TMSI. If the IE "CN domain identity" is equal to "PS domain", this bit string is set to to bits b14 through b23 of the P-TMSI. The TMSI/P-TMSI consists of 4 octets (32bits). This can be represented by a string of bits numbered from b0 to b31, with bit b0 being the least significant. The "Routing parameter" bit string consists of bits b14 through b23 of the TMSI/ PTMSI. The first/ leftmost/ most significant bit of the bit string contains bit b23 of the TMSI/ PTMSI.
- Entered parameter	~~FALSE~~Not checked
NAS message	Set according to that indicated in specific message content for each test case
START	Not checked
Measured results on RACH	Not checked

3GPP TSG-T1 Meeting #22
Hyderabad, India, 2nd – 6th February 2004

T1 ⌘040299

CR-Form-v7

CHANGE REQUEST

⌘ **34.108** **CR** **296** ⌘**rev** **-** ⌘ Current version: **4.9.0** ⌘

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

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	LCR Corrections to TDD RABs merge of T1-040104 , T1-040201 and T1-040203
Source:	⌘	Siemens AG, CCSA
Work item code:	⌘	LCR TDD
Date:	⌘	19/01/04
Category:	⌘	**F**
Release:	⌘	Rel-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change: ⌘ This CR is a merge of CR T1-040104 from Siemens AG and T1-040201 and CR T1-040203 from CCSA.

Changes from CR T1-040104:

1. Test coverage for TDD UE capability classifications is incomplete. RAB configurations need to be adjusted to verify TDD capabilities.
2. TDD interactive / background RABs need to be modified to allow for TrCH switching between RACH/FACH and DCH or USCH/DSCH.
3. Multicode requirement should be removed from UL RABs, for which the corresponding UE capability class does not support. Exceptions to the supporting UE class for these RABs should be minimized.
4. To maintain proper channel quality CRC's needed when no data is present on TrCH's for which BLER quality targets are specified. Transport configurations are aligned with FDD.
5. Test coverage is necessary for TDD physical channel frame repetition functionality.
6. Test coverage is necessary for the TDD multiple dedicated CCTrCH's capability. Operation is identical to TDD shared channels when simultaneous RT and NRT services are supported.
7. Alignment between TDD RAB definitions and TDD UE capability classifications needs to be improved to reduce the number of exceptions listed for each supporting UE class in 25.993.

8. S-CCPCH RAB configurations alternate configurations need to be defined for deployment scenarios where maximum transmission rate is limited.

9. Shared channel RABs need to be modified to avoid inefficient signaling and signaling blocking conditions

10. An additional RAB is needed to demonstrate high rate TDD capabilities

11. TDD RABs are aligned with recent changes approved for FDD RAB's. Services supported by FDD should be common with TDD mode

12. Other minor corrections

Changes from CR T1-040201:

1. Physical channel puncturing limit definitions do not correctly take into account TrCH rate matching parameters.

2. Other minor corrections

Changes from CR T1-040203:

1. TDD RABs are adjusted to keep aligned with recent changes approved for FDD RAB's.

2. Other minor corrections

Summary of change: ⌘ From CR T1-040104:

1. Maximum codes/slot, codes/frame, slots/frame, min SF… levels within TDD UE capability classifications are modified in TDD RABs to provide test coverage.

2. DTCH added to RACH and FACH TrCH definitions. Reduced UL 128bit PDU size added to interactive / background UL DCH and USCH RABs to align with payload offered by the TDD PRACH.

3. Physical channel configurations adjusted across more slots or SF reduced to eliminate the UL multicode requirement in low rate RAB's.

4. Alternate TB size 0 TFCs are added to SRB and speech RAB's.

5. An alternate low rate SRB only RAB with physical channel frame repetition is introduced.

6. Alternate dedicated 2 CCTrCH configurations are added to existing dedicated combination service RABs specifying separate CCTrCH's for the RT and NRT services. Updated are aligned already specified TDD shared channel RABs.

7. Reduction/modification of 2Mb TFCS to avoid greatly increased UE capability requirement, allow for test coverage and reduce class exceptions. Reduction of other RAB TFCS's and removal of alternate 40ms TTI configurations when no benefit is realized to eliminate bits/tti and TB/tti UE class exceptions. Reconfiguration of physical channels across more DL slots to eliminate maximum codes per slot exceptions.

8. S-CCPCH RABs are defined with alternate reduced TFS/TFCS and corresponding reduced code configurations.

9. DCCHs are added to DSCH and USCH transport channels to minimize the requirement for simultaneous RACH and FACH transmission and reception.

10. A TDD shared channel 384kbps UL & 2Mb DL interactive / background RAB is introduced.

	11. TDD RABs are added or removed to match RABs currently specified for FDD. 12. Corrections for MAC header bit calculations, TFCI code word sizes... are introduced. From CR T1-040201: 1. Puncturing limits are correctly calculated according to the specified TrcH rate matching mid-values. 2. Other minor corrections From CR T1-040203: 1. TDD RABs are adjusted to keep aligned with recent changes approved for FDD RAB's. 2. Other minor corrections
Consequences if not approved: ⌘	1. TDD UE class test coverage will be incomplete 2. TrCH switching functionallity will not be possible 3. UL Multicode UE class exceptions will be required 4. Specified PL's will not allow for complete TFCS 5. TrCH BLER will not be tracked on SRBs and speech RABs 6. No test coverage for TDD frame repetition functionality 7. No test coverage for multiple CCTrCH functionallity 8. Inconsistency between RAB definitions and UE classifications 9. Inefficient S-CCPCH configuration 10. Signaling blocking conditions will occur on shared channel RABs 11. High rate TDD services will not have test case 12. TDD services will not match HCR TDD and FDD services 13. RABs will have inconsistent configurations

Clauses affected:	⌘	6.11.5			
Other specs affected:	⌘	**Y** / **N** ☐ / ☐ ☐ / ☐ ☐ / ☐	Other core specifications Test specifications O&M Specifications	⌘	25.993
Other comments:	⌘	To be accepted in conjunction with partner CR T1-040103			

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2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

6.11.5 Reference Radio Bearer configurations used in Radio Bearer testing for 1.28 Mcps TDD

6.11.5.1 RABs and signalling RBs

See clause 6.10.3.1.

6.11.5.2 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.

1a) Stand-alone UL:1.7 DL:1.7 kbps SRBs for DCCH (Multiframe)

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.

4a) Conversational / speech / UL:(12.2, 7.95, 5.9, 4.75) DL:(12.2, 7.95, 5.9, 4.75) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

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

5a) Conversational / speech / UL:(10.2, 6.7, 5.9, 4.75) DL:(10.2, 6.7, 5.9, 4.75) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

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.

7a) Conversational / speech / UL:(7.4, 6.7, 5.9, 4.75) DL:(7.4, 6.7, 5.9, 4.75)kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

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 RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~Void.

19) ~~Streaming / unknown / UL:64 DL:0 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~Void.

20) ~~Streaming / unknown / UL:0 DL:128 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~Void.

21) ~~Streaming / unknown / UL:128 DL:0 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~Void.

22) ~~Streaming / unknown / UL:0 DL:384 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~Void.

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

23a) Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

23b) Interactive or background / UL:16 DL:16 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

23c) Interactive or background / UL:32 DL:32 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

23d) Interactive or background / UL:32 DL:32 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.(20 msTTI)

24) ~~Interactive or background / UL:64 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~Void.

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.~~ Void.

37) ~~Interactive or background / UL:384 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.~~ Void.

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.

38a) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:0 DL:0 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

38b) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

38c) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:32 DL:32 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

38d) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB +

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

38e)Conversational / speech / UL: (12.2, 7.95, 5.9, 4.75) DL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB
+ Interactive or background / UL:0 DL:0 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

38f)Conversational / speech / UL: (12.2, 7.95, 5.9, 4.75) DL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

38g)Conversational / speech / UL: (12.2, 7.95, 5.9, 4.75) DL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB
+ Interactive or background / UL:16 DL:16 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

38h)Conversational / speech / UL: (12.2, 7.95, 5.9, 4.75) DL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB
+ Interactive or background / UL:32 DL:32 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

38i)Conversational / speech / UL: (12.2, 7.95, 5.9, 4.75) DL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

38j)Conversational / speech / UL: (12.2, 7.95, 5.9, 4.75) DL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB
+ Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

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~~Void.

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~~Void.

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~~Void.

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.

49a) Conversational / speech / UL:(12.2, 7.95, 5.9, 4.75) DL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB
+ Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

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.

51a) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

51b) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or background / UL:16 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

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~~Void.

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~~Void.

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

57) Interactive or Background / 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.

58) Streaming / Unknown / UL:16 DL:64 kbps / CS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

59) Reserved for future use

60) Reserved for future use

61) Conversational / Unknown / UL:8 DL:8 kbps / CS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

Combinations on PDSCH, SCCPCH, PUSCH and PRACH

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

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

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

Combinations on PDSCH, SCCPCH, DPCH, PUSCH and PRACH

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

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

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

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.

6.11.5.3 Example of linkage between RABs and services

See clause 6.10.3.3.

6.11.5.4 Typical radio parameter sets

6.11.5.4.1 Combinations on DPCH

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

6.11.5.4.1.1.1 Uplink

6.11.5.4.1.1.1.1 Transport channel parameters

6.11.5.4.1.1.1.1.1 Transport channel parameters for UL:1.7 kbps SRBs for DCCH

See clause 6.10.3.4.1.1.1.1.1.

6.11.5.4.1.1.1.1.2 TFCS

See clause 6.10.3.4.1.1.1.1.2.

6.11.5.4.1.1.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots / radio frame	SF16 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	1604 bits
	TFCI code word / radio frame	48 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	1

6.11.5.4.1.1.2 Downlink

6.11.5.4.1.1.2.1 Transport channel parameters

6.11.5.4.1.1.2.1.1 Transport channel parameters for DL:1.7 kbps SRBs for DCCH

See clause 6.10.3.4.1.1.2.1.1.

6.11.5.4.1.1.2.1.2 TFCS

See clause 6.10.3.4.1.1.2.1.2.

6.11.5.4.1.1.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots / radio frame	SF16 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	1604 bits
	TFCI code word / radio frame	84 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	1

6.11.5.4.1.1a.1 Stand-alone UL:1.7 DL:1.7 kbps SRBs for DCCH (multiframe)

6.11.5.4.1.1a.1.1 Uplink

6.11.5.4.1.1a.1.1.1 Transport channel parameters

See Clause 6.10.3.4.1.1a.1.1.1

6.11.5.4.1.1a.1.1.1.2 TFCS

See 6.10.3.4.1a.1.1.1.2

6.11.5.4.1.1a.1.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots / radio frame	SF16 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	160 bits
	TFCI code word / radio frame	8 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	0.60
	Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 4 bit	

6.11.5.4.1.1a.1.2 Downlink

6.11.5.4.1.1a.1.2.1 Transport channel parameters

see 6.10.3.4.1a.1.2.1.1

6.11.5.4.1.1a.1.2.1.2 TFCS

see 6.10.3.4.1.1a.1.2.1.2

6.~~10~~11.~~3~~5.4.1.1a.1.2.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots / radio frame	SF16 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	160 bits
	TFCI code word / radio frame	8 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	0.60
	Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 4 bit	

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

6.11.5.4.1.2.1 Uplink

6.11.5.4.1.2.1.1 Transport channel parameters

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

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.2.1.1.2 TFCS

See clause 6.10.3.4.1.2.1.1.2.

6.11.5.4.1.2.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots / radio frame	SF16 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	160~~4~~ bits
	TFCI code word / radio frame	8~~4~~ bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	1
Note: In case the first TFCS is not configured, the TFCI code word will be 4 bit		

6.11.5.4.1.2.2 Downlink

6.11.5.4.1.2.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.2.2.1.2 TFCS

See clause 6.10.3.4.1.2.2.1.2.

6.11.5.4.1.2.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots / radio frame	SF16 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	1604 bits
	TFCI code word / radio frame	84 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	1
Note: In case the first TFCS is not configured, the TFCI code word will be 4 bit		

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

6.11.5.4.1.3.1 Uplink

6.11.5.4.1.3.1.1 Transport channel parameters

6.11.5.4.1.3.1.1.1 Transport channel parameters for UL:13.6 kbps SRBs for DCCH

See clause 6.10.3.4.1.3.1.1.1.

6.11.5.4.1.3.1.1.2 TFCS

See clause 6.10.3.4.1.3.1.1.2.

6.11.5.4.1.3.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots / radio frame	SF8 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	33640 bits
	TFCI code word / radio frame	84 bits
	TPC / radio frame	2x 2 bit
	SS / radio frame	2x 2 bit
	Puncturing Limit	0.64
Note: In case the first TFCS is not configured, the TFCI code word will be 4 bit		

6.11.5.4.1.3.2 Downlink

6.11.5.4.1.3.2.1 Transport channel parameters

6.11.5.4.1.3.2.1.1 Transport channel parameters for DL:13.6 kbps SRBs for DCCH

See clause 6.10.3.4.1.3.2.1.1.

6.11.5.4.1.3.2.1.2 TFCS

See clause 6.10.3.4.1.3.2.1.2.

6.11.5.4.1.3.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots / radio frame	SF 16 x 2 code x 2 time slots
	Max. Number of data bits / radio frame	33640 bits
	TFCI code word / radio frame	84 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	0.64
Note: In case the first TFCS is not configured, the TFCI code word will be 4 bit		

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

6.11.5.4.1.4.1 Uplink

6.11.5.4.1.4.1.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.1.1.1.

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

See clause clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.4.1.1.3 TFCS

See clause 6.10.3.4.1.4.1.1.3.

6.11.5.4.1.4.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots / radio frame	SF8 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	328 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	XXX0.600.5220.48

6.11.5.4.1.4.2 Downlink

6.11.5.4.1.4.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.1.

6.11.5.4.1.4.2.1.3 TFCS

See clause 6.10.3.4.1.4.2.1.3.

6.11.5.4.1.4.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots / radio frame	SF 16 x 2 code x 2 time slots
	Max. Number of data bits / radio frame	328 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~XXX~~0.60~~0.52~~0.48

6.11.5.4.1.4a Conversational / speech / UL: 12.2 7.95 5.9 4.75 DL:12.2 7.95 5.9 4.75 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.4a.1 Uplink

6.11.5.4.1.4a.1.1 Transport channel parameters

6.11.5.4.1.4a.1.1.1 Transport channel parameters for Conversational / speech / UL: 12.2 7.95 5.9 4.75 kbps / CS RAB

See clause 6.10.3.4.1.4a.1.1.1.

6.11.5.4.1.4a.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.4a.1.1.3 TFCS

See clause 6.10.3.4.1.4a.1.1.3.

6.11.5.4.1.4a.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots / radio frame	SF8 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	328 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.52~~0.48~~XXX~~

6.11.5.4.1.4a.2 Downlink

6.11.5.4.1.4a.2.1 Transport channel parameters

see 6.10.3.4.1.4a.1.2.1.1

6.11.5.4.1.4a.2.1.1 TFCS

see 6.10.3.4.1a.1.2.1.2

6.11.5.4.1.4a.2.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots / radio frame	SF16 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	164 bits
	TFCI code word / radio frame	8 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.52~~0.48~~0.60~~
	Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 4 bit	

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

6.11.5.4.1.5.1 Uplink

6.11.5.4.1.5.1.1 Transport channel parameters

6.11.5.4.1.5.1.1.1 Transport channel parameters for Conversational / speech / UL:10.2 kbps / CS RAB

See clause 6.10.3.4.1.5.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.5.1.1.3 TFCS

See clause 6.10.3.4.1.5.1.1.3.

6.11.5.4.1.5.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots / radio frame	SF 8 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	328 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.56~~0.52~~0.68~~

6.11.5.4.1.5.2 Downlink

6.11.5.4.1.5.2.1 Transport channel parameters

6.11.5.4.1.5.2.1.1 Transport channel parameters for Conversational / speech / DL:10.2 kbps / CS RAB

See clause 6.10.3.4.1.5.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.5.2.1.3 TFCS

See clause 6.10.3.4.1.5.2.1.3.

6.11.5.4.1.5.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots / radio frame	SF 16 x 2 code x 2 time slots
	Max. Number of data bits / radio frame	328 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.56~~0.52~~0.68~~

6.11.5.4.1.5a Conversational / speech / UL:10.2 6.7 5.9 4.75 DL:10.2 6.7 5.9 4.75 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.5a.1 Uplink

6.11.5.4.1.5a.1.1 Transport channel parameters

6.11.5.4.1.5a.1.1.1 Transport channel parameters for Conversational / speech / UL:10.2 6.7 5.9 4.75 kbps / CS RAB

See clause 6.10.3.4.1.5a.1.1.1.

6.11.5.4.1.5a.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.5a.1.1.3 TFCS

See clause 6.10.3.4.1.5a.1.1.3.

6.11.5.4.1.5a.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots / radio frame	SF 8 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	328 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.68~~ ~~0.56~~0.52

6.11.5.4.1.5a.2 Downlink

6.11.5.4.1.5a.2.1 Transport channel parameters

6.11.5.4.1.5a.2.1.1 Transport channel parameters for Conversational / speech / DL: 10.2 6.7 5.9 4.75 kbps / CS RAB

See clause 6.10.3.4.1.5a.2.1.1.

6.11.5.4.1.5a.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.5a.2.1.3 TFCS

See clause 6.10.3.4.1.5a.2.1.3.

6.11.5.4.1.5a.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots / radio frame	SF 16 x 2 code x 2 time slots
	Max. Number of data bits / radio frame	328 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.56~~0.52 ~~0.68~~

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

6.11.5.4.1.6.1 Uplink

6.11.5.4.1.6.1.1 Transport channel parameters

6.11.5.4.1.6.1.1.1 Transport channel parameters for Conversational / speech / UL:7.95 kbps / CS RAB

See clause 6.10.3.4.1.6.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.6.1.1.3 TFCS

See clause 6.10.3.4.1.6.1.1.3.

6.11.5.4.1.6.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots / radio frame	SF 8 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	328 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.80~~ ~~0.68~~0.60

6.11.5.4.1.6.2 Downlink

6.11.5.4.1.6.2.1 Transport channel parameters

6.11.5.4.1.6.2.1.1 Transport channel parameters for Conversational / speech / DL:7.95 kbps / CS RAB

See clause 6.10.3.4.1.6.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.6.2.1.3 TFCS

See clause 6.10.3.4.1.6.2.1.3.

6.11.5.4.1.6.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF 16 x 2 code x 2 time slots
	Max. Number of data bits / radio frame	328 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.80~~ ~~0.68~~0.60

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

6.11.5.4.1.7.1 Uplink

6.11.5.4.1.7.1.1 Transport channel parameters

6.11.5.4.1.7.1.1.1 Transport channel parameters for Conversational / speech / UL:7.4 kbps / CS RAB

See clause 6.10.3.4.1.7.1.1.1

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

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.7.1.1.3 TFCS

See clause 6.10.3.4.1.7.1.1.3.

6.11.5.4.1.7.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots/ radio frame	SF 8 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	328 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.80~~ ~~0.72~~0.64

6.11.5.4.1.7.2 Downlink

6.11.5.4.1.7.2.1 Transport channel parameters

6.11.5.4.1.7.2.1.1 Transport channel parameters for Conversational / speech / DL:7.4 kbps / CS RAB

See clause 6.10.3.4.1.7.2.1.1

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

See clause 6.10.3.4.1.2.2.1.1

6.11.5.4.1.7.2.1.3 TFCS

See clause 6.10.3.4.1.7.2.1.3

6.11.5.4.1.7.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots / radio frame	SF 16 x 2 code x 2 time slots
	Max. Number of data bits / radio frame	328 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.80~~ ~~0.72~~0.64

6.11.5.4.1.7a Conversational / speech / UL:7.4 6.7 5.9 4.75 DL:7.4 6.7 5.9 4.75 / CS RAB+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.7a.1 Uplink

6.11.5.4.1.7a.1.1 Transport channel parameters

6.11.5.4.1.7a.1.1.1 Transport channel parameters for Conversational / speech / UL:7.4 6.7 5.9 4.75 / CS RAB

See clause 6.10.3.4.1.7a.1.1.1

6.11.5.4.1.7a.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.7a.1.1.3 TFCS

See clause 6.10.3.4.1.7a.1.1.3.

6.11.5.4.1.7a.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots/ radio frame	SF 8 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	328 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.80~~ ~~0.72~~0.64

6.11.5.4.1.7a.2 Downlink

6.11.5.4.1.7a.2.1 Transport channel parameters

6.11.5.4.1.7a.2.1.1 Transport channel parameters for Conversational / speech / DL:7.4 6.7 5.9 4.75 / CS RAB

See clause 6.10.3.4.1.7a.2.1.1

6.11.5.4.1.7a.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1

6.11.5.4.1.7a.2.1.3 TFCS

See clause 6.10.3.4.1.7a.2.1.3

6.11.5.4.1.7a.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots / radio frame	SF 16 x 2 code x 2 time slots
	Max. Number of data bits / radio frame	328 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.80~~ ~~0.72~~0.64

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

6.11.5.4.1.8.1 Uplink

6.11.5.4.1.8.1.1 Transport channel parameters

6.11.5.4.1.8.1.1.1 Transport channel parameters for Conversational / speech / UL:6.7 kbps / CS RAB

See clause 6.10.3.4.1.8.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1

6.11.5.4.1.8.1.1.3 TFCS

See clause 6.10.3.4.1.8.1.1.3.

6.11.5.4.1.8.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots / radio frame	SF 8 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	328 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.88~~ ~~0.76~~0.68

6.11.5.4.1.8.2 Downlink

6.11.5.4.1.8.2.1 Transport channel parameters

6.11.5.4.1.8.2.1.1 Transport channel parameters for Conversational / speech / DL:6.7 kbps / CS RAB

See clause 6.10.3.4.1.8.2.1.1

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

See clause 6.10.3.4.1.2.2.1.1

6.11.5.4.1.8.2.1.3 TFCS

See clause 6.10.3.4.1.8.2.1.3

6.11.5.4.1.8.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots / radio frame	SF 16 x 2 code x 2 time slots
	Max. Number of data bits / radio frame	328 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.88~~ ~~0.76~~0.68

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

6.11.5.4.1.9.1 Uplink

6.11.5.4.1.9.1.1 Transport channel parameters

6.11.5.4.1.9.1.1.1 Transport channel parameters for Conversational / speech / UL:5.9 kbps / CS RAB

See clause 6.10.3.4.1.9.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.9.1.1.3 TFCS

See clause 6.10.3.4.1.9.1.1.3.

6.11.5.4.1.9.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots / radio frame	SF 8 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	328 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.92~~ ~~0.80~~0.72

6.11.5.4.1.9.2 Downlink

6.11.5.4.1.9.2.1 Transport channel parameters

6.11.5.4.1.9.2.1.1 Transport channel parameters for Conversational / speech / DL:5.9 kbps / CS RAB

See clause 6.10.3.4.1.9.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.9.2.1.3 TFCS

See clause 6.10.3.4.1.9.2.1.3

6.11.5.4.1.9.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots / radio frame	SF 16 x 2 code x 2 time slots
	Max. Number of data bits / radio frame	328 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.92~~ ~~0.80~~0.72

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

6.11.5.4.1.10.1 Uplink

6.11.5.4.1.10.1.1 Transport channel parameters

6.11.5.4.1.10.1.1.1 Transport channel parameters for Conversational / speech / UL:5.15 kbps / CS RAB

See clause 6.10.3.4.1.10.1.1.1.

6.11.5.4.1.10.1.1.2 Transport channel parameters for UL:1.7~~3.4~~ kbps SRBs for DCCH

See clause 6.10.3.4.1.1~~2~~.1.1.1.

6.11.5.4.1.10.1.1.3 TFCS

See clause 6.10.3.4.1.10.1.1.3.

6.11.5.4.1.10.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots/ radio frame	SF 8 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	328 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~1.00~~0.96~~0.96~~

6.11.5.4.1.10.2 Downlink

6.11.5.4.1.10.2.1 Transport channel parameters

6.11.5.4.1.10.2.1.1 Transport channel parameters for Conversational / speech / DL:5.15 kbps / CS RAB

See clause 6.10.3.4.1.10.2.1.1.

6.11.5.4.1.10.2.1.2 Transport channel parameters for DL:1.7~~3.4~~ kbps SRBs for DCCH

See clause 6.10.3.4.1.1~~2~~.2.1.1.

6.11.5.4.1.10.2.1.3 TFCS

See clause 6.10.3.4.1.10.2.1.3.

6.11.5.4.1.10.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF 16 x 2 code x 2 time slots
	Max. Number of data bits / radio frame	328 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~1.00~~0.96~~0.96~~

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

6.11.5.4.1.11.1 Uplink

6.11.5.4.1.11.1.1 Transport channel parameters

6.11.5.4.1.11.1.1.1 Transport channel parameters for Conversational / speech / UL:4.75 kbps / CS RAB

See clause 6.10.3.4.1.11.1.1.1.

6.11.5.4.1.11.1.1.2 Transport channel parameters for UL:1.7~~3.4~~ kbps SRBs for DCCH

See clause 6.10.3.4.1.1~~2~~.1.1.1.

6.11.5.4.1.11.1.1.3 TFCS

See clause 6.10.3.4.1.11.1.1.3.

6.11.5.4.1.11.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots / radio frame	SF 8 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	328 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	1

6.11.5.4.1.11.2 Downlink

6.11.5.4.1.11.2.1 Transport channel parameters

6.11.5.4.1.11.2.1.1 Transport channel parameters for Conversational / speech / DL:4.75 kbps / CS RAB

See clause 6.10.3.4.1.11.2.1.1.

6.11.5.4.1.11.2.1.2 Transport channel parameters for DL:1.7~~3.4~~ kbps SRBs for DCCH

See clause 6.10.3.4.1.1~~2~~.2.1.1.

6.11.5.4.1.11.2.1.3 TFCS

See clause 6.10.3.4.1.11.2.1.3.

6.11.5.4.1.11.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots / radio frame	SF 16 x 2 code x 2 time slots
	Max. Number of data bits / radio frame	328 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	1

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

6.11.5.4.1.12.1 Uplink

6.11.5.4.1.12.1.1 Transport channel parameters

6.11.5.4.1.12.1.1.1 Transport channel parameters for conversational / unknown / UL:28.8 kbps / CS RAB

See clause 6.10.3.4.1.12.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.12.1.1.3 TFCS

See clause 6.10.3.4.1.12.1.1.3.

6.11.5.4.1.12.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots / radio frame	SF 4 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	680 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.64~~ ~~0.60~~0.52

6.11.5.4.1.12.2 Downlink

6.11.5.4.1.12.2.1 Transport channel parameters

6.11.5.4.1.12.2.1.1 Transport channel parameters for conversational / unknown / DL:28.8 kbps / CS RAB

See clause 6.10.3.4.1.12.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.12.2.1.3 TFCS

See clause 6.10.3.4.1.12.2.1.3.

6.11.5.4.1.12.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots / radio frame	SF 16 x 4 code x 2 time slots
	Max. Number of data bits / radio frame	680 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.64~~ ~~0.60~~0.52

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

6.11.5.4.1.13.1 Uplink

6.11.5.4.1.13.1.1 Transport channel parameters

6.11.5.4.1.13.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.13.1.1.3 TFCS

See clause 6.10.3.4.1.13.1.1.3.

6.11.5.4.1.13.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots / radio frame	SF2 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	1384~~92~~ bits
	TFCI code word / radio frame	16~~8~~ bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.64~~0.~~56~~0.52

6.11.5.4.1.13.2 Downlink

6.11.5.4.1.13.2.1 Transport channel parameters

6.11.5.4.1.13.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.13.2.1.3 TFCS

See clause 6.10.3.4.1.13.2.1.3.

6.11.5.4.1.13.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots / radio frame	SF 16 x 8 code x 2 time slots
	Max. Number of data bits / radio frame	1384~~92~~ bits
	TFCI code word / radio frame	16~~8~~ bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.64~~ ~~0.56~~0.52

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

6.11.5.4.1.14.1 Uplink

6.11.5.4.1.14.1.1 Transport channel parameters

6.11.5.4.1.14.1.1.1 Transport channel parameters for Conversational / unknown / UL:32 kbps / CS RAB

See clause 6.10.3.4.1.14.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.14.1.1.3 TFCS

See clause 6.10.3.4.1.14.1.1.3.

6.11.5.4.1.14.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots / radio frame	SF4 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	6808 bits
	TFCI code word / radio frame	168 bits
	TPC / radio frame	2x 2 bits
	SS/ radio frame	2x 2 bits
	Puncturing Limit	0.520.44 0.60

6.11.5.4.1.14.2 Downlink

6.11.5.4.1.14.2.1 Transport channel parameters

6.11.5.4.1.14.2.1.1 Transport channel parameters for Conversational / unknown / DL:32 kbps / CS RAB

See clause 6.10.3.4.1.14.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.14.2.1.3 TFCS

See clause 6.10.3.4.1.14.2.1.3.

6.11.5.4.1.14.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF16 x 4 code x 2 time slots
	Max. Number of data bits / radio frame	680~~99~~ bits
	TFCI code word / radio frame	16~~8~~ bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.60~~ ~~0.52~~0.44

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

6.11.5.4.1.15.1 Uplink

6.11.5.4.1.15.1.1 Transport channel parameters

6.11.5.4.1.15.1.1.1 Transport channel parameters for Streaming / unknown / UL: 14.4 kbps / CS RAB

See clause 6.10.3.4.1.15.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.15.1.1.3 TFCS

See clause 6.10.3.4.1.15.1.1.3.

6.11.5.4.1.15.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots / radio frame	SF4 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	680~~8~~ bits
	TFCI code word / radio frame	16~~8~~ bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	1

6.11.5.4.1.15.2 Downlink

6.11.5.4.1.15.2.1 Transport channel parameters

6.11.5.4.1.15.2.1.1 Transport channel parameters for Streaming / unknown / DL:14.4 kbps / CS RAB

See clause 6.10.3.4.1.15.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.15.2.1.3 TFCS

See clause 6.10.3.4.1.15.2.1.3.

6.11.5.4.1.15.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF16 x 3 code x 2 time slots
	Max. Number of data bits / radio	5041~~2~~ bits
	TFCI code word / radio frame	16~~8~~ bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	0.76 ~~0.88~~

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

6.11.5.4.1.16.1 Uplink

6.11.5.4.1.16.1.1 Transport channel parameters

6.11.5.4.1.16.1.1.1 Transport channel parameters for Streaming / unknown / UL:28.8 kbps / CS RAB

See clause 6.10.3.4.1.16.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.16.1.1.3 TFCS

See clause 6.10.3.4.1.16.1.1.3.

6.11.5.4.1.16.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots/ frame	SF4 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	680 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	0.56 ~~0.64~~

6.11.5.4.1.16.2 Downlink

6.11.5.4.1.16.2.1 Transport channel parameters

6.11.5.4.1.16.2.1.1 Transport channel parameters for Streaming / unknown / DL:28.8 kbps / CS RAB

See clause 6.10.3.4.1.16.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.16.2.1.3 TFCS

See clause 6.10.3.4.1.16.2.1.3.

6.11.5.4.1.16.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF16 x 4 code x 2 time slots
	Max. Number of data bits / radio frame	680 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.64~~ 0.56

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

6.11.5.4.1.17.1 Uplink

6.11.5.4.1.17.1.1 Transport channel parameters

6.11.5.4.1.17.1.1.1 Transport channel parameters for Streaming / unknown / UL:57.6 kbps / CS RAB

See clause 6.10.3.4.1.17.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.17.1.1.3 TFCS

See clause 6.10.3.4.1.17.1.1.3.

6.11.5.4.1.17.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots/ radio frame	SF2 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	1384 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.72~~0.68

6.11.5.4.1.17.2 Downlink

6.11.5.4.1.17.2.1 Transport channel parameters

6.11.5.4.1.17.2.1.1 Transport channel parameters for Streaming / unknown / DL:57.6 kbps / CS RAB

See clause 6.10.3.4.1.17.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.17.2.1.3 TFCS

See clause 6.10.3.4.1.17.2.1.3.

6.11.5.4.1.17.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots / radio frame	SF16 x 8 code x 2 time slots
	Max. Number of data bits / radio frame	1384 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.72~~0.68

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

~~6.11.5.4.1.18.1 Uplink~~

~~6.11.5.4.1.18.1.1 Transport channel parameters~~

~~6.11.5.4.1.18.1.1.1 Transport channel parameters for Streaming / unknown / UL:0 kbps / CS or PS RAB~~

~~N/A.~~

~~6.11.5.4.1.18.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.1.1.1.~~

~~6.11.5.4.1.18.1.1.3 TFCS~~

~~See clause 6.10.3.4.1.2.1.1.2.~~

~~6.11.5.4.1.18.1.2 Physical channel parameters~~

~~See clause 6.11.5.4.1.2.1.2.~~

~~6.11.5.4.1.18.2 Downlink~~

~~6.11.5.4.1.18.2.1 Transport channel parameters~~

~~6.11.5.4.1.18.2.1.1 Transport channel parameters for Streaming / unknown / DL:64 kbps / CS or PS RAB~~

~~See clause 6.10.3.4.1.18.2.1.1.~~

~~6.11.5.4.1.18.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.2.1.1.~~

~~6.11.5.4.1.18.2.1.3 TFCS~~

~~See clause 6.10.3.4.1.18.2.1.3.~~

~~6.11.5.4.1.18.2.2 Physical channel parameters~~

~~DPCH Downlink~~	~~Modulation~~	~~QPSK~~
	~~Codes and time slots / radio frame~~	~~SF16 x 8 code x 2 time slots~~
	~~Max. Number of data bits/radio frame~~	~~1384 bits~~
	~~TFCI code word / radio frame~~	~~16 bits~~
	~~TPC / radio frame~~	~~2x 2 bits~~
	~~SS / radio frame~~	~~2x 2 bits~~
	~~Puncturing Limit~~	~~0.64~~

Void.

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

Void.~~6.11.5.4.1.19.1 Uplink~~

~~6.11.5.4.1.19.1.1 Transport channel parameters~~

~~6.11.5.4.1.19.1.1.1 Transport channel parameters for Streaming / unknown / UL:64 kbps / CS or PS RAB~~

~~See clause 6.10.3.4.1.19.1.1.1.~~

~~6.11.5.4.1.19.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.1.1.1.~~

~~6.11.5.4.1.19.1.1.3 TFCS~~

~~See clause 6.10.3.4.1.19.1.1.3.~~

~~6.11.5.4.1.19.1.2 Physical channel parameters~~

~~DPCH Uplink~~	~~Modulation~~	~~QPSK~~
	~~Codes and time slots / radio frame~~	~~SF2 x 1 code x 2 time slots~~
	~~Max. Number of data bits/radio frame~~	~~1384 bits~~
	~~TFCI code word / radio frame~~	~~16 bits~~
	~~TPC / radio frame~~	~~2x 2 bits~~
	~~SS/ radio frame~~	~~2x 2 bits~~
	~~Puncturing Limit~~	~~0.64~~

~~6.11.5.4.1.19.2 Downlink~~

~~6.11.5.4.1.19.2.1 Transport channel parameters~~

~~6.11.5.4.1.19.2.1.1 Transport channel parameters for Streaming / unknown / DL:0 kbps / CS or PS RAB~~

~~N/A.~~

~~6.11.5.4.1.19.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.2.1.1.~~

~~6.11.5.4.1.19.2.1.3 TFCS~~

~~See clause 6.10.3.4.1.2.2.1.2.~~

~~6.11.5.4.1.19.2.2 Physical channel parameters~~

~~See clause 6.11.5.4.1.2.1.2.~~

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

Void. ~~6.11.5.4.1.20.1 Uplink~~

~~6.11.5.4.1.20.1.1 Transport channel parameters~~

~~6.11.5.4.1.20.1.1.1 Transport channel parameters for Streaming / unknown / UL:0 kbps / CS or PS RAB~~

~~N/A~~

~~6.11.5.4.1.20.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.1.1.1.~~

~~6.11.5.4.1.20.1.1.3 TFCS~~

~~See clause 6.10.3.4.1.2.1.1.2.~~

~~6.11.5.4.1.20.1.2 Physical channel parameters~~

~~See clause 6.11.5.4.1.2.1.2.~~

~~6.11.5.4.1.20.2 Downlink~~

~~6.11.5.4.1.20.2.1 Transport channel parameters~~

~~6.11.5.4.1.20.2.1.1 Transport channel parameters for Streaming / unknown / DL:128 kbps / CS or PS RAB~~

~~See clause 6.10.3.4.1.20.2.1.1.~~

~~6.11.5.4.1.20.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.2.1.1.~~

~~6.11.5.4.1.20.2.1.3 TFCS~~

~~See clause 6.10.3.4.1.20.2.1.3.~~

~~6.11.5.4.1.20.2.2 Physical channel parameters~~

~~DPCH Downlink~~	~~Modulation~~	~~QPSK~~
	~~Codes and time slots/ radio frame~~	~~SF1 x 1 code x 2 time slots~~
	~~Max. Number of data bits/radio frame~~	~~2792 bits~~
	~~TFCI code word / radio frame~~	~~16 bits~~
	~~TPC / radio frame~~	~~2x 2 bits~~
	~~SS/ radio frame~~	~~2x 2 bits~~
	~~Puncturing Limit~~	~~0.64~~

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

Void. ~~6.11.5.4.1.21.1 Uplink~~

~~6.11.5.4.1.21.1.1 Transport channel parameters~~

~~6.11.5.4.1.21.1.1.1 Transport channel parameters for Streaming / unknown / UL:128 kbps / CS or PS RAB~~

~~See clause 6.10.3.4.1.21.1.1.1.~~

~~6.11.5.4.1.21.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.1.1.1.~~

~~6.11.5.4.1.21.1.1.3 TFCS~~

~~See clause 6.10.3.4.1.21.1.1.3.~~

~~6.11.5.4.1.21.1.2 Physical channel parameters~~

~~DPCH Uplink~~	~~Modulation~~	~~QPSK~~
	~~Codes and time slots / radio frame~~	~~SF1 x 1 code x 2 time slots~~
	~~Max. Number of data bits/radio frame~~	~~2792 bits~~
	~~TFCI code word/ radio frame~~	~~16 bits~~
	~~TPC / radio frame~~	~~2x 2 bits~~
	~~SS/ radio frame~~	~~2x 2 bits~~
	~~Puncturing Limit~~	~~0.64~~

~~6.11.5.4.1.21.2 Downlink~~

~~6.11.5.4.1.21.2.1 Transport channel parameters~~

~~6.11.5.4.1.21.2.1.1 Transport channel parameters for Streaming / unknown / DL:0 kbps / CS or PS RAB~~

~~N/A.~~

~~6.11.5.4.1.21.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.2.1.1.~~

~~6.11.5.4.1.21.2.1.3 TFCS~~

~~See clause 6.10.3.4.1.2.2.1.1.~~

~~6.11.5.4.1.21.2.2 Physical channel parameters~~

~~See clause 6.11.5.4.1.2.2.2.~~

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

Void. ~~6.11.5.4.1.22.1 Uplink~~

~~6.11.5.4.1.22.1.1 Transport channel parameters~~

~~6.11.5.4.1.22.1.1.1 Transport channel parameters for Streaming / unknown / UL:0 kbps / CS or PS RAB~~

~~N/A.~~

~~6.11.5.4.1.22.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.1.1.1.~~

~~6.11.5.4.1.22.1.1.3 TFCS~~

~~See clause 6.10.3.4.1.2.1.1.2.~~

~~6.11.5.4.1.22.1.2 Physical channel parameters~~

~~See clause 6.11.5.4.1.2.1.2.~~

~~6.11.5.4.1.22.2 Downlink~~

~~6.11.5.4.1.22.2.1 Transport channel parameters~~

~~6.11.5.4.1.22.2.1.1 Transport channel parameters for Streaming / unknown / DL:384 kbps / CS or PS RAB~~

~~See clause 6.10.3.4.1.22.2.1.1.~~

~~6.11.5.4.1.22.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.2.1.1.~~

~~6.11.5.4.1.22.2.1.3 TFCS~~

~~See clause 6.10.3.4.1.22.2.1.3.~~

~~6.11.5.4.1.22.2.2 Physical channel parameters~~

~~DPCH Downlink~~	~~Modulation~~	~~QPSK~~	~~8PSK~~
	~~Codes and time slots/ radio frame~~	~~SF 1 x 1code x 6 time slots~~	~~SF1 x 1 code x 4 time slots~~
	~~Max. Number of data bits / radio frame~~	~~8424 bits~~	~~8212 bits~~
	~~TFCI code word / radio frame~~	~~16 bits~~	~~16 bits~~
	~~TPC / radio frame~~	~~2x 2 bits~~	~~2x 3 bits~~
	~~SS/ radio frame~~	~~2x 2 bits~~	~~2x 3 bits~~
	~~Puncturing Limit~~	~~0.68~~	~~0.68~~

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

6.11.5.4.1.23.1 Uplink

6.11.5.4.1.23.1.1 Transport channel parameters

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

See clause 6.10.3.4.1.23.1.1.1

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

See clause 6.10.3.4.1.2.1.1.1

6.11.5.4.1.23.1.1.3 TFCS

See clause 6.10.3.4.1.23.1.1.3

6.11.5.4.1.23.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots/ radio frame	SF 2 x 1 code x 2 time slots
	Max. Number of data bits/radio frame	1384 bits
	TFCI code word/ radio frame	16 bits
	TPC / radio frame	2 * 2 bits
	SS / radio frame	2 * 2 bits
	Puncturing Limit	1.0 (alt ~~1.0~~0.92)

6.11.5.4.1.23.2 Downlink

6.11.5.4.1.23.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.23.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.23.2.1.3 TFCS

See clause 6.10.3.4.1.23.2.1.3.

6.11.5.4.1.23.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF 16 x 2 codes x 2 time slots
	Max. Number of data bits/radio frame	336 bits
	TFCI code word/ radio frame	8 bits
	TPC/ radio frame	2*2 bits
	SS/ radio frame	2*2 bits
	Puncturing Limit	~~0.84~~0.76 ~~alt (XXX)~~

6.11.5.4.1.23a Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.23a.1 Uplink

6.11.5.4.1.23a.1.1 Transport channel parameters

6.11.5.4.1.23a.1.1.1 Transport channel parameters for Interactive or background / UL:8kbps / PS RAB

See clause 6.10.3.4.1.23a.1.1.1

6.11.5.4.1.23a.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1

6.11.5.4.1.23a.1.1.3 TFCS

See clause 6.10.3.4.1.23a.1.1.3

6.11.5.4.1.23a.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots / radio frame	SF 8 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	328 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.68 alt (XXX)~~ ~~0.68~~0.76 (alt ~~0.72~~0.68)

6.11.5.4.1.23a.2 Downlink

See clause 6.10.3.4.1.23.2~~6.11.5.4.1.23a.2.1 Transport channel parameters~~

~~6.11.5.4.1.23a.2.1.1 Transport channel parameters for Interactive or background / DL:8 kbps / PS RAB~~

~~See clause 6.10.3.4.1.23a.2.1.1.~~

~~6.11.5.4.1.23a.2.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.2.1.1.~~

~~6.11.5.4.1.23a.2.1.3 TFCS~~

~~See clause 6.10.3.4.1.23a.2.1.3.~~

~~6.11.5.4.1.23a.2.2 Physical channel parameters~~

~~DPCH Downlink~~	~~Modulation~~	~~QPSK~~
	~~Codes and time slots / radio frame~~	~~SF 16 x 2 code x 2 time slots~~
	~~Max. Number of data bits / radio frame~~	~~328 bits~~
	~~TFCI code word / radio frame~~	~~16 bits~~
	~~TPC / radio frame~~	~~2x 2 bits~~
	~~SS / radio frame~~	~~2x 2 bits~~
	~~Puncturing Limit~~	~~0.80 0.68~~

6.11.5.4.1.23b Interactive or background / UL:16 DL:16 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.23b.1 Uplink

6.11.5.4.1.23b.1.1 Transport channel parameters

6.11.5.4.1.23b.1.1.1 Transport channel parameters for Interactive or background / UL:16 kbps / PS RAB

See clause 6.10.3.4.1.23b.1.1.1

6.11.5.4.1.23b.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1

6.11.5.4.1.23b.1.1.3 TFCS

See clause 6.10.3.4.1.23b.1.1.3

6.11.5.4.1.23b.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots / radio frame	SF4 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	688 bits
	TFCI code word / radio frame	16bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~1~~0.92 alt (~~0.92~~0.84~~XXX~~)

6.11.5.4.1.23b.2 Downlink

6.11.5.4.1.23b.2.1 Transport channel parameters

6.11.5.4.1.23b.2.1.1 Transport channel parameters for Interactive or background / DL:16 kbps / PS RAB

See clause 6.10.3.4.1.23b.2.1.1.

6.11.5.4.1.23b.2.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.23b.2.1.3 TFCS

See clause 6.10.3.4.1.23b.2.1.3.

6.11.5.4.1.23b.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF16 x 3 code x 2 time slots
	Max. Number of data bits / radio	512 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.76~~0.68 ~~0.88~~

6.11.5.4.1.23c Interactive or background / UL:32 DL32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.23c.1 Uplink

6.11.5.4.1.23c.1.1 Transport channel parameters

6.11.5.4.1.23c.1.1.1 Transport channel parameters for Interactive or background / UL:32 kbps / PS RAB

See clause 6.10.3.4.1.23c.1.1.1

6.11.5.4.1.23c.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1

6.11.5.4.1.23c.1.1.3 TFCS

See clause 6.10.3.4.1.23c.1.1.3

6.11.5.4.1.23c.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots/ radio frame	SF 2 x 1 code x 2 time slots
	Max. Number of data bits/radio frame	1384 bits
	TFCI code word/ radio frame	16 bits
	TPC / radio frame	2 * 2 bits
	SS / radio frame	2 * 2 bits
	Puncturing Limit	1.0 alt (~~1.0~~0.92~~XXX~~)

6.11.5.4.1.23c.2 Downlink

6.11.5.4.1.23c.2.1 Transport channel parameters

6.11.5.4.1.23c.2.1.1 Transport channel parameters for Interactive or background / DL:32 kbps / PS RAB

See clause 6.10.3.4.1.23c.2.1.1.

6.11.5.4.1.23c.2.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.23c.2.1.3 TFCS

See clause 6.10.3.4.1.23c.2.1.3.

6.11.5.4.1.23c.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots / radio frame	SF16 x 8 code x 2 time slots
	Max. Number of data bits/radio frame	1384 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	1.0

6.11.5.4.1.23d Interactive or background / UL:32 DL32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.23d.1 Uplink

6.11.5.4.1.23d.1.1 Transport channel parameters

6.11.5.4.1.23d.1.1.1 Transport channel parameters for Interactive or background / UL:32 kbps / PS RAB

See clause 6.10.3.4.1.23d.1.1.1

6.11.5.4.1.23d.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1

6.11.5.4.1.23d.1.1.3 TFCS

See clause 6.10.3.4.1.23d.1.1.3

6.11.5.4.1.23d.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots/ radio frame	SF 2 x 1 code x 2 time slots
	Max. Number of data bits/radio frame	1384 bits
	TFCI code word/ radio frame	16 bits
	TPC / radio frame	2 * 2 bits
	SS / radio frame	2 * 2 bits
	Puncturing Limit	1.0 alt(~~1.0~~0.92~~XXX~~)

6.11.5.4.1.23d.2 Downlink

6.11.5.4.1.23d.2.1 Transport channel parameters

6.11.5.4.1.23d.2.1.1 Transport channel parameters for Interactive or background / DL:32 kbps / PS RAB

See clause 6.10.3.4.1.23d.2.1.1.

6.11.5.4.1.23d.2.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.23d.2.1.3 TFCS

See clause 6.10.3.4.1.23d.2.1.3.

6.11.5.4.1.23d.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots / radio frame	SF16 x 8 code x 2 time slots
	Max. Number of data bits/radio frame	1384 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	1

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

Void. ~~6.11.5.4.1.24.1 Uplink~~

~~6.11.5.4.1.24.1.1 Transport channel parameters~~

~~6.11.5.4.1.24.1.1.1 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB~~

~~See clause 6.10.3.4.1.24.1.1.1.~~

~~6.11.5.4.1.24.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.1.1.1.~~

~~6.11.5.4.1.24.1.1.3 TFCS~~

~~See clause 6.10.3.4.1.24.1.1.3.~~

~~6.11.5.4.1.24.1.2 Physical channel parameters~~

~~DPCH Uplink~~	~~Modulation~~	~~QPSK~~
	~~Codes and time slots/ radio frame~~	~~SF2 x 1 code x 2 time slots~~
	~~Max. Number of data bits/radio frame~~	~~1384 bits~~
	~~TFCI code word/ radio frame~~	~~16 bits~~
	~~TPC / radio frame~~	~~2 * 2 bits~~
	~~SS / radio frame~~	~~2 * 2 bits~~
	~~Puncturing Limit~~	~~0.6~~

~~6.11.5.4.1.24.2 Downlink~~

~~See clause 6.11.5.4.1.23.2~~

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

6.11.5.4.1.25.1 Uplink

See clause 6.11.5.4.1.23.1.

6.11.5.4.1.25.2 Downlink

6.11.5.4.1.25.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.25.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.25.2.1.3 TFCS

See clause 6.10.3.4.1.25.2.1.3.

6.11.5.4.1.25.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF16 x 8 codes x 2 time slots
	Max. Number of data bits/radio frame	1384 bits
	TFCI code word/ radio frame	16 bits
	TPC/ radio frame	2*2 bits
	SS/ radio frame	2*2 bits
	Puncturing Limit/ radio frame	~~0.6~~0.56

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

6.11.5.4.1.26.1 Uplink

~~See clause 6.11.5.4.1.24.1.~~

6.11.5.4.1.26.1.1 Transport channel parameters

6.11.5.4.1.26.1.1.1 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB

See clause 6.10.3.4.1.26.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.26.1.1.3 TFCS

See clause 6.10.3.4.1.26.1.1.3.

6.11.5.4.1.26.1.2 Physical channel parameters

DPCH Uplink		Physical 1	Physical 2
	Modulation	QPSK	QPSK
	Codes and time slots/ radio frame	SF2 x 1 code x 2 time slots	SF1 x 1 code x 2 time slots
	Max. Number of data bits/radio frame	1384 bits	2792 bits
	TFCI code word/ radio frame	16 bits	16 bits
	TPC / radio frame	2 * 2 bits	2x 2 bits
	SS / radio frame	2 * 2 bits	2x 2 bits
	Puncturing Limit	~~0.60~~0.56 (alt ~~0.52~~0.48)	1

6.11.5.4.1.26.2 Downlink

See clause 6.11.5.4.1.25.2.

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

6.11.5.4.1.27.1 Uplink

See clause 6.11.5.4.1.2~~6~~4.1.

6.11.5.4.1.27.2 Downlink

6.11.5.4.1.27.2.1 Transport channel parameters

6.11.5.4.1.27.2.1.1 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB

See clause 6.10.3.4.1.27.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.27.2.1.3 TFCS

See clause 6.10.3.4.1.27.2.1.3.

6.11.5.4.1.27.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF 16 x 9 codes x 4 time slots
	Max. Number of data bits/radio frame	3144 bits
	TFCI code word/ radio frame	16 bits
	TPC / radio frame	2 * 2 bits
	SS / radio frame	2 * 2 bits
	Puncturing Limit	~~0.72~~ 0.68

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

6.11.5.4.1.28.1 Uplink

6.11.5.4.1.28.1.1 Transport channel parameters

6.11.5.4.1.28.1.1.1 Transport channel parameters for Interactive or background / UL:128 kbps / PS RAB

See clause 6.10.3.4.1.28.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.28.1.1.3 TFCS

See clause 6.10.3.4.1.28.1.1.3.

6.11.5.4.1.28.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots/ radio frame	SF1 x 1 codes x 2 time slots
	Max. Number of data bits/radio frame	2792 bits
	TFCI code word/ radio frame	16 bits
	TPC/ radio frame	2*2 bits
	SS/ radio frame	2*2 bits
	Puncturing Limit	~~0.64~~0.60 alt(~~0.56~~0.52~~XXX~~)

6.11.5.4.1.28.2 Downlink

See clause 6.11.5.4.1.27.2.

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

6.11.5.4.1.29.1 Uplink

See clause 6.11.5.4.1.2~~6~~4.1.

6.11.5.4.1.29.2 Downlink

6.11.5.4.1.29.2.1 Transport channel parameters

6.11.5.4.1.29.2.1.1 Transport channel parameters for Interactive or background / DL:144 kbps / PS RAB

See clause 6.10.3.4.1.29.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.29.2.1.3 TFCS

See clause 6.10.3.4.1.29.2.1.3.

6.11.5.4.1.29.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF 16 x 9 codes x 4 time slots
	Max. Number of data bits/radio frame	3144 bits
	TFCI code word/ radio frame	16 bits
	TPC / radio frame	2 * 2 bits
	SS / radio frame	2 * 2 bits
	Puncturing Limit	~~0.64~~0.52

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

6.11.5.4.1.30.1 Uplink

6.11.5.4.1.30.1.1 Transport channel parameters

6.11.5.4.1.30.1.1.1 Transport channel parameters for Interactive or background / UL:144 kbps / PS RAB

See clause 6.10.3.4.1.30.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.30.1.1.3 TFCS

See clause 6.10.3.4.1.30.1.1.3.

6.11.5.4.1.30.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK	8PSK
	Codes and time slots/ radio frame	(SF1 x 1 code x 2 time slots) + (SF2 x 1 code x 2 time slots)	SF1 x 1code x 2 time slots
	Max. Number of data bits/radio frame	4200 bits	4188 bits
	TFCI code word/ radio frame	16 bits	24 bits
	TPC/ radio frame	2*2 bits	2* 3bits
	SS/ radio frame	2*2 bits	2* 3bits
	Puncturing Limit	~~0.84~~0.72 (alt ~~0.72~~0.64)~~8~~	~~0.84~~0.72 (alt ~~0.72~~0.64)

6.11.5.4.1.30.2 Downlink

See clause 6.11.5.4.1.29.2.

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

6.11.5.4.1.31.1 Uplink

See clause 6.11.5.4.1.2~~6~~4.1.

6.11.5.4.1.31.2 Downlink

6.11.5.4.1.31.2.1 Transport channel parameters

6.11.5.4.1.31.2.1.1 Transport channel parameters for Interactive or background / DL:256 kbps / PS RAB

See clause 6.10.3.4.1.31.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.31.2.1.3 TFCS

See clause 6.10.3.4.1.31.2.1.3.

6.11.5.4.1.31.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF 1 x 1 code x 4 time slots
	Max. Number of data bits/radio frame	5608 bits
	TFCI code word/ radio frame	16 bits
	TPC / radio frame	2 * 2 bits
	SS / radio frame	2 * 2 bits
	Puncturing Limit	~~0.64~~0.56

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

6.11.5.4.1.32.1 Uplink

See clause 6.11.5.4.1.264.1.

6.11.5.4.1.32.2 Downlink

6.11.5.4.1.32.2.1 Transport channel parameters

6.11.5.4.1.32.2.1.1 Transport channel parameters for Interactive or background / DL:384 kbps / PS RAB

See clause 6.10.3.4.1.32.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.32.2.1.3 TFCS

See clause 6.10.3.4.1.32.2.1.3.

6.11.5.4.1.32.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK	8PSK
	Codes and time slots/ radio frame	SF1 x 1 code x 6 time slots	SF1 x 1 code x 4 time slots
	Max. Number of data bits/radio frame	8424 bits	8412 bits
	TFCI code word/ radio frame	16 bits	24 bits
	TPC/ radio frame	2*2 bits	2*3 bits
	SS/ radio frame	2*2 bits	2*3 bits
	Puncturing Limit	0.64	0.64

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

6.11.5.4.1.33.1 Uplink

See clause 6.11.5.4.1.28.1

6.11.5.4.1.33.2 Downlink

See clause 6.11.5.4.1.32.2.

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

6.11.5.4.1.34.1 Uplink

6.11.5.4.1.34.1.1 Transport channel parameters

6.11.5.4.1.34.1.1.1 Transport channel parameters for Interactive or background / UL:384 kbps / PS RAB

See clause 6.10.3.4.1.34.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.34.1.1.3 TFCS

See clause 6.10.3.4.1.34.1.1.3.

6.11.5.4.1.34.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK	8PSK
	Codes and time slots/ radio frame	SF 1 x 1 code x 6 time slots	SF 1 x 1 code x 4 time slots
	Max. Number of data bits/radio frame	8424 bits	8412 bits
	TFCI code word / radio frame	16 bits	24 bits
	TPC / radio frame	2 * 2 bits	~~3~~ 2 * 3 bits
	SS / radio frame	2 * 2 bits	~~3~~ 2 * 3 bits
	Puncturing Limit	0.64	0.64

6.11.5.4.1.34.2 Downlink

See clause 6.11.5.4.1.32.2.

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

6.11.5.4.1.35.1 Uplink

See clause 6.11.5.4.1.2~~6~~4.1.

6.11.5.4.1.35.2 Downlink

6.11.5.4.1.35.2.1 Transport channel parameters

6.11.5.4.1.35.2.1.1 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		1704
	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		1720
	TFS	TF0, bits	0x1720
		TF1, bits	1x1720
		TF2, bits	2x1720
		TF3, bits	4x1720
		TF4, bits	8 x1720
		TF5, bits	12x1720
		TF6, bits	N/A (alt. 16x1720)
		TF7, bits	N/A (alt. 20x1720)
		TF8, bits	N/A (alt. 24x1720)
	TTI, ms		10(alt. 20)
	Coding type		No coding
	CRC, bit		24
	Max number of bits/TTI after channel coding		20928 (alt. 41856)
	Max number of bits/radio frame before rate matching		20928 (alt. 20928)
	RM attribute		130-170

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

See clause 6.10.3.4.1.2.2.1.1

6.11.5.4.1.35.2.1.3 TFCS

TFCS size	12 (alt.18)
TFCS	(2048 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))

6.11.5.4.1.35.2.2 Physical channel parameters

DPCH Downlink	Modulation	8PSK
	Codes and time slots/ radio frame	SF1 x 1 code x 10 time slots
	Max. Number of data bits/radio frame	21084 bits
	TFCI code word/ radio frame	24 bits
	TPC/ radio frame	2*3 bits
	SS/ radio frame	2*3 bits
	Puncturing Limit	1

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

Void. ~~6.11.5.4.1.36.1 Uplink~~

~~See clause 6.11.5.4.1.28.1.~~

~~6.11.5.4.1.36.2 Downlink~~

~~See clause 6.11.5.4.1.35.2.~~

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

Void. ~~6.11.5.4.1.37.1 Uplink~~

~~See clause 6.11.5.4.1.34.1.~~

~~6.11.5.4.1.37.2 Downlink~~

~~See clause 6.11.5.4.1.35.2.~~

6.~~10~~11.~~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

6.11.5.4.1.38.1 Uplink

6.11.5.4.1.38.1.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.1.1.1.

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

See clause 6.10.3.4.1.23.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.38.1.1.4 TFCS

See clause 6.10.3.4.1.38.1.1.4.

6.11.5.4.1.38.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots/ radio frame	SF 2 x 1 code x 2 time slots
	Max. Number of data bits/radio frame	1384 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2 * 2 bits
	SS / radio frame	2 * 2 bits
	Puncturing Limit	~~0.84~~0.80~~0~~0.72 (alt ~~0.72~~0.68)

6.11.5.4.1.38.2 Downlink

6.11.5.4.1.38.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

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

See clause 6.10.3.4.1.23.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.

6.11.5.4.1.38.2.1.4 TFCS

See clause 6.10.3.4.1.38.2.1.4.

6.11.5.4.1.38.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF16 x 3 codes x 2 time slots
	Max. Number of data bits/radio frame	504 bits
	TFCI code word/ radio frame	16 bits
	TPC/ radio frame	2*2 bits
	SS/ radio frame	2*2 bits
	Puncturing Limit	~~0.64~~ ~~0.52~~0.44

6.11.5.4.1.38a Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:0 DL:0 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.38a.1 Uplink

6.11.5.4.1.38a.1.1 Transport channel parameters

6.11.5.4.1.38a.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.1.1.1.

6.11.5.4.1.38a.1.1.2 Transport channel parameters for Interactive or background / UL:0 kbps / PS RAB

See clause 6.10.3.4.1.38a.1.1.2.

6.11.5.4.1.38a.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.38a.1.1.4 TFCS

See clause 6.10.3.4.1.38a.1.1.4.

6.11.5.4.1.38a.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots / radio frame	SF8 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	328 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~XXX~~ ~~0.52~~0.48

6.11.5.4.1.38a.2 Downlink

6.11.5.4.1.38a.2.1 Transport channel parameters

6.11.5.4.1.38a.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.1.38a.2.1.2 Transport channel parameters for Interactive or background / DL:0 kbps / PS RAB

See clause 6.10.3.4.1.38a.2.1.2.

6.11.5.4.1.38a.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.

6.11.5.4.1.38a.2.1.4 TFCS

See clause 6.10.3.4.1.38a.2.1.4.

6.11.5.4.1.38a.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots / radio frame	SF 16 x 2 code x 2 time slots
	Max. Number of data bits / radio frame	328 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~XXX 0.52~~0.48

6.11.2.5.1.38b Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.38b.1 Uplink

6.11.5.4.1.38b.1.1 Transport channel parameters

6.11.5.4.1.38b.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.1.1.1.

6.11.5.4.1.38b.1.1.2 Transport channel parameters for Interactive or background / UL:8 kbps / PS RAB

See clause 6.10.3.4.1.23a~~b~~.1.1.1.

6.11.5.4.1.38b.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.38b.1.1.4 TFCS

See clause 6.10.3.4.1.38b.1.1.4.

6.11.5.4.1.38b.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots/ frame	SF4 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	680 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.64 alt(XXX)~~ ~~0.72~~0.64 alt(0.60)

6.11.5.4.1.38b.2 Downlink

6.11.5.4.1.38b.2.1 Transport channel parameters

6.11.5.4.1.38b.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.1.38b.2.1.2 Transport channel parameters for Interactive or background / DL:8 kbps / PS RAB

See clause 6.10.3.4.1.23.2.1.1.

6.11.5.4.1.38b.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.38b.2.1.4 TFCS

See clause 6.10.3.4.1.38b.2.1.4.

6.11.5.4.1.38b.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF16 x 4 code x 2 time slots
	Max. Number of data bits / radio frame	680 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.64~~ ~~0.72~~0.64

6.11.2.5.1.38c Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.38c.1 Uplink

6.11.5.4.1.38c.1.1 Transport channel parameters

6.11.5.4.1.38c.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.1.1.1.

6.11.5.4.1.38c.1.1.2 Transport channel parameters for Interactive or background / UL:32 kbps / PS RAB

See clause 6.10.3.4.1.23d.1.1.~~2~~1.

6.11.5.4.1.38c.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.38c.1.1.4 TFCS

See clause 6.10.3.4.1.38c.1.1.4.

6.11.5.4.1.38c.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots/ radio frame	SF2 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	1384 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~XXX alt(XX)~~ 0.72 (alt ~~0.80~~0.64) for TFCS size=18 0.80 (alt 0.72) for TFCS size=17

6.11.5.4.1.38c.2 Downlink

6.11.5.4.1.38c.2.1 Transport channel parameters

6.11.5.4.1.38c.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.1.38c.2.1.2 Transport channel parameters for Interactive or background / DL:32 kbps / PS RAB

See clause 6.10.3.4.1.23d.2.1.1.

6.11.5.4.1.38c.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.38c.2.1.4 TFCS

See clause 6.10.3.4.1.38c.2.1.4.

6.11.5.4.1.38c.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots / radio frame	SF16 x 8 code x 2 time slots
	Max. Number of data bits / radio frame	1384 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	0.72 (alt ~~0.80~~0.64)

6.11.5.4.1.38d Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.38d.1 Uplink

6.11.5.4.1.38d.1.1 Transport channel parameters

6.11.5.4.1.38d.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.1.1.1.

6.11.5.4.1.38d.1.1.2 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB

See clause 6.10.3.4.1.38d.1.1.2.

6.11.5.4.1.38d.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.38d.1.1.4 TFCS

See clause 6.10.3.4.1.38d.1.1.4.

6.11.5.4.1.38d.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK	8PSK
	Codes and time slots/ radio frame	(SF1 x 1 code x 2 time slots) + (SF2 x 1 code x 2 time slots)	SF1 x 1code x 2 time slots
	Max. Number of data bits/radio frame	4200 bits	4188 bits
	TFCI code word/ radio frame	16 bits	24 bits
	TPC/ radio frame	2*2 bits	2* 3bits
	SS/ radio frame	2*2 bits	2* 3bits
	Puncturing Limit	~~xxx 0.84~~0.72 (alt ~~0.72~~0.64)	~~0.84~~0.72 (alt ~~0.72~~0.64)~~yyy~~

6.11.5.4.1.38d.2 Downlink

6.11.5.4.1.38d.2.1 Transport channel parameters

6.11.5.4.1.38d.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.1.38d.2.1.2 Transport channel parameters for Interactive or background / DL:64 kbps / PS RAB

See clause 6.10.3.4.1.38d.2.1.2.

6.11.5.4.1.38d.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.38d.2.1.4 TFCS

See clause 6.10.3.4.1.38d.2.1.4.

6.11.5.4.1.38d.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF 16 x 9 codes x 4 time slots
	Max. Number of data bits/radio frame	3144 bits
	TFCI code word/ radio frame	16 bits
	TPC / radio frame	2 * 2 bits
	SS / radio frame	2 * 2 bits
	Puncturing Limit	~~xxx 0.60~~0.52

6.11.5.4.1.38e Conversational / speech / UL: 12.2 7.95 5.9 4.75 DL:12.2 7.95 5.9 4.75 kbps / CS RAB
+ Interactive or background / UL:0 DL:0 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.38e.1 Uplink

6.11.5.4.1.38e.1.1 Transport channel parameters

6.11.5.4.1.38e.1.1.1 Transport channel parameters for Conversational / speech / UL: 12.2 7.95 5.9 4.75 / CS RAB

See clause 6.10.3.4.1.4a.1.1.1.

6.11.5.4.1.38e.1.1.2 Transport channel parameters for Interactive or background / UL:0 kbps / PS RAB

See clause 6.10.3.4.1.38a.1.1.2.

6.11.5.4.1.38e.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.38e.1.1.4 TFCS

See clause 6.10.3.4.1.38e.1.1.4.

6.11.5.4.1.38e.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots / radio frame	SF8 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	328 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~XXX0.52~~0.48

6.11.5.4.1.38e.2 Downlink

6.11.5.4.1.38e.2.1 Transport channel parameters

6.11.5.4.1.38e.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 7.95 5.9 4.75 / CS RAB

See clause 6.10.3.4.1.4a.2.1.1.

6.11.5.4.1.38e.2.1.2 Transport channel parameters for Interactive or background / DL:0 kbps / PS RAB

See clause 6.10.3.4.1.38a.2.1.2.

6.11.5.4.1.38e.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.38e.2.1.4 TFCS

See clause 6.10.3.4.1.38e.2.1.4.

6.11.5.4.1.38e.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots / radio frame	SF 16 x 2 code x 2 time slots
	Max. Number of data bits / radio frame	328 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~XXX0.52~~0.48

6.11.5.4.1.38f Conversational / speech / UL: 12.2 7.95 5.9 4.75 DL:12.2 7.95 5.9 4.75 kbps / CS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.38f.1 Uplink

6.11.5.4.1.38f.1.1 Transport channel parameters

6.11.5.4.1.38f.1.1.1 Transport channel parameters for Conversational / speech / UL: 12.2 7.95 5.9 4.75 / CS RAB

See clause 6.10.3.4.1.4a.1.1.1.

6.11.5.4.1.38f.1.1.2 Transport channel parameters for Interactive or background / UL:8 kbps / PS RAB

See clause 6.10.3.4.1.23a.1.1.1.

6.11.5.4.1.38f.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.38f.1.1.4 TFCS

See clause 6.10.3.4.1.38f.1.1.4.

6.11.5.4.1.38f.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots/ frame	SF4 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	680 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~Xxx alt(XXX)0.72~~0.64 (alt ~~0.68~~0.60)

6.11.5.4.1.38f.2 Downlink

6.11.5.4.1.38f.2.1 Transport channel parameters

6.11.5.4.1.38f.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 7.95 5.9 4.75 / CS RAB

See clause 6.10.3.4.1.4a.2.1.1.

6.11.5.4.1.38f.2.1.2 Transport channel parameters for Interactive or background / DL:8 kbps / PS RAB

See clause 6.10.3.4.1.23.2.1.1.

6.11.5.4.1.38f.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.

6.11.5.4.1.38f.2.1.4 TFCS

See clause 6.10.3.4.1.38f.2.1.4.

6.11.5.4.1.38f.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF16 x 4 code x 2 time slots
	Max. Number of data bits / radio frame	680 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~xxx0.72~~0.64

6.11.5.4.1.38g Conversational / speech / UL: 12.2 7.95 5.9 4.75 DL:12.2 7.95 5.9 4.75 kbps / CS RAB
+ Interactive or background / UL:16 DL:16 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.38g.1 Uplink

6.11.5.4.1.38g.1.1 Transport channel parameters

6.11.5.4.1.38g.1.1.1 Transport channel parameters for Conversational / speech / UL: 12.2 7.95 5.9 4.75 / CS RAB

See clause 6.10.3.4.1.4a.1.1.1.

6.11.5.4.1.38g.1.1.2 Transport channel parameters for Interactive or background / UL:16 kbps / PS RAB

See clause 6.10.3.4.1.23b.1.1.1.

6.11.5.4.1.38g.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.38g.1.1.4 TFCS

See clause 6.10.3.4.1.38g.1.1.4.

6.11.5.4.1.38g.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots/ radio frame	SF2 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	1384 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	1.0 (alt~~(1.0~~ 0.96~~XXX~~)
Note: There are 32 bit and 16 bit TFCIs for the two cases.		

6.11.5.4.1.38g.2 Downlink

6.11.5.4.1.38g.2.1 Transport channel parameters

6.11.5.4.1.38g.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 7.95 5.9 4.75 / CS RAB

See clause 6.10.3.4.1.4a.2.1.1.

6.11.5.4.1.38g.2.1.2 Transport channel parameters for Interactive or background / DL:16 kbps / PS RAB

See clause 6.10.3.4.1.23b.2.1.1.

6.11.5.4.1.38g.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.38g.2.1.4 TFCS

See clause 6.10.3.4.1.38g.2.1.4.

6.11.5.4.1.38g.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots / radio frame	SF16 x 8 code x 2 time slots
	Max. Number of data bits / radio frame	1384 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	1.0

6.11.5.4.1.38h Conversational / speech / UL: 12.2 7.95 5.9 4.75 DL:12.2 7.95 5.9 4.75 kbps / CS RAB
+ Interactive or background / UL:32 DL:32 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.38h.1 Uplink

6.11.5.4.1.38h.1.1 Transport channel parameters

6.11.5.4.1.38h.1.1.1 Transport channel parameters for Conversational / speech / UL: 12.2 7.95 5.9 4.75 / CS RAB

See clause 6.10.3.4.1.4a.1.1.1.

6.11.5.4.1.38h.1.1.2 Transport channel parameters for Interactive or background / UL:32 kbps / PS RAB

See clause 6.10.3.4.1.23d.1.1.2.

6.11.5.4.1.38h.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.38h.1.1.4 TFCS

See clause 6.10.3.4.1.38h.1.1.4.

6.11.5.4.1.38h.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots / radio frame	SF2 x 1 code x 2 time slots
	Max. Number of data bits/radio frame	1384 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS/ radio frame	2x 2 bits
	Puncturing Limit	~~Xxx0.80~~0.72 (alt ~~0.72~~0.64)

6.11.5.4.1.38h.2 Downlink

6.11.5.4.1.38h.2.1 Transport channel parameters

6.11.5.4.1.38h.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 7.95 5.9 4.75 / CS RAB

See clause 6.10.3.4.1.4a.2.1.1.

6.11.5.4.1.38h.2.1.2 Transport channel parameters for Interactive or background / DL:32 kbps / PS RAB

See clause 6.10.3.4.1.23d.2.1.1.

6.11.5.4.1.38h.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.

6.11.5.4.1.38h.2.1.4 TFCS

See clause 6.10.3.4.1.38h.2.1.4.

6.11.5.4.1.38h.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots / radio frame	SF16 x 8 code x 2 time slots
	Max. Number of data bits / radio frame	1384 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~Xxx0.80~~0.72

6.11.5.4.1.38i Conversational / speech / UL: 12.2 7.95 5.9 4.75 DL:12.2 7.95 5.9 4.75 kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.38i.1 Uplink

6.11.5.4.1.38i.1.1 Transport channel parameters

6.11.5.4.1.38i.1.1.1 Transport channel parameters for Conversational / speech / UL: 12.2 7.95 5.9 4.75 / CS RAB

See clause 6.10.3.4.1.4a.1.1.1.

6.11.5.4.1.38i.1.1.2 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB

See clause 6.10.3.4.1.26.1.1.1.

6.11.5.4.1.38i.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.38i.1.1.4 TFCS

See clause 6.10.3.4.1.38i.1.1.4.

6.11.5.4.1.38i.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK	8PSK
	Codes and time slots/ radio frame	(SF1 x 1 code x 2 time slots) + (SF2 x 1 code x 2 time slots)	SF1 x 1code x 2 time slots
	Max. Number of data bits/radio frame	4200 bits	4188 bits
	TFCI code word/ radio frame	16 bits	24 bits
	TPC/ radio frame	2*2 bits	2* 3bits
	SS/ radio frame	2*2 bits	2* 3bits
	Puncturing Limit	1	1

6.11.5.4.1.38i.2 Downlink

6.11.5.4.1.38i.2.1 Transport channel parameters

6.11.5.4.1.38i.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 7.95 5.9 4.75 / CS RAB

See clause 6.10.3.4.1.4a.2.1.1.

6.11.5.4.1.38i.2.1.2 Transport channel parameters for Interactive or background / DL:64 kbps / PS RAB

See clause 6.10.3.4.1.25.2.1.1.

6.11.5.4.1.38i.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.

6.11.5.4.1.38i.2.1.4 TFCS

See clause 6.10.3.4.1.38i.2.1.4.

6.11.5.4.1.38i.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF 16 x 9 codes x 4 time slots
	Max. Number of data bits/radio frame	3144 bits
	TFCI code word/ radio frame	16 bits
	TPC / radio frame	2 * 2 bits
	SS / radio frame	2 * 2 bits
	Puncturing Limit	1

6.11.5.4.1.38j Conversational / speech / UL: 12.2 7.95 5.9 4.75 DL:12.2 7.95 5.9 4.75 kbps / CS RAB
+ Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.38j.1 Uplink

see 6.11.5.4.1.38i .1

6.11.5.4.1.38j.2 Downlink

6.11.5.4.1.38j.2.1 Transport channel parameters

6.11.5.4.1.38j.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 7.95 5.9 4.75 / CS RAB

See clause 6.10.3.4.1.4a.2.1.1.

6.11.5.4.1.38j.2.1.2 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB

See clause 6.10.3.4.1.27.2.1.1.

6.11.5.4.1.38j.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.38j.2.1.4 TFCS

See clause 6.10.3.4.1.38j.2.1.4.

6.11.5.4.1.38j.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF 16 x 9 codes x 4 time slots
	Max. Number of data bits/radio frame	3144 bits
	TFCI code word/ radio frame	16 bits
	TPC / radio frame	2 * 2 bits
	SS / radio frame	2 * 2 bits
	Puncturing Limit	~~Xxx~~0.60

6.11.5.4.1.39 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

6.11.5.4.1.39.1 Uplink

See clause 6.11.5.4.1.38.1.

6.11.5.4.1.39.2 Downlink

6.11.5.4.1.39.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

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

See clause 6.10.3.4.1.25.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.39.2.1.4 TFCS

See clause 6.10.3.4.1.39.2.1.4.

6.11.5.4.1.39.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF 16 x 10 codes x 2 time slots
	Max. Number of data bits/radio frame	1736 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2 * 2 bits
	SS / radio frame	2 * 2 bits
	Puncturing Limit	~~0.64~~0.60~~0~~0.56

6.11.5.4.1.40 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

6.11.5.4.1.40.1 Uplink

6.11.5.4.1.40.1.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.1.1.1.

6.11.5.4.1.40.1.1.2 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB

See clause 6.10.3.4.1.2~~6~~64.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.40.1.1.4 TFCS

See clause 6.10.3.4.1.40.1.1.4.

6.11.5.4.1.40.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots/ radio frame	SF1 x 1 code x 2 time slots
	Max. Number of data bits/radio frame	~~2784~~ 2792 bits
	TFCI code word/ radio frame	16 bits
	TPC/ radio frame	2*2 bits
	SS/ radio frame	2*2 bits
	Puncturing Limit	~~10.96~~0.92 (alt. 0.84)

6.11.5.4.1.40.2 Downlink

See clause 6.11.5.4.1.39.2.

6.11.5.4.1.41 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

6.11.5.4.1.41.1 Uplink

See clause 6.11.5.4.1.40.1.

6.11.5.4.1.41.2 Downlink

6.11.5.4.1.41.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.1.41.2.1.2 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB

See clause 6.10.3.4.1.27.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.41.2.1.4 TFCS

See clause 6.10.3.4.1.41.2.1.4.

6.11.5.4.1.41.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK	8PSK
	Codes and time slots/ radio frame	SF 16 x 9 codes x 4 time slots	SF 16 x 12 codes x 2 time slots
	Max. Number of data bits/radio frame	3144 bits	3132 bits
	TFCI code word / radio frame	16 bits	24 bits
	TPC / radio frame	2 * 2 bits	~~3~~ 2 x 3 bits
	SS / radio frame	2 * 2 bits	~~3~~ 2 x 3 bits
	Puncturing Limit	~~0.64~~0.60	~~0.64~~0.60

6.11.5.4.1.42 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

6.11.5.4.1.42.1 Uplink

See clause 6.11.5.4.1.40.1.

~~See clause 6.11.5.4.1.40.1.~~

~~6.11.5.4.1.42.1.1 Transport channel parameters~~

~~6.11.5.4.1.42.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB~~

~~See clause 6.10.3.4.1.4.1.1.1.~~

~~6.11.5.4.1.42.1.1.2 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB~~

~~See clause 6.10.3.4.1.26.1.1.1.~~

~~6.11.5.4.1.42.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.1.1.1.~~

~~6.11.5.4.1.42.1.1.4 TFCS~~

~~See Clause 6.10.3.4.1.40.1.1.4.1.~~

~~Physical channel parameters~~

~~DPCH Uplink~~	~~Modulation~~	~~QPSK~~
	~~Codes and time slots/ radio frame~~	~~SF1 x 1 code x 2 time slots~~
	~~Max. Number of data bits/radio frame~~	~~2784 bits~~
	~~TFCI code word/ radio frame~~	~~16 bits~~
	~~TPC/ radio frame~~	~~2*2 bits~~
	~~SS/ radio frame~~	~~2*2 bits~~
	~~Puncturing Limit~~	~~10.96~~

6.11.5.4.1.42.2 Downlink

6.11.5.4.1.42.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.1.42.2.1.2 Transport channel parameters for Interactive or background / DL:256 kbps / PS RAB

See clause 6.10.3.4.1.31.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.42.2.1.4 TFCS

See clause 6.10.3.4.1.42.2.1.4.

6.11.5.4.1.42.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK	8PSK
	Codes and time slots/ radio frame	SF1 x 1code x 6 time slots	SF1 x 1 code x 4 time slots
	Max. Number of data bits/radio frame	~~8400~~ 8408 bits	~~8376~~ 8388 bits
	TFCI code word/ radio frame	~~16~~ 32 bits	~~24~~ 48 bits
	TPC/ radio frame	2*2 bits	2*3 bits
	SS/ radio frame	2*2 bits	2*3 bits
	Puncturing Limit	~~0.880.92~~0.80	~~0.880.92~~0.80

6.11.5.4.1.43 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

6.11.5.4.1.43.1 Uplink

See clause 6.11.5.4.1.40.1.

6.11.5.4.1.43.2 Downlink

6.11.5.4.1.43.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.1.43.2.1.2 Transport channel parameters for Interactive or background / DL:384 kbps / PS RAB

See clause 6.10.3.4.1.32.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.43.2.1.4 TFCS

See clause 6.10.3.4.1.43.2.1.4.

6.11.5.4.1.43.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK	8PSK
	Codes and time slots/ radio frame	SF 1 x 1 code x 6 time slots	SF 1 x 1 code x 4 time slots
	Max. Number of data bits/radio frame	8408 bits	8388 bits
	TFCI code word / radio frame	32 bits	48 bits
	TPC / radio frame	2 * 2 bits	~~3~~ 2 x 3 bits
	SS / radio frame	2 * 2 bits	~~3~~ 2 x 3 bits
	Puncturing Limit	0.60	0.60

6.11.5.4.1.44 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

6.11.5.4.1.44.1 Uplink

6.11.5.4.1.44.1.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.1.1.1.

6.11.5.4.1.44.1.1.2 Transport channel parameters for Interactive or background / UL:128 kbps / PS RAB

See clause 6.10.3.4.1.28.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.44.1.1.4 TFCS

See clause 6.10.3.4.1.44.1.1.4.

6.11.5.4.1.44.1.2 Physical channel parameters

DPCH Uplink	Modulation	8PSK
	Codes and time slots/ radio frame	SF1 x 1 code x 2 time slots
	Max. Number of data bits/radio frame	4188 bits
	TFCI code word/ radio frame	24 bits
	TPC/ radio frame	2*3 bits
	SS/ radio frame	2*3 bits
	Puncturing Limit	~~0.88~~0.80 (alt 0.72)

6.11.5.4.1.44.2 Downlink

6.11.5.4.1.44.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.1.44.2.1.2 Transport channel parameters for Interactive or background / DL:2048 kbps / PS RAB

See clause 6.11.5.4.1.35.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.44.2.1.4 TFCS

TFCS size	~~33~~32 (alt. ~~51~~50)
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 2048 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),~~ (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)) (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),~~ (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))

For better understanding of the TFCS please note that the following combinations are not included in the table above:(TF2, TF1, TF1, TF5, TF0) , (TF1, TF0, TF0, TF5, TF0), (TF1, TF0, TF0, TF5, TF1), (TF2, TF1, TF1, TF5, TF1) , (TF2, TF1, TF1, TF8, TF0), (TF1, TF0, TF0, TF8, TF0), (TF1, TF0, TF0, TF8, TF1), (TF2, TF1, TF1, TF8, TF1)

6.11.5.4.1.44.2.2 Physical channel parameters

DPCH Downlink	Modulation	8PSK
	Codes and time slots/ radio frame	SF 1 x 1 code x 10 time slots
	Max. Number of data bits/radio frame	21060 bits
	TFCI code word / radio frame	48 bits
	TPC / radio frame	~~3~~ 2 * 3 bits
	SS / radio frame	2~~3~~ * 3 bits
	Puncturing Limit	1

6.11.5.4.1.45 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

6.11.5.4.1.45.1 Uplink

6.11.5.4.1.45.1.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.1.1.1.

6.11.5.4.1.45.1.1.2 Transport channel parameters for Streaming / unknown / UL:57.6 kbps / CS RAB

See clause 6.10.3.4.1.17.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.45.1.1.4 TFCS

See clause 6.10.3.4.1.45.1.1.4.

6.11.5.4.1.45.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots/ radio frame	SF2 x 1code x 2 time slots
	Max. Number of data bits/radio frame	1384 bits
	TFCI code word/ radio frame	16 bits
	TPC/ radio frame	2*2 bits
	SS/ radio frame	2*2 bits
	Puncturing Limit	~~0.64~~0.5~~6~~0.52

6.11.5.4.1.45.2 Downlink

6.11.5.4.1.45.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.1.45.2.1.2 Transport channel parameters for Streaming / unknown / DL:57.6 kbps / CS RAB

See clause 6.10.3.4.1.17.2.1.1.

6.11.5.4.1.45.2.1.3 Transport channel parameters for ~~U~~DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.45.2.1.4 TFCS

See clause 6.10.3.4.1.45.2.1.4.

6.11.5.4.1.45.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF 16 x 9 codes x 2 time slots
	Max. Number of data bits/radio frame	1560 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2 * 2 bits
	SS / radio frame	2 * 2 bits
	Puncturing Limit	~~0.64~~0.60~~0~~0.56

6.11.5.4.1.46 ~~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~~

Void. ~~6.11.5.4.1.46.1 Uplink~~

~~See clause 6.11.5.4.1.4.1.~~

~~6.11.5.4.1.46.2 Downlink~~

~~6.11.5.4.1.46.2.1 Transport channel parameters~~

~~6.11.5.4.1.46.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB~~

~~See clause 6.10.3.4.1.4.2.1.1.~~

~~6.11.5.4.1.46.2.1.2 Transport channel parameters for Streaming / unknown / DL:64 kbps / CS or PS RAB~~

~~See clause 6.10.3.4.1.18.2.1.1.~~

~~6.11.5.4.1.46.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.2.1.1.~~

~~6.11.5.4.1.46.2.1.4 TFCS~~

~~See clause 6.10.3.4.1.46.2.1.4.~~

6.11.5.4.1.46.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF16 x 11 codes x 2 time slots
	Max. Number of data bits/radio frame	1912 bits
	TFCI code word/ radio frame	16 bits
	TPC/ radio frame	2*2 bits
	SS/ radio frame	2*2 bits
	Puncturing Limit	0.64

6.11.5.4.1.47 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

Void. 6.11.5.4.1.47.1 Uplink

See clause 6.11.5.4.1.4.1.

6.11.5.4.1.47.2 Downlink

6.11.5.4.1.47.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.1.47.2.1.2 Transport channel parameters for Streaming / unknown / DL:128 kbps / CS or PS RAB

See clause 6.10.3.4.1.20.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.47.2.1.4 TFCS

See clause 6.10.3.4.1.47.2.1.4.

6.11.5.4.1.47.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK	8PSK
	Codes and time slots/ radio frame	SF 16 x 9 codes x 4 time slots	SF 16 x 12 codes x 2 time slots
	Max. Number of data bits/radio frame	3128 bits	3108 bits
	TFCI code word / radio frame	32 bits	48 bits
	TPC / radio frame	2 * 2 bits	3 x 3 bits
	SS / radio frame	2 * 2 bits	3 x 3 bits
	Puncturing Limit	0.68	0.68

6.11.5.4.1.48 ~~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~~

Void. ~~6.11.5.4.1.48.1 Uplink~~

~~See clause 6.11.5.4.1.4.1.~~

~~6.11.5.4.1.48.2 Downlink~~

~~6.11.5.4.1.48.2.1 Transport channel parameters~~

~~6.11.5.4.1.48.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB~~

~~See clause 6.10.3.4.1.4.2.1.1.~~

~~6.11.5.4.1.48.2.1.2 Transport channel parameters for Streaming / unknown / DL:384 kbps / CS or PS RAB~~

~~See clause 6.10.3.4.1.22.2.1.1.~~

~~6.11.5.4.1.48.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.2.1.1.~~

~~6.11.5.4.1.48.2.1.4 TFCS~~

~~See clause 6.10.3.4.1.48.2.1.4.~~

~~6.11.5.4.1.48.2.2 Physical channel parameters~~

	~~DPCH Downlink~~	~~Modulation~~	~~QPSK~~	~~8PSK~~
		~~Codes and time slots/ radio frame~~	~~SF1 x 1code x 6 time slots~~	~~SF1 x 1 code x 4 time slots~~
		~~Max. Number of data bits/radio frame~~	~~8408 bits~~	~~8388 bits~~
		~~TFCI code word/ radio frame~~	~~32 bits~~	~~48 bits~~
		~~TPC/ radio frame~~	~~2*2 bits~~	~~2*3 bits~~
		~~SS/ radio frame~~	~~2*2 bits~~	~~2*3 bits~~
		~~Puncturing Limit~~	~~0.64~~	~~0.64~~

6.11.5.4.1.49 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

6.11.5.4.1.49.1 Uplink

6.11.5.4.1.49.1.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.1.1.1.

6.11.5.4.1.49.1.1.2 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.49.1.1.4 TFCS

See clause 6.10.3.4.1.49.1.1.4.

6.11.5.4.1.49.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots/ radio frame	SF 1 x 1 code x 2 time slots
	Max. Number of data bits/radio frame	2792 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2 * 2 bits
	SS / radio frame	2 * 2 bits
	Puncturing Limit	~~1~~0.88

6.11.5.4.1.49.2 Downlink

6.11.5.4.1.49.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.1.49.2.1.2 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.49.2.1.4 TFCS

See clause 6.10.3.4.1.49.2.1.4.

6.11.5.4.1.49.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF16 x 11 codes x 2 time slots
	Max. Number of data bits/radio frame	1912 bits
	TFCI code word/ radio frame	16 bits
	TPC/ radio frame	2*2 bits
	SS/ radio frame	2*2 bits
	Puncturing Limit	~~0.64~~0.60~~.68~~0.60

6.11.5.4.1.49a Conversational / speech / UL: 12.2 7.95 5.9 4.75 DL: 12.2 7.95 5.9 4.75 kbps / CS RAB
+ Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.49a.1 Uplink

6.11.5.4.1.49a.1.1 Transport channel parameters

6.11.5.4.1.49a.1.1.1 Transport channel parameters for Conversational / speech / UL: 12.2 7.95 5.9 4.75 kbps / CS RAB

See clause 6.10.3.4.1.4a.1.1.1.

6.11.5.4.1.49a.1.1.2 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.1.1.1.

6.11.5.4.1.49a.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.49a.1.1.4 TFCS

See clause 6.10.3.4.1.49a.1.1.4.

6.11.5.4.1.49a.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots/ radio frame	SF 1 x 1 code x 2 time slots
	Max. Number of data bits/radio frame	2792 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2 * 2 bits
	SS / radio frame	2 * 2 bits
	Puncturing Limit	~~1~~0.88

6.11.5.4.1.49a.2 Downlink

6.11.5.4.1.49a.2.1 Transport channel parameters

6.11.5.4.1.49a.2.1.1 Transport channel parameters for Conversational / speech / DL: 12.2 7.95 5.9 4.75 kbps / CS RAB

See clause 6.10.3.4.1.4a.2.1.1.

6.11.5.4.1.49a.2.1.2 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.2.1.1.

6.11.5.4.1.49a.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.49.2.1.4 TFCS

See clause 6.10.3.4.1.49a.2.1.4.

6.11.5.4.1.49a.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF16 x 11 codes x 2 time slots
	Max. Number of data bits/radio frame	1912 bits
	TFCI code word/ radio frame	16 bits
	TPC/ radio frame	2*2 bits
	SS/ radio frame	2*2 bits
	Puncturing Limit	~~0.64~~0.68~~0~~0.60

6.11.5.4.1.50 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

6.11.5.4.1.50.1 Uplink

6.11.5.4.1.50.1.1 Transport channel parameters

6.11.5.4.1.50.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.5.4.1.13.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.50.1.1.3 TFCS

See clause 6.10.3.4.1.50.1.1.3.

6.11.5.4.1.50.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots/ radio frame	SF 1 x 1 code x 2 time slots
	Max. Number of data bits/radio frame	2792 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2 * 2 bits
	SS / radio frame	2 * 2 bits
	Puncturing Limit	~~0.68~~0.60~~0~~0.52

6.11.5.4.1.50.2 Downlink

6.11.5.4.1.50.2.1 Transport channel parameters

6.11.5.4.1.50.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.50.2.1.3 TFCS

See clause 6.10.3.4.1.50.2.1.3.

6.11.5.4.1.50.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF 16 x 15 codes x 2 time slots
	Max. Number of data bits/radio frame	2616 bits
	TFCI code word/ radio frame	16 bits
	TPC/ radio frame	2*2 bits
	SS/ radio frame	2*2 bits
	Puncturing Limit	~~0.64~~0.~~56~~0.48

6.11.5.4.1.51 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

6.11.5.4.1.51.1 Uplink

6.11.5.4.1.51.1.1 Transport channel parameters

6.11.5.4.1.51.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.1.1.1.

6.11.5.4.1.51.1.1.2 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB

See clause 6.10.3.4.1.264.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.51.1.1.4 TFCS

See clause 6.10.3.4.1.51.1.1.4.

6.11.5.4.1.51.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots/ radio frame	SF 1 x 1 code x 2 time slots
	Max. Number of data bits/radio frame	2792 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2 * 2 bits
	SS / radio frame	2 * 2 bits
	Puncturing Limit	0.640.600.52 (alt. 0.48)

6.11.5.4.1.51.2 Downlink

6.11.5.4.1.51.2.1 Transport channel parameters

6.11.5.4.1.51.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.2.1.1.

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

See clause 6.10.3.4.1.25.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.51.2.1.4 TFCS

See clause 6.10.3.4.1.51.2.1.4.

6.11.5.4.1.51.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF1 x 1 code x 2 time slots
	Max. Number of data bits/radio frame	2792 bits
	TFCI code word/ radio frame	16 bits
	TPC/ radio frame	2*2 bits
	SS/ radio frame	2*2 bits
	Puncturing Limit	~~0.64~~0.60~~0~~0.52

6.11.5.4.1.51a Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.51a.1 Uplink

6.11.5.4.1.51a.1.1 Transport channel parameters

6.11.5.4.1.51a.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.1.1.1.

6.11.5.4.1.51a.1.1.2 Transport channel parameters for Interactive or background / UL:8 kbps / PS RAB

See clause 6.10.3.4.1.23a.1.1.1.

6.11.5.4.1.51a.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.51a.1.1.4 TFCS

See clause 6.10.3.4.1.51a.1.1.4.

6.11.5.4.1.51a.1.2 Physical channel parameters

DPCH Uplink		Physical 1	Physical 2
	Modulation	QPSK	QPSK
	Codes and time slots/ radio frame	SF2 x 1 code x 2 time slots	SF1 x 1 code x 2 time slots
	Max. Number of data bits/radio frame	1384 bits	2792 bits
	TFCI code word/ radio frame	16 bits	16 bits
	TPC / radio frame	2 * 2 bits	2x 2 bits
	SS / radio frame	2 * 2 bits	2x 2 bits
	Puncturing Limit	~~0.52 alt 0.48~~0.40	~~1.0 alt 1.0~~0.84

6.11.5.4.1.51a.2 Downlink

6.11.5.4.1.51a.2.1 Transport channel parameters

6.11.5.4.1.51a.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.2.1.1.

6.11.5.4.1.51a.2.1.2 Transport channel parameters for Interactive or background / DL:8 kbps / PS RAB

See clause 6.10.3.4.1.23.2.1.1.

6.11.5.4.1.51a.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.51a.2.1.4 TFCS

See clause 6.10.3.4.1.51.2.1.4.

6.11.5.4.1.51a.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF1 x 1 code x 2 time slots
	Max. Number of data bits/radio frame	2792 bits
	TFCI code word/ radio frame	16 bits
	TPC/ radio frame	2*2 bits
	SS/ radio frame	2*2 bits
	Puncturing Limit	~~Xxx1.0~~0.84

6.11.5.4.1.51b Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or background / UL:16 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.51b.1 Uplink

6.11.5.4.1.51b.1.1 Transport channel parameters

6.11.5.4.1.51b.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.1.1.1.

6.11.5.4.1.51b.1.1.2 Transport channel parameters for Interactive or background / UL:16 kbps / PS RAB

See clause 6.10.3.4.1.23b.1.1.1.

6.11.5.4.1.51b.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.51b.1.1.4 TFCS

See clause 6.10.3.4.1.51b.1.1.4.

6.11.5.4.1.51b.1.2 Physical channel parameters

DPCH Uplink		Physical 1	Physical 2
	Modulation	QPSK	QPSK
	Codes and time slots/ radio frame	SF2 x 1 code x 2 time slots	SF1 x 1 code x 2 time slots
	Max. Number of data bits/radio frame	1384 bits	2792 bits
	TFCI code word/ radio frame	16 bits	16 bits
	TPC / radio frame	2 * 2 bits	2x 2 bits
	SS / radio frame	2 * 2 bits	2x 2 bits
	Puncturing Limit	~~xxx0.48~~0.40	~~yyy0.96~~0.76

6.11.5.4.1.51b.2 Downlink

see 6.11.5.4.1.51.2 Downlink

6.11.5.4.1.52 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

6.11.5.4.1.52.1 Uplink

See clause 6.11.5.4.1.51.1

6.11.5.4.1.52.2 Downlink

6.11.5.4.1.52.2.1 Transport channel parameters

6.11.5.4.1.52.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.2.1.1.

6.11.5.4.1.52.2.1.2 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB

See clause 6.10.3.4.1.27.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.52.2.1.4 TFCS

See clause 6.10.3.4.1.52.2.1.4.

6.11.5.4.1.52.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF 16 x 12 codes x 4 time slots
	Max. Number of data bits/radio frame	4200 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2 * 2 bits
	SS / radio frame	2 * 2 bits
	Puncturing Limit	~~0.64~~0.60~~0~~0.52

6.11.5.4.1.53 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

6.11.5.4.1.53.1 Uplink

6.11.5.4.1.53.1.1 Transport channel parameters

6.11.5.4.1.53.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.1.1.1.

6.11.5.4.1.53.1.1.2 Transport channel parameters for Interactive or background / UL:128 kbps / PS RAB

See clause 6.10.3.4.1.28.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.53.1.1.4 TFCS

See clause 6.10.3.4.1.53.1.1.4.

6.11.5.4.1.53.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK	8PSK
	Codes and time slots/ radio frame	SF1 x 1 code x 4 time slots	SF1 x 1code x 2 time slots
	Max. Number of data bits/radio frame	5608 bits	4188 bits
	TFCI code word/ radio frame	16 bits	24 bits
	TPC/ radio frame	2*2 bits	2*3 bits
	SS/ radio frame	2*2 bits	2*3 bits
	Puncturing Limit	~~0.88~~ ~~0.80~~0.72 (alt ~~0.72~~0.68)	~~0.68~~0.60~~0~~0.52 (alt ~~0.56~~0.48)

6.11.5.4.1.53.2 Downlink

See clause 6.11.5.4.1.52.2.

6.11.5.4.1.54 ~~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~~

Void. ~~6.11.5.4.1.54.1 Uplink~~

~~See clause 6.11.5.4.1.24.1.~~

~~6.11.5.4.1.54.2 Downlink~~

~~6.11.5.4.1.54.2.1 Transport channel parameters~~

~~6.11.5.4.1.54.2.1.1 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB~~

~~See clause 6.10.3.4.1.27.2.1.1.~~

~~6.11.5.4.1.54.2.1.2 Transport channel parameters for Streaming / unknown / DL:64 kbps / CS or PS RAB~~

~~See clause 6.10.3.4.1.18.2.1.1.~~

~~6.11.5.4.1.54.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.2.1.1.~~

~~6.11.5.4.1.54.2.1.4 TFCS~~

~~See clause 6.10.3.4.1.54.2.1.4.~~

~~6.11.5.4.1.54.2.2 Physical channel parameters~~

~~DPCH Downlink~~	~~Modulation~~	~~QPSK~~
	~~Codes and time slots/ radio frame~~	~~SF 16 x 12 codes x 4 time slots~~
	~~Max. Number of data bits/radio frame~~	~~4184 bits~~
	~~TFCI code word / radio frame~~	~~32 bits~~
	~~TPC / radio frame~~	~~2 * 2 bits~~
	~~SS / radio frame~~	~~2 * 2 bits~~
	~~Puncturing Limit~~	~~0.64~~

6.11.5.4.1.55 ~~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~~

Void. ~~6.11.5.4.1.55.1 Uplink~~

~~See clause 6.11.5.4.1.24.1.~~

~~6.11.5.4.1.55.2 Downlink~~

~~6.11.5.4.1.55.2.1 Transport channel parameters~~

~~6.11.5.4.1.55.2.1.1 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB~~

~~See clause 6.10.3.4.1.27.2.1.1.~~

~~6.11.5.4.1.55.2.1.2 Transport channel parameters for Streaming / unknown / DL:128 kbps / CS or PS RAB~~

~~See clause 6.10.3.4.1.20.2.1.1.~~

~~6.11.5.4.1.55.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.2.1.1.~~

~~6.11.5.4.1.55.2.1.4 TFCS~~

~~See clause 6.10.3.4.1.55.2.1.4.~~

~~6.11.5.4.1.55.2.2 Physical channel parameters~~

~~DPCH Downlink~~	~~Modulation~~	~~QPSK~~
	~~Codes and time slots/ radio frame~~	~~SF1 x 1 code x 4 time slots~~
	~~Max. Number of data bits/radio frame~~	~~5592 bits~~
	~~TFCI code word/ radio frame~~	~~24 bits~~
	~~TPC/ radio frame~~	~~2*2 bits~~
	~~SS/ radio frame~~	~~2*2 bits~~
	~~Puncturing Limit~~	~~0.64~~

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

6.11.5.4.1.56.1 Uplink

6.11.5.4.1.56.1.1 Transport channel parameters

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

see clause 6.10.3.4.1.56.1.1.1

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

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.56.1.1.3 TFCS

See clause 6.10.3.4.1.56.1.1.3

6.11.5.4.1.56.1.2.1 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots / radio frame	SF4 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	680 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS/ radio frame	2x 2 bits
	Puncturing Limit	~~1.00~~0.84 (alt ~~0.88~~0.76)

6.11.5.4.1.56.2 Downlink

6.11.5.4.1.56.2.1 Transport channel parameters

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

see clause 6.10.3.4.1.56.2.1.1

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.56.2.1.3 TFCS

See clause 6.10.3.4.1.56.2.1.3

6.11.5.4.1.56.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF16 x 4 code x 2 time slots
	Max. Number of data bits / radio frame	680 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~1.00~~0.84

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

6.11.5.4.1.57.1 Uplink

6.11.5.4.1.57.1.1 Transport channel parameters

6.11.5.4.1.57.1.1.1 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB + UL:64 kbps / PS RAB

See clause 6.10.3.4.1.38d.1.1.2.

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

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.57.1.1.3 TFCS

See clause 6.11.5.4.1.57.1.1.3

6.11.5.4.1.57.1.2 Physical channel parameters

DPCH Uplink		Physical 1~~2~~
	Modulation	QPSK
	Codes and time slots/ radio frame	SF1 x 1 code x 2 time slots
	Max. Number of data bits/radio frame	2792 bits
	TFCI code word/ radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.60~~0.52 (alt. 0.44)~~1~~

6.11.5.4.1.57.2 Downlink

6.11.5.4.1.57.2.1 Transport channel parameters

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

see clause 6.10.3.4.1.57.2.1.1

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.57.2.1.3 TFCS

See clause 6.10.3.4.1.57.2.1.3

6.11.5.4.1.57.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots/ radio frame	SF1 x 1 code x 2 time slots
	Max. Number of data bits/radio frame	2792 bits
	TFCI code word/ radio frame	16 bits
	TPC/ radio frame	2*2 bits
	SS/ radio frame	2*2 bits
	Puncturing Limit	~~0.60~~0.52

~~DPCH Downlink~~	~~Modulation~~	~~QPSK~~
	~~Codes and time slots/ radio frame~~	~~SF16 x 8 codes x 2 time slots~~
	~~Max. Number of data bits/radio frame~~	~~1384 bits~~
	~~TFCI code word/ radio frame~~	~~16 bits~~
	~~TPC/ radio frame~~	~~2*2 bits~~
	~~SS/ radio frame~~	~~2*2 bits~~
	~~Puncturing Limit/ radio frame~~	~~0.6~~

6.11.5.4.1.58 Streaming / unknown / UL:16 DL:64 kbps / PS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.58.1 Uplink

6.11.5.4.1.58.1.1 Transport channel parameters

6.11.5.4.1.58.1.1.1 Transport channel parameters for Streaming / unknown / UL:16 kbps / PS RAB

See Clause 6.10.3.4.1.58.1.1.1

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

See clause 6.10.3.4.1.23a.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.58.1.1.4 TFCS

See clause 6.10.3.4.1.58.1.1.4

6.11.5.1.58.1.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots/ frame	SF4 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	680 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.640.72~~0.60 (alt ~~0.68~~0.56)

6.11.5.4.1.58.2 Downlink

6.11.5.4.1.58.2.1 Transport channel parameters

6.11.5.4.1.58.2.1.1 Transport channel parameters for Streaming / unknown / DL:64 kbps / PS RAB

see Clause 6.10.3.4.1.58.2.1.1

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

See clause 6.10.3.4.1.23.2.1.1

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

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.58.2.1.4 TFCS

See Clause 6.10.3.4.1.58.2.1.4

6.11.5.4.1.58.2.3 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots / radio frame	SF16 x 8 code x 2 time slots
	Max. Number of data bits / radio frame	1384 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.72~~0.~~56~~0.44

6.11.5.4.1.59 Reserved for future use

6.11.5.4.1.60 Reserved for future use

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

6.11.5.4.1.61.1 Uplink

6.11.5.4.1.61.1.1 Transport channel parameters

6.11.5.4.1.61.1.1 Transport channel parameters for Conversational / unknown / UL:8 kbps / PS RAB

see Clause 6.10.3.4.1.61.1.1.1

6.10.3.4.1.61.1.1.2 Transport channel parameters for Interactive or Background / UL:8 kbps / PS RAB

See clause 6.10.3.4.1.23a.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1

6.11.5.4.1.61.1.1.4 TFCS

See Clause 6.10.3.4.1.61.1.1.4

6.11.5.4.1.61.2 Physical channel parameters

DPCH Uplink	Modulation	QPSK
	Codes and time slots / radio frame	SF 4 x 1 code x 2 time slots
	Max. Number of data bits / radio frame	680 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.82~~ ~~0.96~~0.84 (alt ~~0.92~~0.80)

6.11.5.4.1.61.2 Downlink

6.11.5.4.1.61.2.1 Transport channel parameters

6.11.5.4.1.61.2.1.1 Transport channel parameters for Conversational / unknown / DL:8 kbps / PS RAB

See clause 6.10.3.4.1.61.2.1.1

6.11.5.4.1.61.2.1.2 Transport channel parameters for Interactive or Background / DL:8 kbps / PS RAB

See clause 6.10.3.4.1.23.2.1.1

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

See clause 6.10.3.4.1.2.2.1.1

6.11.5.4.1.61.2.1.4 TFCS

See Clause 6.10.3.4.1.61.2.1.4

6.10.3.4.1.61.2.2 Physical channel parameters

DPCH Downlink	Modulation	QPSK
	Codes and time slots / radio frame	SF 16 x 4 code x 2 time slots
	Max. Number of data bits / radio frame	680 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2x 2 bits
	SS / radio frame	2x 2 bits
	Puncturing Limit	~~0.92~~0.96~~0~~0.84

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Next section

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6.11.5.4.2 Combinations on PDSCH, SCCPCH, PUSCH and PRACH

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

6.11.5.4.2.1.1 Uplink

6.11.5.4.2.1.1.1 Transport channel parameters

6.11.5.4.2.1.1.1.1 Transport channel parameters for Interactive or background / UL: 64 kbps / PS RAB and UL SRB for SHCCH mapped on USCH

See clause 6.10.3.4.2.1.1.1.1.

6.11.5.4.2.1.1.1.2 TFCS for USCH

See clause 6.10.3.4.32.1.1.1.52.

6.11.5.4.2.1.1.1.3 Transport channel parameters for SRB for CCCH and UL SRBs for DCCH and UL SRB for SHCCH mapped on RACH

See clause 6.10.3.4.2.1.1.1.63.

6.11.5.4.2.1.1.2 Physical channel parameters

PUSCH	Modulation	QPSK
	Codes and time slots/ radio frame	SF 1 x 1 code x 2 time slots
	Max. Number of data bits/radio frame	2792 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2 * 2 bits
	SS / radio frame	2 * 2 bits
	Puncturing Limit	1

Physical channel parameter for PRACH.

See clause 6.11.5.4.5.1.2.

6.11.5.4.2.1.2 Downlink

6.11.5.4.2.1.2.1 Transport channel parameters

6.11.5.4.2.1.2.1.1 Transport channel parameters for Interactive or background / DL: 256 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

See clause 6.10.3.4.2.1.2.1.1.

6.11.5.4.2.1.2.1.2 TFCS for DSCH

See clause 6.10.3.4.32.1.2.1.52.

6.11.5.4.2.1.2.1.3 Transport channel parameters for DL SRBs for DCCH and SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

Higher layer	RAB/signalling RB	**SRB#0**	**SRB#1**	**SRB#2**	**SRB#3**	**SRB#4**	**SRB#5**	**SRB#6**
	User of Radio Bearer	RRC	RRC	RRC	NAS_DT High prio	NAS_DT Low prio	RRC	RRC
RLC	Logical channel type	CCCH	DCCH	DCCH	DCCH	DCCH	SHCCH	BCCH
	RLC mode	UM	UM	AM	AM	AM	UM	TM
	Payload sizes, bit	160	136 or 120*	128	128	128	160	168
	Max data rate, bps	32000 (alt. 48000)	27200 or 24000 (alt. 40800 or 36000)	25600 (alt. 38400)	25600 (alt. 38400)	25600 (alt. 38400)	32000 (alt. 48000)	33600 (a 50400)
	RLC header, bit	8	8	16	16	16	8	0
MAC	MAC header, bit	3	27 or 43	27	27	27	3	3

	MAC multiplexing		7 logical channel multiplexing						
Layer 1	TrCH type		FACH						
	TB sizes, bit		171	171	171	171	171	171	171
	TFS	TF0, bits	0x171						
		TF1, bits	1x171						
		TF2, bits	2x171						
		TF3, bits	3x171						
		TF4, bits	4x171						
		TF5, bits	N/A (alt. 5x171)						
		TF6, bits	N/A (alt. 6x171)						
	TTI, ms		20						
	Coding type		CC ½						
	CRC, bit		16						
	Max number of bits/TTI after channel coding		1528 (alt. 2292)	1528 (alt. 2292)	1528 (alt. 2292)	1528 (alt. 2292)	1528 (alt. 2292)	1528 (alt. 2292)	1528 (al 2292)

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

6.11.5.4.2.1.2.1.4 TFCS for FACH

TFCS size	5 (alt. 7)
TFCS	FACH = (TF0), (TF1),(TF2), (TF3),(TF)4 (alt. FACH = TF0, TF1, TF2, TF3, TF4, TF5, TF6)

6.11.5.4.2.1.2.2 Physical channel parameters

PDSCH	Modulation	QPSK	8PSK
	Codes and time slots/ radio frame	SF16 x 11 codes x 6 time slots	SF1 x 1 code x 4 time slots
	Max. Number of data bits/radio frame	5784 bits	6511 bits
	TFCI code word/ radio frame	16 bits	24 bits
	TPC/ radio frame	2*2 bits	2*3 bits
	SS/ radio frame	2*2 bits	2*3 bits
	Puncturing Limit	~~0.64~~0.60	~~0.72~~0.68

S-CCPCH	Modulation	QPSK
	Codes and time slots/ radio frame	SF16 x 5 codes x 2 time slots
	Max. Number of data bits/radio frame	856 bits
	TFCI code word/ radio frame	16 bits
	TPC/ radio frame	2*2 bits
	SS/ radio frame	2*2 bits
	Puncturing Limit	0.72

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

6.11.5.4.2.2.1 Uplink

See clause 6.11.5.4.2.1.1.

6.11.5.4.2.2.2 Downlink

6.11.5.4.2.2.2.1 Transport channel parameters

6.11.5.4.2.2.2.1.1 Transport channel parameters for Interactive or background / DL: 384 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

See clause 6.10.3.4.2.2.2.1.1.

6.11.5.4.2.2.2.1.2 TFCS for DSCH

See clause 6.10.3.4.3~~2~~.2.2.1.5~~2~~.

6.11.5.4.2.2.2.1.3 Transport channel parameters for DL SRBs for DCCH and SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

See clause 6.11.5.4.2.1.2.1.3.

6.11.5.4.2.2.2.1.4 TFCS for FACH

See clause 6.11.5.4.2.1.2.1.4.

6.11.5.4.2.2.2.2 Physical channel parameters

PDSCH	Modulation	QPSK
	Codes and time slots/ radio frame	SF 1 x 1 code x 6 time slots
	Max. Number of data bits/radio frame	8424 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2 * 2 bits
	SS / radio frame	2 * 2 bits
	Puncturing Limit	~~0.64~~0.60

SCCPCH	Modulation	QPSK
	Codes and time slots/ radio frame	SF 16 x 5 codes x 2 time slots
	Max. Number of data bits/radio frame	856 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2 * 2 bits
	SS / radio frame	2 * 2 bits
	Puncturing Limit	0.72

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

6.11.5.4.2.3.1 Uplink

See clause 6.11.5.4.2.1.1.

6.11.5.4.2.3.2 Downlink

6.11.5.4.2.3.2.1 Transport channel parameters

6.11.5.4.2.3.2.1.1 Transport channel parameters for Interactive or background / DL: 2048 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

Higher Layer	RAB/Signalling RB		**RAB**	**SRB#5**
RLC	Logical channel type		DTCH	SHCCH
	RLC mode		AM	UM
	Payload sizes, bit		1704	160
	Max data rate, bps		2048000	16000
	RLC header, bit		16	8
MAC	MAC header, bit		0	0
	MAC multiplexing		N/A	N/A
Layer 1	TrCH type		DSCH	DSCH
	TB sizes, bit		1720	168
	TFS	TF0, bits	0x1720	0x168
		TF1, bits	1x1720	1x168
		TF2, bits	2x1720	N/A
		TF3, bits	4x1720	N/A
		TF4, bits	8x1720	N/A
		TF5, bits	12x1720	N/A
		TF6, bits	N/A (alt. 16x1720)	N/A
		TF7, bits	N/A (alt. 20x1720)	N/A
		TF8, bits	N/A (alt. 24x1720)	N/A
	TTI, ms		10 (alt. 20)	10
	Coding type		No Coding	CC ½
	CRC, bit		24	16
	Max number of bits/TTI after channel coding		20928 (alt. 41856)	384
	Downlink: Max number of bits/radio frame before rate matching		20928 (alt. 20928)	384
	RM attribute		135-175	180-220

6.11.5.4.2.3.2.1.2 TFCS for DSCH

TFCS size	11 (alt.17)
TFCS	(2048 kbps RAB, SHCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, 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), (TF7, TF0), (TF8, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF1))

For better understanding of the TFCS please note that the following combinations are not included in the table above: (TF5, TF1), (TF8, TF1)

6.11.5.4.2.3.2.1.3 Transport channel parameters for DL SRBs for DCCH and SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

See clause 6.11.5.4.2.1.2.1.3.

6.11.5.4.2.3.2.1.4 TFCS for FACH

See clause 6.11.5.4.2.1.2.1.4.

6.11.5.4.2.3.2.2 Physical channel parameters

PDSCH	Modulation	8PSK
	Codes and time slots/ radio frame	SF1 x 1 code x 10 time slots
	Max. Number of data bits/radio frame	21084 bits
	TFCI code word/ radio frame	24 bits
	TPC/ radio frame	2*3 bits
	SS/ radio frame	2*3 bits
	Puncturing Limit	1

S-CCPCH	Modulation	QPSK
	Codes and time slots/ radio frame	SF16 x 5 codes x 2 time slots
	Max. Number of data bits/radio frame	856 bits
	TFCI code word/ radio frame	16 bits
	TPC/ radio frame	2*2 bits
	SS/ radio frame	2*2 bits
	Puncturing Limit	0.72

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

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

6.11.5.4.3.1.1 Uplink

6.11.5.4.3.1.1.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.1.1.1.

6.11.5.4.3.1.1.1.2 Transport channel parameters for UL SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.3.1.1.1.3 TFCS for DCH

See clause 6.10.3.4.1.4.1.1.3.

6.11.5.4.3.1.1.1.4 Transport channel parameters for Interactive or background / UL: 64 kbps / PS RAB and UL SRB for SHCCH mapped on USCH

See clause 6.10.3.4.2.1.1.1.1.

6.11.5.4.3.1.1.1.5 TFCS for USCH

See clause 6.10.3.4.~~2~~3.1.1.1.~~2~~5.

6.11.5.4.3.1.1.1.6 Transport channel parameters for SRB for CCCH and UL SRB for SHCCH mapped on RACH

See clause 6.10.3.4.3.1.1.1.6.

6.11.5.4.3.1.1.2 Physical channel parameters

Physical channel parameters for uplink DPCH see clause 6.11.5.4.1.4.1.2.

Physical channel parameters for PUSCH see clause 6.11.5.4.2.1.1.2.

Physical channel parameters for PRACH see clause 6.11.5.4.2.1.1.2.

6.11.5.4.3.1.2 Downlink

6.11.5.4.3.1.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.3.1.2.1.2 Transport channel parameters for DL SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.3.1.2.1.3 TFCS for DCH

See clause 6.10.3.4.1.4.2.1.3.

6.11.5.4.3.1.2.1.4 Transport channel parameters for Interactive or background / DL: 256 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

See clause 6.10.3.4.2.1.2.1.1.

6.11.5.4.3.1.2.1.5 TFCS for DSCH

See clause 6.10.3.4.3~~2~~.1.2.1.5~~2~~.

6.11.5.4.3.1.2.1.6 Transport channel parameters for SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

Higher layer	RAB/Signalling RB		SRB#0	SRB#5	SRB#6
	User of Radio Bearer		RRC	RRC	RRC
RLC	Logical channel type		CCCH	SHCCH	BCCH
	RLC mode		UM	UM	TM
	Payload sizes, bit		160	160	168
	Max data rate, bps		32000	32000	33600
	RLC header, bit		8	8	0
MAC	MAC header, bit		3		
	MAC multiplexing		3 logical channel multiplexing		
Layer 1	TrCH type		FACH		
	TB sizes, bit		171		
	TFS	TF0, bits	0x171		
		TF1, bits	1x171		
		TF2, bits	2x171		
		TF3, bits	3x171		
		TF4, bits	4x171		
	TTI, ms		20		
	Coding type		CC ½		
	CRC, bit		16		
	Max number of bits/TTI after channel coding		1528		
	Max number of bits/radio frame before rate matching		764		

6.11.5.4.3.1.2.1.7 TFCS for FACH

TFCS size	5
TFCS	FACH = TF0, TF1,TF2,TF3,TF4

6.11.5.4.3.1.2.2 Physical channel parameters

Physical channel parameters for downlink for DPCH see clause 6.11.5.4.1.4.2.2.

Physical channel parameters for downlink for PDSCH see clause 6.11.5.4.2.1.2.2.

Physical channel parameters for SCCPCH see clause 6.11.5.4.2.1.2.2.

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

6.11.5.4.3.2.1 Uplink

See clause 6.11.5.4.3.1.1.

6.11.5.4.3.2.2 Downlink

6.11.5.4.3.2.2.1 Transport channel parameters

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

See clause 6.10.3.1.4.1.4.2.1.1.

6.11.5.4.3.2.2.1.2 Transport channel parameters for DL SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.3.2.2.1.3 TFCS for DCH

See clause 6.10.3.4.1.4.2.1.3.

6.11.5.4.3.2.2.1.4 Transport channel parameters for Interactive or background / DL: 384 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

See clause 6.10.3.4.2.2.2.1.1.

6.11.5.4.3.2.2.1.5 TFCS for DSCH

See clause 6.10.3.4.3~~2~~.2.2.1.5~~2~~.

6.11.5.4.3.2.2.1.6 Transport channel parameters for SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

See clause 6.11.5.4.3.1.2.1.6.

6.11.5.4.3.2.2.1.7 TFCS for FACH

See clause 6.11.5.4.3.1.2.1.7.

6.11.5.4.3.2.2.2 Physical channel parameters

Physical channel parameters for downlink for DPCH see clause 6.11.5.4.1.4.2.2.

Physical channel parameters for downlink for PDSCH see clause 6.11.5.4.2.2.2.2.

Physical channel parameters for downlink for SCCPCH see clause 6.11.5.4.2.1.2.2.

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

6.11.5.4.3.3.1 Uplink

See clause 6.11.5.4.3.1.1.

6.11.5.4.3.3.2 Downlink

6.11.5.4.3.3.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.3.3.2.1.2 Transport channel parameters for DL SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.3.3.2.1.3 TFCS for DCH

See clause 6.10.3.4.1.4.2.1.3.

6.11.5.4.3.3.2.1.4 Transport channel parameters for Interactive or background / DL: 2048 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

See clause 6.11.5.4.2.3.2.1.2.

6.11.5.4.3.3.2.1.5 TFCS for DSCH

See clause 6.11.5.4.2.3.2.1.4.

6.11.5.4.3.3.2.1.6 Transport channel parameters for SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

See clause 6.11.5.4.3.1.2.1.6.

6.11.5.4.3.3.2.1.7 TFCS for FACH

See clause 6.11.5.4.3.1.2.1.7.

6.11.5.4.3.3.2.2 Physical channel parameters

Physical channel parameters for downlink DPCH see clause 6.11.5.4.1.4.2.2.

Physical channel parameters for PDSCH see clause 6.11.5.4.2.3.2.2.

Physical channel parameters for SCCPCH see clause 6.11.5.4.2.1.2.2.

6.11.5.4.4 Combinations on SCCPCH

6.11.5.4.4.1 Stand-alone signalling RB for PCCH

6.11.5.4.4.1.1 Transport channel parameters

6.11.5.4.4.1.1.1 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, bits	0x240 (alt. 0x80)
		TF1, bits	1x240 (alt. 1x80)
		TF2, bits	2x240 (alt. 2x80)
	TTI, ms		20
	Coding type		CC 1/2
	CRC, bit		16
	Max number of bits/TTI before rate matching		1056 (alt. 400)
	RM attribute		210-250

6.11.5.4.4.1.1.2 TFCS

TFCS size	3
TFCS	SRBs for PCCH = TF0, TF1,TF2

6.11.5.4.4.1.2 Physical channel parameters

S-CCPCH	Modulation	QPSK
	Codes and time slots/ radio frame	SF16 x 2 codes x 2 time slots
	Max. Number of data bits/radio frame	344 bits
	TFCI code word/ radio frame	8 bits
	TPC/ radio frame	0 bits
	SS/ radio frame	0 bits
	Puncturing Limit	0.64

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

6.11.5.4.4.2.1 Transport channel parameters

6.11.5.4.4.2.1.1 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		27
	MAC multiplexing		N/A
Layer 1	TrCH type		FACH
	TB sizes, bit		363
	TFS	TF0, bits	0 x363
		TF1, bits	1x363
		TF2, bits	2x363
	TTI, ms		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI before rate matching		2286
	RM attribute		110-150

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

Higher layer	RAB/signalling RB		SRB#1	SRB#2	SRB#3	SRB#4	SRB#5	SRB#6
	User of Radio Bearer		RRC	RRC	RRC	NAS_DT High prio	NAS_DT Low prio	RRC
RLC	Logical channel type		CCCH	DCCH	DCCH	DCCH	DCCH	BCCH
	RLC mode		UM	UM	AM	AM	AM	TM
	Payload sizes, bit		160	136 or 120	128	128	128	168
	Max data rate, bps		32000 (alt. 48000)	27200 or 2400 (alt. 40800 or 36000)	25600 (alt. 38400)	25600 (alt. 38400)	25600 (alt. 38400)	33600 (alt. 50400)
	RLC header, bit		8	8	16	16	16	0
MAC	MAC header, bit		3	27 or 43	27	27	27	3
	MAC multiplexing		6 logical channel multiplexing					
Layer 1	TrCH type		FACH					
	TB sizes, bit		171					
	TFS	TF0, bits	0x171					
		TF1, bits	1x171					
		TF2, bits	2x171					
		TF3, bits	3x171					
		TF4, bits	4x171					
		TF5, bits	N/A (alt. 5x171)					
		TF6, bits	N/A (alt. 6x171)					

	TTI, ms	20
	Coding type	CC ½
	CRC, bit	16
	Max number of bits/TTI before rate matching	1528 (alt. 2292)
	RM attribute	200-240

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

6.11.5.4.4.2.1.3 TFCS

TFCS size	15 (alt. 21)
TFCS	(32kbps RAB, SRBs for CCCH/DCCH/BCCH) = (TF0, TF0), (TF0, TF1), (TF0, TF2),(TF0, TF3),), (TF0, TF4), (TF1, TF0), (TF1, TF1), (TF1, TF2), (TF1, TF3), (TF1, TF4), (TF2, TF0), (TF2, TF1), (TF2, TF2), (TF2, TF3), (TF2, TF4), (alt. (TF0, TF0), (TF0, TF1), (TF0, TF2), (TF0, TF3), (TF0, TF4), (TF0, TF5), (TF0, TF6), (TF1, TF0), (TF1, TF1), (TF1, TF2), (TF1, TF3), (TF1, TF4), (TF1, TF5), (TF1, TF6), (TF2, TF0), (TF2, TF1), (TF2, TF2), (TF2, TF3), (TF2, TF4), (TF2, TF5), (TF2, TF6))

6.11.5.4.4.2.2 Physical channel parameters

SCCPCH	Modulation	QPSK
	Codes and time slots/ radio frame	SF 16 x 9 codes x 2 time slots
	Max. Number of data bits/radio frame	1560 bits
	TFCI code word / radio frame	16 bits
	TPC / radio frame	2 * 2 bits
	SS / radio frame	2 * 2 bits
	Puncturing Limit	~~0.68~~0.40

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

6.11.5.4.4.3.1 Transport channel parameters

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

See clause 6.11.5.4.4.2.1.

6.11.5.4.4.3.1.2 Transport channel parameters of SRB for PCCH

See clause 6.11.5.4.4.1.1.

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

See clause 6.11.5.4.4.2.1.2.

6.11.5.4.4.3.1.4 TFCS

TFCS size	45 (alt. 63)
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, TF0, TF4),(TF0, TF1, TF0), (TF0, TF1, TF1), (TF0, TF1, TF2), (TF0, TF1, TF3), (TF0, TF1, TF4),(TF0, TF2, TF0), (TF0, TF2, TF1), (TF0, TF2, TF2), (TF0, TF2, TF3), (TF0, TF2, TF4),(TF1, 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, TF2, TF0), (TF1, TF2, TF1), (TF1, TF2, TF2), (TF1, TF2, TF3), (TF1, TF2, TF4),(TF2, TF0, TF0), (TF2, TF0, TF1), (TF2, TF0, TF2), (TF2, TF0, TF3), (TF2, TF0, TF4),(TF2, TF1, TF0), (TF2, TF1, TF1), (TF2, TF1, TF2), (TF2, TF1, TF3), (TF2, TF1, TF4),(TF2, TF2, TF0), (TF2, TF2, TF1), (TF2, TF2, TF2), (TF2, TF2, TF3), (TF2, TF2, TF4) (alt. (TF0, TF0, TF0), (TF0, TF0, TF1), (TF0, TF0, TF2), (TF0, TF0, TF3), (TF0, TF0, TF4), (TF0, TF0, TF5), (TF0, TF0, TF6),(TF0, TF1, TF0), (TF0, TF1, TF1), (TF0, TF1, TF2), (TF0, TF1, TF3), (TF0, TF1, TF4), (TF0, TF1, TF5), (TF0, TF1, TF6),(TF0, TF2, TF0), (TF0, TF2, TF1), (TF0, TF2, TF2), (TF0, TF2, TF3), (TF0, TF2, TF4), (TF0, TF2, TF5), (TF0, TF2, TF6), (TF1, TF0, TF0), (TF1, TF0, TF1), (TF1, TF0, TF2), (TF1, TF0, TF3), (TF1, TF0, TF4), (TF1, TF0, TF5), (TF1, TF0, TF6),(TF1, TF1, TF0), (TF1, TF1, TF1), (TF1, TF1, TF2), (TF1, TF1, TF3), (TF1, TF1, TF4), (TF1, TF1, TF5), (TF1, TF1, TF6),(TF1, TF2, TF0), (TF1, TF2, TF1), (TF1, TF2, TF2), (TF1, TF2, TF3), (TF1, TF2, TF4), (TF1, TF2, TF5), (TF1, TF2, TF6),(TF2, TF0, TF0), (TF2, TF0, TF1), (TF2, TF0, TF2), (TF2, TF0, TF3), (TF2, TF0, TF4), (TF2, TF0, TF5), (TF2, TF0, TF6),(TF2, TF1, TF0), (TF2, TF1, TF1), (TF2, TF1, TF2), (TF2, TF1, TF3), (TF2, TF1, TF4), (TF2, TF1, TF5), (TF2, TF1, TF6),(TF2, TF2, TF0), (TF2, TF2, TF1), (TF2, TF2, TF2), (TF2, TF2, TF3), (TF2, TF2, TF4), (TF2, TF2, TF5) (TF2, TF2, TF6))

6.11.5.4.4.3.2 Physical channel parameters

S-CCPCH	Modulation	QPSK
	Codes and time slots/ radio frame	SF16 x 10 codes x 2 time slots
	Max. Number of data bits/radio frame	1728 bits
	TFCI code word/ radio frame	32 bits
	TPC/ radio frame	0 bits
	SS/ radio frame	0 bits
	Puncturing Limit	0.64

6.11.5.4.5 Combinations on PRACH

6.11.5.4.5.1 SRB for CCCH + SRBs for DCCH

6.11.5.4.5.1.1 Transport channel parameters

6.11.5.4.5.1.1.1 Transport channel parameter for SRB for CCCH, SRBs for DCCH

Higher layer	RAB/signalling RB	**SRB#1**	**SRB#2**	**SRB#3**	**SRB#4**	**SRB#5**
	User of Radio Bearer	RRC	RRC	RRC	NAS_DT High prio	NAS_DT Low prio
RLC	Logical channel type	CCCH	DCCH	DCCH	DCCH	DCCH
	RLC mode	TM	UM	AM	AM	AM
	Payload sizes, bit	168	136	128	128	128

	Max data rate, bps	16800	13600	12800	12800	12800
	RLC header, bit	0	8	16	16	16
MAC	MAC header, bit	2	26	26	26	26
	MAC multiplexing	5 logical channel multiplexing				
Layer 1	TrCH type	RACH				
	TB sizes, bit	170	170	170	170	170
	TFS TF0, bits	1x170				
	TTI, ms	10				
	Coding type	CC ½				
	CRC, bit	16				
	Max number of bits/TTI after channel coding	388	388	388	388	388
	Max number of bits/Radio frame before rate matching	388	388	388	388	388

6.11.5.4.5.1.1.2 TFCS

See clause 6.10.3.4.5.1.1.2

6.11.5.4.5.1.2 Physical channel parameters

PRACH	Modulation	QPSK
	Codes and time slots/ radio frame	SF 8 x 1 code x 2 time slots
	Max. Number of data bits/radio frame	352 bits
	TPC / radio frame	0 bits
	SS / radio frame	0 bits
	Puncturing Limit	0.88

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

6.11.5.4.5.2.1 Transport channel parameters

6.11.5.4.5.2.1.1 Transport channel parameters for Interactive or background / UL: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
	AMD/UMD/TrD PDU header, bit		16
MAC	MAC header, bit		24
	MAC multiplexing		
Layer 1	TrCH type		RACH
	TB sizes, bit		360
	TFS	TF0, bits	1x360

TTI, ms	10
Coding type	CC ½
CRC, bit	16
Max number of bits/TTI after channel coding	768
Max number of bits/ Radio frame before rate matching	768

6.11.5.4.5.2.1.2 Transport channel parameters for SRB for CCCH + SRBs for DCCH

See the Chapter 6.11.5.4.5.1.1.1.

6.11.5.4.5.2.1.3 TFCS

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

6.11.5.4.5.2.2 Physical channel parameters

PRACH	Modulation	QPSK
	Codes and time slots/ radio frame	SF 4 x 1 code x 2 time slots
	Max. Number of data bits/radio frame	704 bits
	TPC / radio frame	0 bits
	SS / radio frame	0 bits
	Puncturing Limit	0.88

For physical channel parameters for SRB for CCCH + SRBs for DCCH see clause 6.11.5.4.5.1.2.

3GPP TSG-T WG1 Meeting #22
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Tdoc ⌘T1-040273

CR-Form-v7

CHANGE REQUEST

⌘ **34.108** **CR** **295** ⌘ **rev** **-** ⌘ Current version: **4.9.0** ⌘

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

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	Baseline radio bearer combination for HSDPA support
Source:	⌘	Ericsson
Work item code:	⌘	HSDPA
Date:	⌘	3/02/2004
Category:	⌘	**B**
Release:	⌘	REL-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 *(GSM Phase 2)*
R96 *(Release 1996)*
R97 *(Release 1997)*
R98 *(Release 1998)*
R99 *(Release 1999)*
Rel-4 *(Release 4)*
Rel-5 *(Release 5)*
Rel-6 *(Release 6)*

Reason for change:	⌘	Currently there is no reference radio bearer configurations for HS-DSCH in TS 34.108. The reason for this CR is to allow the testing of the baseline standalone HSDPA radio bearers. This CR is based on the RAN2 recommendations received in the LS in T1-040047(R2-032694).
Summary of change:	⌘	1. Combinations on DPCH and HS-PDSCH added to section 6.10.2.2 2. Section 6.10.3.4.6 added (Combinations on DPCH and HS-PDSCH) 3. The following Release 5 radio bearer configurations for testing of HSDPA is added: a. 6.10.3.4.6.1 Interactive or Background / UL:64 DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH b. 6.10.3.4.6.2 Interactive or background / UL:384 DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH
Consequences if not approved:	⌘	UE conformance testing would not cover any radio bearer configuration required for the provision of HSDPA.

Clauses affected:	⌘	6.10.2.2, 6.10.3.4.6 (new), 6.10.3.4.6.1 (new) and 6.10.3.4.6.2 (new)

[Y] [N]

Other specs Affected:	⌘		X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘	Changes introduced in T1-040273 (revision of T1-040070) are color coded in blue.			

How to create CRs using this form:

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

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

<Start of first modified section>

6.10 Reference Radio Bearer configurations used in Radio Bearer interoperability testing

The reference radio bearer configurations are typical configurations of the radio interface. This sub-set of the mandatory set of radio bearer configurations supported by the UE is intended to be used as test configurations for testing of the UE. The purpose of the reference radio bearer configurations is to ensure interoperability of UE's in different regions and networks.

The reference radio bearer configurations are used in the radio bearer interoperability test cases, clause 14 of TS 34.123-1 [1]. The reference radio bearer configurations are also intended to be the first choice for other test cases where a radio bearer configuration is needed. For test cases requiring alternative configurations not provided by the reference radio bearer configurations then these specific radio bearer configurations are either specified in the actual test case itself; or in case the configurations are used by more than one test case then these common radio bearer configurations are specified in clause 6.11 of the present document.

NOTE If not specifically specified then the mid-value of the RM attríbute value range as specified by the actual reference radio bearer configuration shall be applied for testing.

6.10.1 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.

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 6.10.1.1.

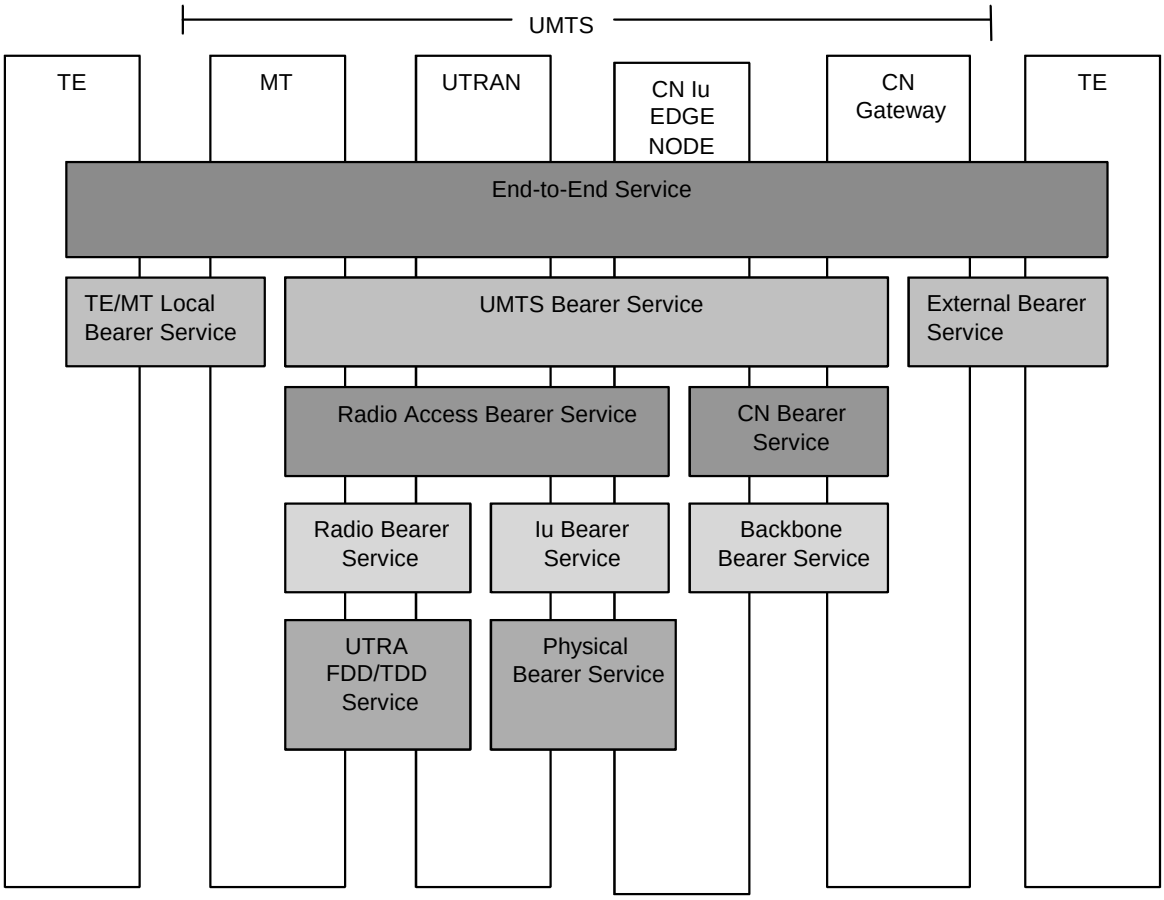

Figure 6.10.1.1: UMTS QoS Architecture

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. As a first approach the four following attributes have been considered to come up with the parameter settings in clause 6.10.2.4 for FDD mode and 6.10.3.4 for TDD mode:

- Traffic class;
- SSD;
- Maximum bit rate;
- Residual BER.

The Traffic classes are explained in table 6.10.1.1. 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.

NOTE: The maximum bit rate in 6.10.2.4 for FDD mode and 6.10.3.4 for TDD mode is one of the RAB attribute as described above. For Interactive/Background PS RABs, however, the maximum bit rate of Radio Bearer can be lower than the maximum bit rate of RAB attributes due to radio resource management. Bit rates of Interactive/Background PS RABs described in 6.10.2.4 for FDD mode and 6.10.3.4 for TDD mode may represent the maximum bit rate of Radio Bearer taking account into this management.

Table 6.10.1.1: 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

6.10.2 RAB and signalling RB for FDD

6.10.2.1 RABs and signalling RBs

In the following clauses, 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 6.10.2.1.1: Prioritised RABs.

#	Traffic class [15]	SSD [15]	Max. rate, kbps	CS/PS
1	Conversational	Speech	UL:12.2 DL:12.2	CS
1a	Conversational	Speech	UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75)	CS
2	Conversational	Speech	UL:10.2 DL:10.2	CS
2a	Conversational	Speech	UL:(10.2, 6.7, 5.9, 4.75) DL:(10.2, 6.7, 5.9, 4.75)	CS
3	Conversational	Speech	UL:7.95 DL:7.95	CS
4	Conversational	Speech	UL:7.4 DL:7.4	CS
4a	Conversational	Speech	UL:(7.4, 6.7, 5.9, 4.75) DL:(7.4, 6.7, 5.9, 4.75)	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
11a	Conversational	Unknown	UL:8 DL:8	PS
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	Void			
15a	Streaming	Unknown	UL:16 DL:64	PS
16	Void			
17	Void			
18	Void			
19	Void			
20	Interactive or Background	N/A	UL:32 DL:8	PS
20a	Interactive or Background	N/A	UL:8 DL:8	PS
20b	Interactive or Background	N/A	UL:16 DL:16	PS
20c	Interactive or Background	N/A	UL:32 DL:32	PS
21	Void			
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	Void			
32	Interactive or Background	N/A	UL:64 DL:256	PS
33	Interactive or Background	N/A	UL:0 DL:32	PS
34	Interactive or Background	N/A	UL:32 DL: 0	PS
35	Interactive or Background	N/A	UL:64 DL:144	PS
36	Interactive or Background	N/A	UL:144 DL:144	PS
37	Reserved for future use			
38	Reserved for future use			
39	Interactive or Background	N/A	UL:64 DL:768	PS

Table 6.10.2.1.2: 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

6.10.2.2 Combinations of RABs and Signalling RBs

In the present 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.

4a) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

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

5a) Conversational / speech / UL:(10.2, 6.7, 5.9, 4.75) DL:(10.2, 6.7, 5.9, 4.75) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

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.

7a) Conversational / speech / UL:(7.4, 6.7, 5.9, 4.75) DL:(7.4, 6.7, 5.9, 4.75) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

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) Void

19) Void.

20) Void.

21) Void.

22) Void.

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

23a) Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

23b) Interactive or background / UL:16 DL:16 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

23c) Interactive or background / UL:32 DL:32 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

23d) Interactive or background / UL:32 DL:32 kbps / PS RAB (20 ms TTI)
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

24) Void

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) Void

37) Void

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.

38a) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:0 DL:0 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

38b) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

38c) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:32 DL:32 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

38d) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

38e) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:0 DL:0 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

38f) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

38g) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:16 DL:16 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

38h) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:32 DL:32 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

38i) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

38j) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

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) Void

47) Void.

48) Void.

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.

49a) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

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.

51a) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or Background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

51b) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or Background / UL:16 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

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) Void

55) Void.

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

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

58) Streaming / unknown / UL:16 DL:64 kbps / PS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

59) Reserved for future use.

60) Reserved for future use.

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

62) Reserved for future use.

Combinations on DSCH and DPCH

1) Void

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

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

4) Void

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.

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.

Combinations on SCCPCH

1) Stand-alone 24 kbps SRB for PCCH.

2) Interactive or background / DL:32 kbps / PS RAB
+ SRB for CCCH
+ SRBs for DCCH
+ SRB for BCCH.

3) Interactive or background / DL:32 kbps / PS RAB
+ SRB for PCCH
+ SRB for CCCH
+ SRBs for DCCH
+ SRB for BCCH.

4) RB for CTCH
+ SRB for CCCH
+SRB for BCCH

Combinations on PRACH

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

Combinations on DPCH and HS-PDSCH

1) Interactive or background / UL:64 DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

2) Interactive or background / UL:384 DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.3 Example of linkage between RABs and services

RABs, which are included in the present document, can provide the services as shown in table 6.10.1.1. Furthermore, the required BER for each RAB, which is assumed in the present document, is shown in table 6.10.2.3.1.

Table 6.10.2.3.1: Example of linkage between RABs and services

RAB				Residual BER [15]	Services
Traffic class [15]	SSD [15]	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 [15]
Conversational	Unknown	UL:32 DL:32	CS	$1x10^{-4}$ or $1x10^{-6}$	32k 3G-324M [15]
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 [18] PIAFS 32 kbps
Streaming	Unknown	UL:57.6 DL:57.6	CS	$1x10^{-3}$	Modem [18], FTM [17] PIAFS 64 kbps
Streaming	Unknown	UL:64-128 or DL:64-384	CS	$1x10^{-3}$ 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 1: SMS can be provided via the signalling RB (DCCH) on DPCH or SCCPCH.

NOTE 2: CBS can be provided via the signalling RB (CTCH) on SCCPCH.

NOTE 3: UDI *n*B can be provided via *n* RABs of conversational 64 kbps.

6.10.2.4 Typical radio parameter sets

<End of modified section>

<Start of next modified section>

6.10.3.4.6 Combinations on DPCH and HS-PDSCH

6.10.3.4.6.1 Interactive or background / UL:64 DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.6.1.1 Uplink

See clause 6.10.2.4.1.26.1.

6.10.3.4.6.1.2 Downlink

6.10.3.4.6.1.2.1 Transport channel parameters

6.10.3.4.6.1.2.1.1 Transport channel parameters for HS-DSCH

6.10.3.4.6.1.2.1.1.1 MAC-d flow parameters for Interactive or background / DL: [max bit rate depending on UE category] / PS RAB

Higher layer	RAB/Signalling RB	**RAB**
RLC	Logical channel type	DTCH
	RLC mode	AM
	Payload sizes, bit	320 (alt. 640)
	Max data rate, bps	depends on UE category NOTE1
	AMD PDU header, bit	16
MAC	MAC-d header, bit	0
	MAC multiplexing	N/A
	MAC-d PDU size, bit	336 (alt. 656)
	MAC-hs header fixed part, bit	21
Layer 1	TrCH type	HS-DSCH
	TTI	2 ms
	Coding type	TC
	CRC, bit	24

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

6.10.3.4.6.1.2.1.2 Transport channel parameters for DCH

6.10.3.4.6.1.2.1.2.1 Transport channel parameters for UL:3.4 DL: 3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.3.4.6.1.2.1.2.2 TFCS

See clause 6.10.2.4.1.2.2.1.2.

6.10.3.4.6.1.2.2 Physical channel parameters

6.10.3.4.6.1.2.2.1 Physical channel parameters on DPCH

See clause 6.10.2.4.1.2.2.2.

6.10.3.4.6.1.2.2.21 Physical channel parameters on HS-PDSCH

Note that each alternative configuration in physical channel parameters is stand-alone and can be associated with any of the RAB alternatives in the transport channel parameters.

UE HS-DSCH Physical Layer category 1:

HS-PDSCH	Number of processes	2, (alt. 8)
	Process memory size	Split equally among all processes
	Max Data Rate	1.2Mbps, (alt. 400kbps)

UE HS-DSCH Physical Layer category 2:

HS-PDSCH	Number of processes	2, (alt. 8)
	Process memory size	Split equally among all processes
	Max Data Rate	1.2Mbps, (alt. 600kbps)]

UE HS-DSCH Physical Layer category 3:

HS-PDSCH	Number of processes	3, (alt. 8)
	Process memory size	Split equally among all processes
	Max Data Rate	1.8Mbps, (alt. 900kbps)

UE HS-DSCH Physical Layer category 4:

HS-PDSCH	Number of processes	3, (alt. 8)
	Process memory size	Split equally among all processes
	Max Data Rate	1.8Mbps, (alt. 1.2Mbps)

UE HS-DSCH Physical Layer category 5:

HS-PDSCH	Number of processes	6, (alt. 8)
	Process memory size	Split equally among all processes
	Max Data Rate	3.65Mbps, (alt. 3.6Mbps)

UE HS-DSCH Physical Layer category 6:

HS-PDSCH	Number of processes	6, (alt. 8)
	Process memory size	Split equally among all processes
	Max Data Rate	3.65Mbps, (alt. 3.65Mbps)

UE HS-DSCH Physical Layer category 7:

HS-PDSCH	Number of processes	6, (alt. 8)
	Process memory size	Split equally among all processes
	Max Data Rate	7.3Mbps, (alt. 7.2Mbps)

UE HS-DSCH Physical Layer category 8:

HS-PDSCH	Number of processes	6, (alt. 8)
	Process memory size	Split equally among all processes
	Max Data Rate	7.3Mbps, (alt. 7.3Mbps)

UE HS-DSCH Physical Layer category 9:

HS-PDSCH	Number of processes	6, (alt. 8)
	Process memory size	Split equally among all processes
	Max Data Rate	10.2Mbps, (alt. 10.2Mbps)

UE HS-DSCH Physical Layer category 10:

HS-PDSCH	Number of processes	6, (alt. 8)
	Process memory size	Split equally among all processes
	Max Data Rate	14.4Mbps, (alt. 10.8Mbps)

UE HS-DSCH Physical Layer category 11:

HS-PDSCH	Number of processes	3, (alt. 8)
	Process memory size	Split equally among all processes
	Max Data Rate	900kbps, (alt. 450kbps)

UE HS-DSCH Physical Layer category 12:

HS-PDSCH	Number of processes	6, (alt. 8)
	Process memory size	Split equally among all processes
	Max Data Rate	1.8Mbps, (alt. 1.8Mbps)

6.10.3.4.6.2 Interactive or background / UL:384 DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.6.2.1 Uplink

See clause 6.10.2.4.1.34.1.

6.10.3.4.6.2.2 Downlink

6.10.3.4.6.2.2.1 Transport channel parameters

6.10.3.4.6.2.2.1.1 Transport channel parameters for HS-DSCH

6.10.3.4.6.2.2.1.1.1 MAC-d flow parameters for Interactive or background / DL: [max bit rate depending on UE category] / PS RAB

Higher Layer	RAB/Signalling RB	**RAB**
RLC	Logical channel type	DTCH
	RLC mode	AM
	Payload sizes, bit	320 (alt. 640)
	Max data rate, bps	depends on UE category NOTE1
	AMD PDU header, bit	16
MAC	MAC-d header, bit	0
	MAC multiplexing	N/A
	MAC-d PDU size, bit	336 (alt. 656)
	MAC-hs header fixed part, bit	21
Layer 1	TrCH type	HS-DSCH
	TTI	2 ms
	Coding type	TC
	CRC, bit	24

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

6.10.3.4.6.2.2.1.2 Transport channel parameters for DCH

6.10.3.4.6.2.2.1.2.1 Transport channel parameters for UL:3.4 DL: 3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.3.4.6.2.2.1.2.2 TFCS

See clause 6.10.2.4.1.2.2.1.2.

6.10.3.4.6.2.2.2 Physical channel parameters

6.10.3.4.6.2.2.2.1 Physical channel parameters on DPCH

See clause 6.10.2.4.1.2.2.2.

6.10.3.4.6.2.2.2.2 Physical channel parameters on HS-PDSCH

Note that each alternative configuration in physical channel parameters is stand-alone and can be associated with any of the RAB alternatives in the transport channel parameters.

UE HS-DSCH Physical Layer category 1:

HS-PDSCH	Number of processes	2, (alt. 8)
	Process memory size	Split equally among all processes
	Max Data Rate	1.2Mbps, (alt. 400kbps)

UE HS-DSCH Physical Layer category 2:

HS-PDSCH	Number of processes	2, (alt. 8)
	Process memory size	Split equally among all processes
	Max Data Rate	1.2Mbps, (alt. 600kbps)]

UE HS-DSCH Physical Layer category 3:

HS-PDSCH	Number of processes	3, (alt. 8)
	Process memory size	Split equally among all processes
	Max Data Rate	1.8Mbps, (alt. 900kbps)

UE HS-DSCH Physical Layer category 4:

HS-PDSCH	Number of processes	3, (alt. 8)
	Process memory size	Split equally among all processes
	Max Data Rate	1.8Mbps, (alt. 1.2Mbps)

UE HS-DSCH Physical Layer category 5:

HS-PDSCH	Number of processes	6, (alt. 8)
	Process memory size	Split equally among all processes
	Max Data Rate	3.65Mbps, (alt. 3.6Mbps)

UE HS-DSCH Physical Layer category 6:

HS-PDSCH	Number of processes	6, (alt. 8)
	Process memory size	Split equally among all processes
	Max Data Rate	3.65Mbps, (alt. 3.65Mbps)

UE HS-DSCH Physical Layer category 7:

HS-PDSCH	Number of processes	6, (alt. 8)
	Process memory size	Split equally among all processes
	Max Data Rate	7.3Mbps, (alt. 7.2Mbps)

UE HS-DSCH Physical Layer category 8:

HS-PDSCH	Number of processes	6, (alt. 8)
	Process memory size	Split equally among all processes
	Max Data Rate	7.3Mbps, (alt. 7.3Mbps)

UE HS-DSCH Physical Layer category 9:

HS-PDSCH	Number of processes	6, (alt. 8)
	Process memory size	Split equally among all processes
	Max Data Rate	10.2Mbps, (alt. 10.2Mbps)

UE HS-DSCH Physical Layer category 10:

HS-PDSCH	Number of processes	6, (alt. 8)
	Process memory size	Split equally among all processes
	Max Data Rate	14.4Mbps, (alt. 10.8Mbps)

UE HS-DSCH Physical Layer category 11:

HS-PDSCH	Number of processes	3, (alt. 8)
	Process memory size	Split equally among all processes
	Max Data Rate	900kbps, (alt. 450kbps)

UE HS-DSCH Physical Layer category 12:

HS-PDSCH	Number of processes	6, (alt. 8)
	Process memory size	Split equally among all processes
	Max Data Rate	1.8Mbps, (alt. 1.8Mbps)

<End of modified section>

3GPP TSG-T WG1 Meeting #22
Hyderabad, India, February 2nd-6th, 2004

Tdoc ⌘T1-040271

CR-Form-v7

CHANGE REQUEST

⌘ **34.108** **CR** **294** ⌘**rev** **-** ⌘ Current version: **4.9.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	CR to 34.108 REL-5; Generic setup procedure and default message contents for HSDPA (as of T1-040069rev1)
Source:	⌘	Ericsson
Work item code:	⌘	HSDPA
Date:	⌘	03/02/2004
Category:	⌘	**F**
Release:	⌘	REL-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 *(GSM Phase 2)*
R96 *(Release 1996)*
R97 *(Release 1997)*
R98 *(Release 1998)*
R99 *(Release 1999)*
Rel-4 *(Release 4)*
Rel-5 *(Release 5)*
Rel-6 *(Release 6)*

Reason for change:	⌘	For HSDPA testing, there is a need for a generic setup procedure for the radio bearer mapped onto HS-DSCH. Also, the default messages need an update with the new information elements related to the HS-DSCH.
Summary of change:	⌘	In 7.4.1, a new state 6-17 PS-DCCH+DTCH_HS-DSCH is added. A new generic procedure P25 is added in 7.4.2.6 (Radio access bearer establishment procedure for packet switched sessions). This procedure would establish the radio bearer for HS-DSCH and transit the UE from state 6-7 to state 6-17. Default message contents are updated to reflect IEs introduced by HSDPA in release 5 for the following FDD messages: CELL UPDATE CONFIRM PHYSICAL CHANNEL RECONFIGURATION RADIO BEARER SETUP RADIO BEARER RECONFIGURATION RADIO BEARER RELEASE TRANSPORT CHANNEL RECONFIGURATION In the RADIO BEARER SETUP message, a new condition A9 “Packet to CELL_DCH / HS-DSCH from CELL_DCH in PS" has been added. In the RADIO BEARER RELEASE message a new condition A9 “Packet to CELL_DCH from CELL_DCH / HS-DSCH in PS” has been added. A “Version” column has been added to the message tables and the Release 5

		specific IEs, values and conditions are marked with “REL-5”.
Consequences if not approved:	⌘	Testcases would have to include the establishment of the radio bearer for HS-DSCH instead of just referring to a generic procedure. Default message contents would be incomplete with respect to HSDPA.

Clauses affected:	⌘	7.4.1, 7.4.2.6, 9.1.1			
Other specs affected:	⌘	**Y** / **N**		⌘	
			X Other core specifications		
			X Test specifications		
			X O&M Specifications		
Other comments:	⌘	Affects REL-5, but the REL-4 version of 34.108 was used as base for the CR since no REL-5 version does not yet exist.			

How to create CRs using this form:

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

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

7.4.1 UE RRC Test States for common procedures

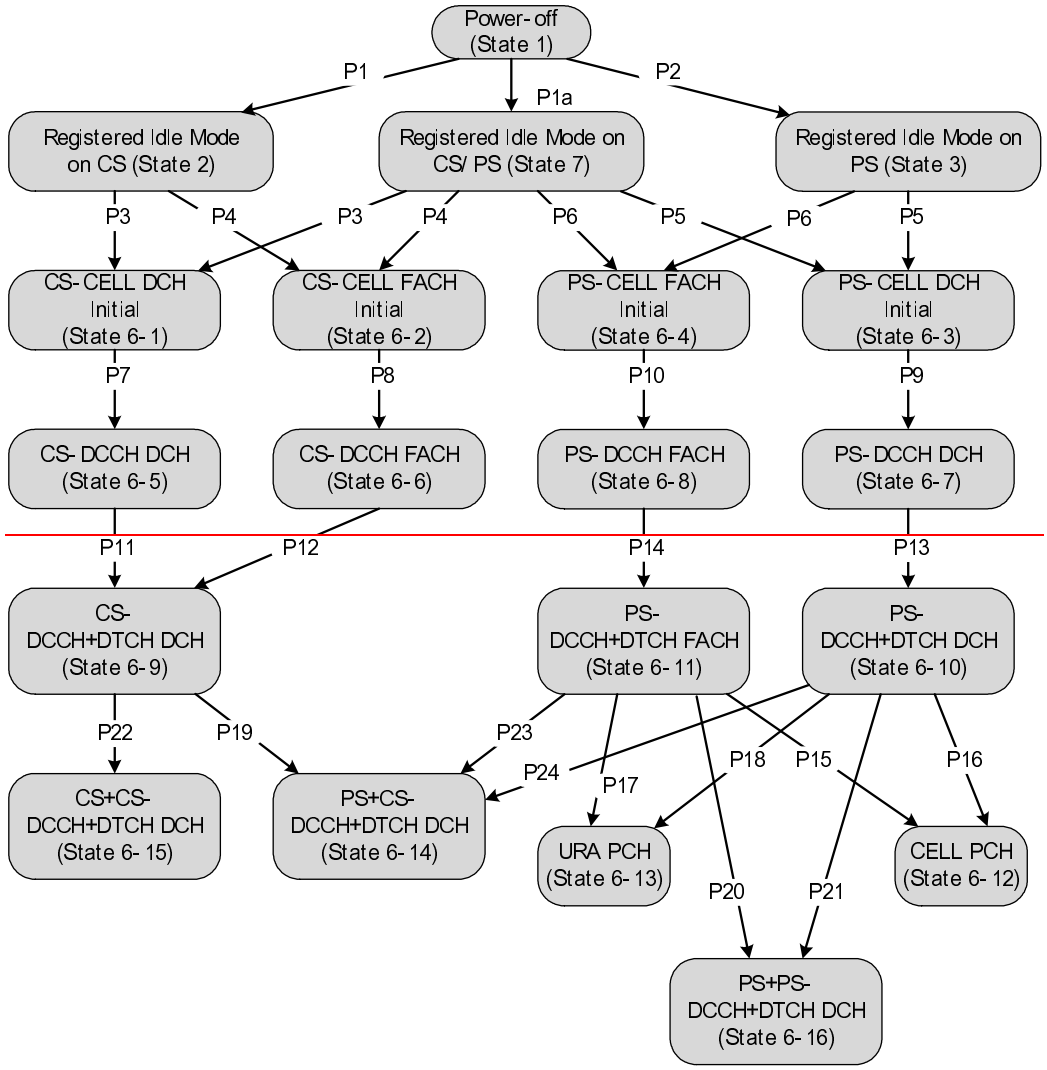

Figure 7.4.1.1: UE RRC test initial states and common procedures

For UE to set up a call in UTRAN, there are a number of procedures to be undertaken in a hierarchical sequence to move between known states. The sequences are shown in figure 7.4.1.1, the operating states for various protocols in the UE are given in table 7.4.1.1.

It is noted that figure 7.4.1.1 should not be construed as a formal state transition diagram, in any manner. The intention here is to define the starting state of UE following the execution of the procedures indicated above.

Table 7.4.1.1: The UE states

		RRC	CC	MM	SM	GMM
State 1	**Power OFF**	-----	Null	Detached	Inactive	Detached
State 2	**Registered Idle Mode on CS**	Idle	Null	Idle	Inactive	Detached
State 3	**Registered Idle Mode on PS**	Idle	Null	Detached	Inactive	Idle
State 7	**Registered Idle Mode on CS/PS**	Idle	Null	Idle	Inactive	Idle
State BGP6-1	**CS-CELL_DCH_Initial**	Connected	Null	As previous	Inactive	As previous
State BGP6-2	**CS-CELL_FACH_Initial**	Connected	Null	As previous	Inactive	As previous
State BGP6-3	**PS-CELL_DCH_Initial**	Connected	Null	As previous	Inactive	As previous
State BGP6-4	**PS-CELL_FACH_Initial**	Connected	Null	As previous	Inactive	As previous
State BGP6-5	**CS-DCCH_DCH**	Connected (CELL_DCH)	Null	As previous	Inactive	As previous
State BGP6-6	**CS-DCCH_FACH**	Connected (CELL_FACH)	Null	As previous	Inactive	As previous
State BGP6-7	**PS-DCCH_DCH**	Connected (CELL_DCH)	Null	As previous	Active pending	As previous
State BGP6-8	**PS-DCCH_FACH**	Connected (CELL_FACH)	Null	As previous	Active pending	As previous
State BGP6-9	**CS-DCCH+DTCH_DCH**	Connected (CELL_DCH)	Connected	As previous	Inactive	As previous
State BGP6-10	**PS-DCCH+DTCH_DCH**	Connected (CELL_DCH)	Null	As previous	Active	As previous
State BGP6-11	**PS-DCCH+DTCH_FACH**	Connected (CELL_FACH)	Null	As previous	Active	As previous
State BGP6-12	**CELL_PCH**	Connected (CELL_PCH)	Null	As previous	Inactive	As previous
State BGP6-13	**URA_PCH**	Connected (URA_PCH)	Null	As previous	Inactive	As previous
State BGP6-14	**PS+CS-DCCH+DTCH_DCH**	Connected (CELL_DCH)	Connected	As previous	Active	As previous
State BGP6-15	**CS+CS-DCCH+DTCH_DCH**	Connected (CELL_DCH)	Connected	As previous	Inactive	As previous
State BGP6-16	**PS+PS-DCCH+DTCH_DCH**	Connected (CELL_DCH)	Null	As previous	Active	As previous
State BGP6-17	**PS-DCCH+DTCH_HS-DSCH**	Connected (CELL_DCH)	Null	As previous	Active	As previous

State 1, state 2, state 3, P1, P2 and P1a are described in TS34.108 clause 7.2. States 6-X (for X=1 to ~~16~~17) are described below.

7.4.2.6 Radio access bearer establishment procedure for packet switched sessions (procedure P13, ~~and~~ P14 and P25)

7.4.2.6.1 Mobile terminating session

7.4.2.6.1.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-7 or state 6-8.
- The Test USIM shall be inserted.

7.4.2.6.1.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1 of TS 34.108.

7.4.2.6.1.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in clause 5.2 and 6.1 of TS 34.108. Reference Test Conditions.

Step	Direction		Message	Comments
	UE	SS		
1		<--	RADIO BEARER SETUP	RRC RAB SETUP
2		-->	RADIO BEARER SETUP COMPLETE	RRC
3		<--	ACTIVATE PDP CONTEXT ACCEPT	SM

7.4.2.6.1.4 Specific message contents

For step 1, the messages in clause 9 of TS 34.108 are used. To execute procedure P13, use the message titled "Packet to CELL_DCH from CELL_DCH in PS". To execute procedure P14, use the message titled "Packet to CELL_FACH from CELL_FACH in PS". To execute procedure P25, use the message titled "Packet to CELL_DCH / HS-DSCH from CELL_DCH in PS".

7.4.2.6.2 Mobile originating sessions

7.4.2.6.2.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-7 or state 6-8.
- The Test USIM shall be inserted.

7.4.2.6.2.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1 of TS 34.108.

7.4.2.6.2.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in clause 5.2 and 6.1 of TS 34.108. Reference Test Conditions.

Step	Direction		Message	Comments
	UE	SS		
1	<--		RADIO BEARER SETUP	RRC RAB SETUP
2	-->		RADIO BEARER SETUP COMPLETE	RRC
3	<--		ACTIVATE PDP CONTEXT ACCEPT	SM

7.4.2.6.2.4 Specific message contents

For step 1, the messages in clause 9 of TS 34.108 are used. To execute procedure P13, use the message titled "Packet to CELL_DCH from CELL_DCH in PS". To execute procedure P14, use the message titled "Packet to CELL_FACH from CELL_FACH in PS". To execute procedure P25, use the message titled "Packet to CELL_DCH / HS-DSCH from CELL_DCH in PS".

9.1.1 Default RRC Message Contents (FDD)

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Contents of CELL UPDATE CONFIRM message: UM

Information Element	Value/remark	Version
Message Type		
U-RNTI	If this message is sent on CCCH, use the following values. Else, this IE is absent.	
- SRNC identity	0000 0000 0001B	
- S-RNTI	0000 0000 0000 0000 0001B	
RRC transaction identifier	Selects an arbitrary integer between 0 to 3	
Integrity check info		
- message authentication code	SS calculates the value of MAC-I for this message and writes to this IE. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.	
- RRC message sequence number	SS provides the value of this IE, from its internal counter.	
Integrity protection mode info	Not Present	
Ciphering mode info	Not Present	
Activation time	Not Present – use default value	
New U-RNTI	Not Present	
New C-RNTI	Not Present	
New DSCH-RNTI	Not Present	
New H-RNTI	Not Present	REL-5
RRC State indicator	CELL_FACH	
UTRAN DRX cycle length coefficient	Not Present	
RLC re-establish indicator (RB2, RB3 and RB4)	FALSE	
RLC re-establish indicator (RB5 and upwards)	FALSE	
CN information info	Not Present	
URA identity	Not Present	
RB information to release list	Not Present	
RB information to reconfigure list	Not Present	
RB information to be affected list	Not Present	
Downlink counter synchronisation info	Not Present	
UL Transport channel information common for all transport channels	Not Present	
Deleted TrCH information list	Not Present	
Added or Reconfigured TrCH information list	Not Present	
CHOICE Mode	FDD	
- CPCH set ID	Not Present	
- Added or Reconfigured TrCH information for DRAC list	Not Present	
DL Transport channel information common for all transport channels	Not Present	
Deleted TrCH information list	Not Present	
Added or Reconfigured TrCH information list	Not Present	
Frequency info	Not Present	
Maximum allowed UL TX power	Not Present	
CHOICE channel requirement	Not Present	
CHOICE mode	FDD	
- Downlink PDSCH information	Not Present	
Downlink HS-PDSCH Information	Not Present	REL-5
Downlink information common for all radio links	Not Present	
Downlink information per radio link list	Not Present	

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Contents of PHYSICAL CHANNEL RECONFIGURATION message: AM or UM

Information Element	Condition	Value/remark	Version
Message Type	A1, A2, A3, A4, A5, A6		
RRC transaction identifier		Arbitrarily selects an integer between 0 and 3	
Integrity check info			
- message authentication code		SS calculates the value of MAC-I for this message and writes to this IE. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.	
- RRC message sequence number		SS provides the value of this IE, from its internal counter.	
Integrity protection mode info		Not Present	
Ciphering mode info		Not Present	
Activation time	A1, A2, A3	(256+CFN-(CFN MOD 8 + 8))MOD 256	
Activation time	A4, A5, A6	Not Present	
New U-RNTI		Not Present	
New C-RNTI	A1, A2, A3, A4	Not Present	
New C-RNTI	A5, A6	'1010 1010 1010 1010'	
New DSCH-RNTI	A1, A2, A3, A4, A5, A6	Not Present	
New H-RNTI	A1, A2, A3, A4, A5, A6	Not Present	REL-5
RRC State indicator	A1, A2, A3, A4	CELL_DCH	
RRC State indicator	A5, A6	CELL_FACH	
UTRAN DRX cycle length coefficient	A1, A2, A3, A4, A5, A6	Not Present	
CN information info		Not Present	
URA identity		Not Present	
Downlink counter synchronisation info		Not Present	
Frequency info	A1, A2, A3, A4, A5		
- UARFCN uplink (Nu)		Reference to clause 5.1 Test frequencies	
- UARFCN downlink (Nd)		Reference to clause 5.1 Test frequencies	
Frequency info	A6	Not Present	
Maximum allowed UL TX power		33dBm	
CHOICE *channel requirement*	A5, A6	Not Present	
CHOICE *channel requirement*	A1, A2, A3, A4	Uplink DPCH info	
- Uplink DPCH power control info			
- DPCCH power offset		-6dB	
- PC Preamble		1 frame	
- SRB delay		7 frames	
- Power Control Algorithm		Algorithm1	
- TPC step size		1dB	
- Scrambling code type		Long	
- Scrambling code number		0 (0 to 16777215)	
- Number of DPDCH		Not Present(1)	
- spreading factor		Reference to TS34.108 clause 6.10 Parameter Set	
- TFCI existence		Reference to TS34.108 clause 6.10 Parameter Set	
- Number of FBI bit		Reference to TS34.108 clause 6.10 Parameter Set	
- Puncturing Limit		Reference to TS34.108 clause 6.10 Parameter Set	
CHOICE Mode	A1, A2, A3, A4, A5, A6	FDD	
- Downlink PDSCH information		Not Present	
Downlink HS-PDSCH Information	A1, A2, A3, A4, A5, A6	Not Present	REL-5

Information Element	Condition	Value/remark	Version
Downlink information common for all radio links - Downlink DPCH info common for all RL - Timing indicator - CFN-targetSFN frame offset - Downlink DPCH power control information - DPC mode - CHOICE mode - Power offset $P_{Pilot-DPDCH}$ - DL rate matching restriction information - Spreading factor - Fixed or Flexible Position - TFCI existence - CHOICE SF - DPCH compressed mode info - TX Diversity mode - SSDT information - Default DPCH Offset Value	A1, A2, A3	 Maintain Not Present 0 (single) FDD 0 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present None Not Present Not Present	
Downlink information common for all radio links - Downlink DPCH info common for all RL - Timing indicator - CFN-targetSFN frame offset - Downlink DPCH power control information - DPC mode - CHOICE mode - Power offset $P_{Pilot-DPDCH}$ - DL rate matching restriction information - Spreading factor - Fixed or Flexible Position - TFCI existence - CHOICE SF - DPCH compressed mode info - TX Diversity mode - SSDT information - Default DPCH Offset Value	A4	 Initialise Not Present 0 (single) FDD 0 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present None Not Present Arbitrary set to value 0..306688 by step of 512	
Downlink information common for all radio links	A5, A6	Not Present	
Downlink information for each radio links - Choice mode - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - PDSCH code mapping - Serving HS-DSCH radio link indicator - Downlink DPCH info for each RL - CHOICE mode - Primary CPICH usage for channel estimation - DPCH frame offset - Power offset $P_{Pilot-DPDCH}$ - Secondary CPICH info - DL channelisation code - Secondary scrambling code - Spreading factor - Code number - Scrambling code change	A1, A2,A3	 FDD Ref. to the Default setting in TS34.108 clause 6.1 (FDD) Not Present Not Present FALSE FDD Primary CPICH may be used Set to value : Default DPCH Offset Value (as currently stored in SS) mod 38400 0 Not Present 5 Reference to TS34.108 clause 6.10 Parameter Set 0 No change	 REL-5

Information Element	Condition	Value/remark	Version
- TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - SCCPCH information for FACH		0 Not Present Not Present Not Present	
Downlink information for each radio links - Choice mode - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - PDSCH code mapping - Serving HS-DSCH radio link indicator - Downlink DPCH info for each RL - CHOICE mode - Primary CPICH usage for channel estimation - DPCH frame offset - Power offset $P_{Pilot-DPDCH}$ - Secondary CPICH info - DL channelisation code - Secondary scrambling code - Spreading factor - Code number - Scrambling code change - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - SCCPCH information for FACH	A4	 FDD Ref. to the Default setting in TS34.108 clause 6.1 (FDD) Not Present Not Present FALSE FDD Primary CPICH may be used Set to value : Default DPCH Offset Value mod 38400 0 Not Present 5 Reference to TS34.108 clause 6.10 Parameter Set 0 No change 0 Not Present Not Present Not Present	 REL-5
- Downlink information for each radio link - Choice mode - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - PDSCH code mapping - Serving HS-DSCH radio link indicator - Downlink DPCH info for each RL - SCCPCH Information for FACH	A5	 FDD Ref. to the Default setting in TS34.108 clause 6.1 (FDD) Not Present Not Present FALSE Not Present Not Present	 REL-5
- Downlink information for each radio link	A6	Not Present	

Condition	Explanation
A1	This IE need for "Non speech in CS"
A2	This IE need for "Speech in CS"
A3	This IE need for "Packet to CELL_DCH from CELL_DCH in PS"
A4	This IE need for "Packet to CELL_DCH from CELL_FACH in PS"
A5	This IE need for "Packet to CELL_FACH from CELL_DCH in PS"
A6	This IE need for "Packet to CELL_FACH from CELL_FACH in PS"

…

Contents of RADIO BEARER SETUP message: AM or UM

Information Element	Condition	Value/remark	Version
Message Type	A1, A2, A3, A4, A5, A6, A7, A8 , A9		REL-5
RRC transaction identifier		Arbitrarily selects an integer between 0 and 3	
Integrity check info			
- message authentication code		SS calculates the value of MAC-I for this message and writes to this IE. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.	
- RRC message sequence number		SS provides the value of this IE, from its internal counter.	
Integrity protection mode info		Not Present	
Ciphering mode info		Not Present	
Activation time	A1, A2, A3 , A9	(256+CFN-(CFN MOD 8 + 8))MOD 256	REL-5
Activation time	A4, A5, A6, A7, A8	Not Present	
New U-RNTI	A1, A2, A3, A4, A5, A6, A7, A8 , A9	Not Present	REL-5
New C-RNTI	A1, A2, A3, A4, A7, A8 , A9	Not Present	REL-5
New C-RNTI	A5, A6	'1010 1010 1010 1010'	
New DSCH-RNTI	A1, A2, A3, A4, A5, A6, A7, A8 , A9	Not Present	REL-5
New H-RNTI	A1, A2, A3, A4, A5, A6, A7, A8	Not Present	REL-5
New H-RNTI	A9	'1010 1010 1010 1010'	REL-5
RRC State indicator	A1, A2, A3, A4, A7, A8 , A9	CELL_DCH	REL-5
RRC State indicator	A5, A6	CELL_FACH	
UTRAN DRX cycle length coefficient	A1, A2, A3, A4, A5, A6, A7, A8 , A9	Not Present	REL-5
CN information info		Not Present	
URA identity		Not Present	
Signalling RB information to setup		Not Present	
RAB information for setup	A1, A7		
- RAB info			
- RAB identity		0000 0001B The first/ leftmost bit of the bit string contains the most significant bit of the RAB identity.	
- CN domain identity		CS domain	
- NAS Synchronization Indicator		Not Present	
- Re-establishment timer		useT314	
- RB information to setup			
- RB identity		10	

Information Element	Condition	Value/remark	Version
- PDCP info		Not Present	
- CHOICE RLC info type		RLC info	
- CHOICE Uplink RLC mode		TM RLC	
- Transmission RLC discard		Not Present	
- Segmentation indication		FALSE	
- CHOICE Downlink RLC mode		TM RLC	
- Segmentation indication		FALSE	
- RB mapping info			
- Information for each multiplexing option			
- RLC logical channel mapping indicator		Not Present	
- Number of uplink RLC logical channels		1	
- Uplink transport channel type		DCH	
- UL Transport channel identity		1	
- Logical channel identity		Not Present	
- CHOICE RLC size list		Configured	
- MAC logical channel priority		7	
- Downlink RLC logical channel info			
- Number of downlink RLC logical channels		1	
- Downlink transport channel type		DCH	
- DL DCH Transport channel identity		6	
- DL DSCH Transport channel identity		Not Present	
- Logical channel identity		Not Present	
RAB information for setup	A2, A8		
- RAB info			
- RAB identity		0000 0001B The first/ leftmost bit of the bit string contains the most significant bit of the RAB identity.	
- CN domain identity		CS domain	
- NAS Synchronization Indicator		Not Present	
- Re-establishment timer		useT314	
- RB information to setup			
- RB identity		10	
- PDCP info		Not Present	
- CHOICE RLC info type		RLC info	
- CHOICE Uplink RLC mode		TM RLC	
- Transmission RLC discard		Not Present	
- Segmentation indication		FALSE	
- CHOICE Downlink RLC mode		TM RLC	
- Segmentation indication		FALSE	
- RB mapping info			
- Information for each multiplexing option			
- RLC logical channel mapping indicator		Not Present	
- Number of uplink RLC logical channels		1	
- Uplink transport channel type		DCH	
- UL Transport channel identity		1	
- Logical channel identity		Not Present	
- CHOICE RLC size list		Configured	
- MAC logical channel priority		6	
- Downlink RLC logical channel info			
- Number of downlink RLC logical channels		1	
- Downlink transport channel type		DCH	
- DL DCH Transport channel identity		6	
- DL DSCH Transport channel identity		Not Present	
- Logical channel identity		Not Present	
- RB identity		11	
- PDCP info		Not Present	
- CHOICE RLC info type		RLC info	
- CHOICE Uplink RLC mode		TM RLC	
- Transmission RLC discard		Not Present	
- Segmentation indication		FALSE	
- CHOICE Downlink RLC mode		TM RLC	
- Segmentation indication		FALSE	
- RB mapping info			
- Information for each multiplexing option			

Information Element	Condition	Value/remark	Version
- RLC logical channel mapping indicator		Not Present	
- Number of uplink RLC logical channels		1	
- Uplink transport channel type		DCH	
- UL Transport channel identity		2	
- Logical channel identity		Not Present	
- CHOICE RLC size list		Configured	
- MAC logical channel priority		6	
- Downlink RLC logical channel info			
- Number of downlink RLC logical channels		1	
- Downlink transport channel type		DCH	
- DL DCH Transport channel identity		7	
- DL DSCH Transport channel identity		Not Present	
- Logical channel identity		Not Present	
- RB identity		12	
- PDCP info		Not Present	
- CHOICE RLC info type		RLC info	
- CHOICE Uplink RLC mode		TM RLC	
- Transmission RLC discard		Not Present	
- Segmentation indication		FALSE	
- CHOICE Downlink RLC mode		TM RLC	
- Segmentation indication		FALSE	
- RB mapping info			
- Information for each multiplexing option			
- RLC logical channel mapping indicator		Not Present	
- Number of uplink RLC logical channels		1	
- Uplink transport channel type		DCH	
- UL Transport channel identity		3	
- Logical channel identity		Not Present	
- CHOICE RLC size list		Configured	
- MAC logical channel priority		6	
- Downlink RLC logical channel info			
- Number of downlink RLC logical channels		1	
- Downlink transport channel type		DCH	
- DL DCH Transport channel identity		8	
- DL DSCH Transport channel identity		Not Present	
- Logical channel identity		Not Present	
RAB information for setup	A3, A4, A5, A6		
- RAB info		(AM DTCH for PS domain)	
- RAB identity		0000 0101B The first/ leftmost bit of the bit string contains the most significant bit of the RAB identity.	
- CN domain identity		PS domain	
- NAS Synchronization Indicator		Not Present	
- Re-establishment timer		useT315	
- RB information to setup			
- RB identity		20	
- PDCP info			
- Support for lossless SRNS relocation		FALSE	
- Max PDCP SN window size		Not present	
- PDCP PDU header		Absent	
- Header compression information		Not present	
- CHOICE RLC info type		RLC info	
- CHOICE Uplink RLC mode		AM RLC	
- Transmission RLC discard			
- CHOICE SDU discard mode		No Discard	
- MAX_DAT		15	
- Transmission window size		128	
- Timer_RST		500	
- Max_RST		4	
- Polling info			
- Timer_poll_prohibit		200	
- Timer_poll		200	
- Poll_PDU		Not Present	

Information Element	Condition	Value/remark	Version
- Poll_SDU		1	
- Last transmission PDU poll		TRUE	
- Last retransmission PDU poll		TRUE	
- Poll_Windows		99	
- Timer_poll_periodic		Not Present	
- CHOICE Downlink RLC mode		AM RLC	
- In-sequence delivery		TRUE	
- Receiving window size		128	
- Downlink RLC status info			
- Timer_status_prohibit		200	
- Timer_EPC		Not Present	
- Missing PDU indicator		TRUE	
- Timer_STATUS_periodic		Not Present	
- RB mapping info			
- Information for each multiplexing option		2 RBMuxOptions	
- RLC logical channel mapping indicator		Not Present	
- Number of uplink RLC logical channels		1	
- Uplink transport channel type		DCH	
- UL Transport channel identity		1	
- Logical channel identity		Not Present	
- CHOICE RLC size list		Configured	
- MAC logical channel priority		8	
- Downlink RLC logical channel info			
- Number of downlink RLC logical channels		1	
- Downlink transport channel type		DCH	
- DL DCH Transport channel identity		6	
- DL DSCH Transport channel identity		Not Present	
- Logical channel identity		Not Present	
- RLC logical channel mapping indicator		Not Present	
- Number of uplink RLC logical channels		1	
- Uplink transport channel type		RACH	
- UL Transport channel identity		Not Present	
- Logical channel identity		7	
- CHOICE RLC size list		Explicit list	
- RLC size index		Reference to TS34.108 clause 6 Parameter Set	
- MAC logical channel priority		8	
- Downlink RLC logical channel info			
- Number of downlink RLC logical channels		1	
- Downlink transport channel type		FACH	
- DL DCH Transport channel identity		Not Present	
- DL DSCH Transport channel identity		Not Present	
- Logical channel identity		7	
RAB information for setup	A9		REL-5
- RAB info		(high-speed AM DTCH for PS domain)	
- RAB identity		0000 0110B The first/ leftmost bit of the bit string contains the most significant bit of the RAB identity.	
- CN domain identity		PS domain	
- NAS Synchronization Indicator		Not Present	
- Re-establishment timer		useT315	
- RB information to setup			
- RB identity		23	
- PDCP info			
- Support for lossless SRNS relocation		FALSE	
- Max PDCP SN window size		Not present	
- PDCP PDU header		Absent	
- Header compression information		Not present	
- CHOICE RLC info type		RLC info	
- CHOICE Uplink RLC mode		AM RLC	
- Transmission RLC discard			
- CHOICE SDU discard mode		No Discard	
- MAX_DAT		15	
- Transmission window size		128	

Information Element	Condition	Value/remark	Version
- Timer_RST		500	
- Max_RST		4	
- Polling info			
- Timer_poll_prohibit		100	
- Timer_poll		100	
- Poll_PDU		Not Present	
- Poll_SDU		1	
- Last transmission PDU poll		TRUE	
- Last retransmission PDU poll		TRUE	
- Poll_Windows		99	
- Timer_poll_periodic		Not Present	
- CHOICE Downlink RLC mode		AM RLC	
- In-sequence delivery		TRUE	
- Receiving window size		768	
- Downlink RLC status info			
- Timer_status_prohibit		100	
- Timer_EPC		Not Present	
- Missing PDU indicator		TRUE	
- Timer_STATUS_periodic		Not Present	
- RB mapping info			
- Information for each multiplexing option		3 RBMuxOptions	
- RLC logical channel mapping indicator		Not Present	
- Number of uplink RLC logical channels		1	
- Uplink transport channel type		DCH	
- UL Transport channel identity		1	
- Logical channel identity		Not Present	
- CHOICE RLC size list		Configured	
- MAC logical channel priority		8	
- Downlink RLC logical channel info			
- Number of downlink RLC logical channels		1	
- Downlink transport channel type		DCH	
- DL DCH Transport channel identity		6	
- DL DSCH Transport channel identity		Not Present	
- DL HS-DSCH MAC-d flow identity		Not Present	
- Logical channel identity		Not Present	
- RLC logical channel mapping indicator		Not Present	
- Number of uplink RLC logical channels		1	
- Uplink transport channel type		DCH	
- UL Transport channel identity		1	
- Logical channel identity		Not Present	
- CHOICE RLC size list		Configured	
- MAC logical channel priority		8	
- Downlink RLC logical channel info			
- Number of downlink RLC logical channels		1	
- Downlink transport channel type		HS-DSCH	
- DL DCH Transport channel identity		Not Present	
- DL DSCH Transport channel identity		Not Present	
- DL HS-DSCH MAC-d flow identity		0	
- Logical channel identity		Not Present	
- RLC logical channel mapping indicator		Not Present	
- Number of uplink RLC logical channels		1	
- Uplink transport channel type		RACH	
- UL Transport channel identity		Not Present	
- Logical channel identity		7	
- CHOICE RLC size list		Explicit list	
- RLC size index		Reference to TS34.108 clause 6 Parameter Set	
- MAC logical channel priority		8	
- Downlink RLC logical channel info			
- Number of downlink RLC logical channels		1	
- Downlink transport channel type		FACH	
- DL DCH Transport channel identity		Not Present	
- DL DSCH Transport channel identity		Not Present	
- Logical channel identity		7	

Information Element	Condition	Value/remark	Version
RB information to be affected	A1, A2, A3, A4, A5, A6, A7, A8 , A9	Not Present	REL-5
Downlink counter synchronisation info	A1, A2, A3, A4, A5, A6, A7, A8 , A9	Not Present	REL-5
UL Transport channel information for all transport channels	A1, A2, A3, A4, A5, A6, A7, A8 , A9		REL-5
- PRACH TFCS		Not Present	
- CHOICE mode		FDD	
- TFC subset		Not Present	
- UL DCH TFCS			
- CHOICE TFCI signalling		Normal	
- TFCI Field 1 information			
- CHOICE TFCS representation		Complete reconfiguration	
- TFCS complete reconfigure information			
- CHOICE CTFC Size		Number of bits used must be enough to cover all combinations of CTFC from TS34.108 clause 6.10.2.4 Parameter Set.	
- CTFC information		This IE is repeated for TFC numbers and reference to TS34.108 clause 6.10.2.4 Parameter Set	
- CTFC		Reference to TS34.108 clause 6.10.2.4 Parameter Set	
- Power offset information			
- CHOICE Gain Factors		Computed Gain Factors(The last TFC is set to Signalled Gain Factors)	
- Gain factor βc		11 (below 64 kbps) 9 (higher than 64 kbps) (Not Present if the CHOICE Gain Factors is set to Computed Gain Factors)	
- Gain factor βd		15 (Not Present if the CHOICE Gain Factors is set to Computed Gain Factors)	
- Reference TFC ID		0	
- CHOICE mode		FDD	
- Power offset $P_{p\text{-}m}$		Not Present	
Deleted UL TrCH information	A1, A2, A3, A4, A5, A6, A7, A8 , A9	Not Present	REL-5
Added or Reconfigured UL TrCH information	A1, A3 A4, A5, A6, A7 , A9	1 DCH added, 1 DCH reconfigured	REL-5
- Uplink transport channel type		DCH	
- UL Transport channel identity		1	
- TFS			
- CHOICE Transport channel type		Dedicated transport channels	
- Dynamic Transport format information			
- RLC Size		Reference to TS34.108 clause 6.10 Parameter Set	
- Number of TBs and TTI List		(This IE is repeated for TFI number.)	
- Transmission Time Interval		Not Present	
- Number of Transport blocks		Reference to TS34.108 clause 6.10 Parameter Set	
- CHOICE Logical Channel list		All	
- Semi-static Transport Format information			

Information Element	Condition	Value/remark	Version
- Transmission time interval		Reference to TS34.108 clause 6.10 Parameter Set	
- Type of channel coding		Reference to TS34.108 clause 6.10 Parameter Set	
- Coding Rate		Reference to TS34.108 clause 6.10 Parameter Set	
- Rate matching attribute		Reference to TS34.108 clause 6.10 Parameter Set	
- CRC size		Reference to TS34.108 clause 6.10 Parameter Set	
- Uplink transport channel type		DCH	
- UL Transport channel identity		5	
- TFS			
- CHOICE Transport channel type		Dedicated transport channels	
- Dynamic Transport format information			
- RLC Size		Reference to TS34.108 clause 6.10 Parameter Set	
- Number of TBs and TTI List		(This IE is repeated for TFI number.)	
- Transmission Time Interval		Not Present	
- Number of Transport blocks		Reference to TS34.108 clause 6.10 Parameter Set	
- CHOICE Logical Channel list		All	
- Semi-static Transport Format information			
- Transmission time interval		Reference to TS34.108 clause 6.10 Parameter Set	
- Type of channel coding		Reference to TS34.108 clause 6.10 Parameter Set	
- Coding Rate		Reference to TS34.108 clause 6.10 Parameter Set	
- Rate matching attribute		Reference to TS34.108 clause 6.10 Parameter Set	
- CRC size		Reference to TS34.108 clause 6.10 Parameter Set	
Added or Reconfigured UL TrCH information	A2, A8	4 TrCHs(DCH for DCCH and 3DCHs for DTCH)	
- Uplink transport channel type		DCH	
- UL Transport channel identity		5	
- TFS			
- CHOICE Transport channel type		Dedicated transport channels	
- Dynamic Transport format information			
- RLC Size		Reference to TS34.108 clause 6.10 Parameter Set	
- Number of TBs and TTI List		(This IE is repeated for TFI number.)	
- Transmission Time Interval		Not Present	
- Number of Transport blocks		Reference to TS34.108 clause 6.10 Parameter Set	
- CHOICE Logical Channel list		All	
- Semi-static Transport Format information			
- Transmission time interval		Reference to TS34.108 clause 6.10 Parameter Set	
- Type of channel coding		Reference to TS34.108 clause 6.10 Parameter Set	
- Coding Rate		Reference to TS34.108 clause 6.10 Parameter Set	
- Rate matching attribute		Reference to TS34.108 clause 6.10 Parameter Set	
- CRC size		Reference to TS34.108 clause 6.10 Parameter Set	
- Uplink transport channel type		DCH	
- UL Transport channel identity		1	
- TFS			
- CHOICE Transport channel type		Dedicated transport channels	
- Dynamic Transport format information			
- RLC Size		Reference to TS34.108 clause 6.10 Parameter Set	
- Number of TBs and TTI List		(This IE is repeated for TFI number.)	
- Transmission Time Interval		Not Present	

Information Element	Condition	Value/remark	Version
- Number of Transport blocks		Reference to TS34.108 clause 6.10 Parameter Set	
- CHOICE Logical Channel list		All	
- Semi-static Transport Format information			
- Transmission time interval		Reference to TS34.108 clause 6.10 Parameter Set	
- Type of channel coding		Reference to TS34.108 clause 6.10 Parameter Set	
- Coding Rate		Reference to TS34.108 clause 6.10 Parameter Set	
- Rate matching attribute		Reference to TS34.108 clause 6.10 Parameter Set	
- CRC size		Reference to TS34.108 clause 6.10 Parameter Set	
- Uplink transport channel type		DCH	
- UL Transport channel identity		2	
- TFS			
- CHOICE Transport channel type		Dedicated transport channels	
- Dynamic Transport format information			
- RLC Size		Reference to TS34.108 clause 6.10 Parameter Set	
- Number of TBs and TTI List		(This IE is repeated for TFI number.)	
- Transmission Time Interval		Not Present	
- Number of Transport blocks		Reference to TS34.108 clause 6.10 Parameter Set	
- CHOICE Logical Channel list		All	
- Semi-static Transport Format information			
- Transmission time interval		Reference to TS34.108 clause 6.10 Parameter Set	
- Type of channel coding		Reference to TS34.108 clause 6.10 Parameter Set	
- Coding Rate		Reference to TS34.108 clause 6.10 Parameter Set	
- Rate matching attribute		Reference to TS34.108 clause 6.10 Parameter Set	
- CRC size		Reference to TS34.108 clause 6.10 Parameter Set	
- Uplink transport channel type		DCH	
- UL Transport channel identity		3	
- TFS			
- CHOICE Transport channel type		Dedicated transport channels	
- Dynamic Transport format information			
- RLC Size		Reference to TS34.108 clause 6.10 Parameter Set	
- Number of TBs and TTI List		(This IE is repeated for TFI number.)	
- Transmission Time Interval		Not Present	
- Number of Transport blocks		Reference to TS34.108 clause 6.10 Parameter Set	
- CHOICE Logical Channel list		All	
- Semi-static Transport Format information			
- Transmission time interval		Reference to TS34.108 clause 6.10 Parameter Set	
- Type of channel coding		Reference to TS34.108 clause 6.10 Parameter Set	
- Coding Rate		Reference to TS34.108 clause 6.10 Parameter Set	
- Rate matching attribute		Reference to TS34.108 clause 6.10 Parameter Set	
- CRC size		Reference to TS34.108 clause 6.10 Parameter Set	
CHOICE *mode*	A1, A2, A3, A4, A5, A6, A7, A8 , A9	FDD	REL-5
- CPCH set ID		Not Present	
- Added or Reconfigured TrCH information for DRAC list		Not Present	

Information Element	Condition	Value/remark	Version
DL Transport channel information common for all transport channel - SCCPCH TFCS - CHOICE mode - CHOICE DL parameters	A1, A2, A7, A8	 Not Present FDD SameasUL	
DL Transport channel information common for all transport channel - SCCPCH TFCS - CHOICE mode - CHOICE DL parameters - DL DCH TFCS - CHOICE TFCI Signalling - TFCI Field 1 Information - CHOICE TFCS representation - TFCS complete reconfigure - CHOICE CTFC Size - CTFC information - CTFC - Power offset information	A3, A4, A5, A6 , A9	 Not Present FDD Explicit Normal Complete reconfiguration Number of bits used must be enough to cover all combinations of CTFC from clause TS34.108 clause 6.10.2.4 Parameter Set. This IE is repeated for TFC numbers and reference to TS34.108 clause 6.10.2.4 Reference to TS34.108 clause 6.10.2.4 Parameter Set Not Present	REL-5
Deleted DL TrCH information Added or Reconfigured DL TrCH information - Downlink transport channel type - DL Transport channel identity - CHOICE DL parameters - Uplink transport channel type - UL TrCH identity - DCH quality target - BLER Quality value - Downlink transport channel type - DL Transport channel identity - CHOICE DL parameters - Uplink transport channel type - UL TrCH identity - DCH quality target - BLER Quality value	A1, A2, A3, A4, A5, A6, A7, A8 , A9 A1	Not Present 1 DCH added, 1 DCH reconfigured DCH 6 Same as UL DCH 1 -2.0 DCH 10 Same as UL DCH 5 -2.0	REL-5
Added or Reconfigured DL TrCH information - Downlink transport channel type - DL Transport channel identity - CHOICE DL parameters - Uplink transport channel type - UL TrCH identity - DCH quality target - BLER Quality value - Downlink transport channel type - DL Transport channel identity - CHOICE DL parameters - TFS - CHOICE Transport channel type - Dynamic transport format information - RLC Size - Number of TBs and TTI List - Dynamic transport format information - Transmission Time Interval	A3, A4, A5, A6, A7	2 TrCHs(DCH for DCCH and DCH for DTCH) DCH 10 Same as UL DCH 5 -2.0 DCH 6 Explicit Dedicated transport channel Reference to TS34.108 clause 6.10 Parameter Set (This IE is repeated for TFI number.) Not Present	

Information Element	Condition	Value/remark	Version
- Number of Transport blocks		Reference to TS34.108 clause 6.10 Parameter Set	
- CHOICE Logical Channel list		All	
- Semi-static Transport Format information			
- Transmission time interval		Reference to TS34.108 clause 6.10 Parameter Set	
- Type of channel coding		Reference to TS34.108 clause 6.10 Parameter Set	
- Coding Rate		Reference to TS34.108 clause 6.10 Parameter Set	
- Rate matching attribute		Reference to TS34.108 clause 6.10 Parameter Set	
- CRC size		Reference to TS34.108 clause 6.10 Parameter Set	
- DCH quality target			
- BLER Quality value		-2.0	
Added or Reconfigured DL TrCH information	A2, A8	4 TrCHs(DCH for DCCH and 3DCHs for DTCH)	
- Downlink transport channel type		DCH	
- DL Transport channel identity		10	
- CHOICE DL parameters		Same as UL	
- Uplink transport channel type		DCH	
- UL TrCH identity		5	
- DCH quality target			
- BLER Quality value		2.0	
- Downlink transport channel type		DCH	
- DL Transport channel identity		6	
- CHOICE DL parameters		Explicit	
- TFS			
- CHOICE Transport channel type		Dedicated transport channel	
- Dynamic transport format information			
- RLC Size		Reference to TS34.108 clause 6.10 Parameter Set	
- Number of TBs and TTI List		(This IE is repeated for TFI number.)	
- Dynamic transport format information			
- Transmission Time Interval		Not Present	
- Number of Transport blocks		Reference to TS34.108 clause 6.10 Parameter Set	
- CHOICE Logical Channel list		All	
- Semi-static Transport Format information			
- Transmission time interval		Reference to TS34.108 clause 6.10 Parameter Set	
- Type of channel coding		Reference to TS34.108 clause 6.10 Parameter Set	
- Coding Rate		Reference to TS34.108 clause 6.10 Parameter Set	
- Rate matching attribute		Reference to TS34.108 clause 6.10 Parameter Set	
- CRC size		Reference to TS34.108 clause 6.10 Parameter Set	
- DCH quality target			
- BLER Quality value		Not Present	
- Downlink transport channel type		DCH	
- DL Transport channel identity		7	
- CHOICE DL parameters		Explicit	
- TFS			
- CHOICE Transport channel type		Dedicated transport channel	
- Dynamic transport format information			
- RLC Size		Reference to TS34.108 clause 6.10 Parameter Set	
- Number of TBs and TTI List		(This IE is repeated for TFI number.)	
- Dynamic transport format information			
- Transmission Time Interval		Not Present	
- Number of Transport blocks		Reference to TS34.108 clause 6.10 Parameter Set	
- CHOICE Logical Channel list		All	
- Semi-static Transport Format information			

Information Element	Condition	Value/remark	Version
- Transmission time interval		Reference to TS34.108 clause 6.10 Parameter Set	
- Type of channel coding		Reference to TS34.108 clause 6.10 Parameter Set	
- Coding Rate		Reference to TS34.108 clause 6.10 Parameter Set	
- Rate matching attribute		Reference to TS34.108 clause 6.10 Parameter Set	
- CRC size		Reference to TS34.108 clause 6.10 Parameter Set	
- DCH quality target			
- BLER Quality value		Not Present	
- Downlink transport channel type		DCH	
- DL Transport channel identity		8	
- CHOICE DL parameters		Explicit	
- TFS			
- CHOICE Transport channel type		Dedicated transport channel	
- Dynamic transport format information			
- RLC Size		Reference to TS34.108 clause 6.10 Parameter Set	
- Number of TBs and TTI List		(This IE is repeated for TFI number.)	
- Dynamic transport format information			
- Transmission Time Interval		Not Present	
- Number of Transport blocks		Reference to TS34.108 clause 6.10 Parameter Set	
- CHOICE Logical Channel list		All	
- Semi-static Transport Format information			
- Transmission time interval		Reference to TS34.108 clause 6.10 Parameter Set	
- Type of channel coding		Reference to TS34.108 clause 6.10 Parameter Set	
- Coding Rate		Reference to TS34.108 clause 6.10 Parameter Set	
- Rate matching attribute		Reference to TS34.108 clause 6.10 Parameter Set	
- CRC size		Reference to TS34.108 clause 6.10 Parameter Set	
- DCH quality target			
- BLER Quality value		Not Present	
Added or Reconfigured DL TrCH information	A9	3 TrCHs (DCH for DCCH and DCH plus HS-DSCH for DTCH)	REL-5
- Downlink transport channel type		DCH	
- DL Transport channel identity		10	
- CHOICE DL parameters		Same as UL	
- Uplink transport channel type		DCH	
- UL TrCH identity		5	
- DCH quality target			
- BLER Quality value		-2.0	
- Downlink transport channel type		DCH	
- DL Transport channel identity		6	
- CHOICE DL parameters		Explicit	
- TFS			
- CHOICE Transport channel type		Dedicated transport channel	
- Dynamic transport format information			
- RLC Size		Reference to TS34.108 clause 6.10 Parameter Set	
- Number of TBs and TTI List		(This IE is repeated for TFI number.)	
- Dynamic transport format information			
- Transmission Time Interval		Not Present	
- Number of Transport blocks		Reference to TS34.108 clause 6.10 Parameter Set	
- CHOICE Logical Channel list		All	
- Semi-static Transport Format information			
- Transmission time interval		Reference to TS34.108 clause 6.10 Parameter Set	
- Type of channel coding		Reference to TS34.108 clause 6.10 Parameter Set	

Information Element	Condition	Value/remark	Version
- Coding Rate		Reference to TS34.108 clause 6.10 Parameter Set	
- Rate matching attribute		Reference to TS34.108 clause 6.10 Parameter Set	
- CRC size		Reference to TS34.108 clause 6.10 Parameter Set	
- DCH quality target			
- BLER Quality value		-2.0	
- Downlink transport channel type		HS-DSCH	
- DL Transport channel identity		Not Present	
- CHOICE DL parameters		HS-DSCH	
- HARQ Info			
- Number of Processes		6	
- CHOICE *Memory Partitioning*		Implicit	
- MAC-hs reset indicator		TRUE	
- Added or reconfigured MAC-d flow			
- MAC-hs queue to add or reconfigure list		(one queue)	
- MAC-hs queue Id		0	
- MAC-d Flow Identity		0	
- T1		50	
- MAC-hs window size		16	
- MAC-d PDU size Info			
- MAC-d PDU size		336	
- MAC-d PDU size index		0	
- MAC-hs queue to delete list		Not present	
- DCH quality target		Not present	
Frequency info	A1, A2, A3, A4, A5, A7, A8 , A9		REL-5
- UARFCN uplink (Nu)		Reference to clause 5.1 Test frequencies if frequency is different from the current frequency otherwise set to Not Present.	
- UARFCN downlink (Nd)		Reference to clause 5.1 Test frequencies if frequency is different from the current frequency otherwise set to Not Present.	
Frequency info	A6	Not Present	
Maximum allowed UL TX power	A1, A2, A3, A4, A7, A8 , A9	33dBm	REL-5
Maximum allowed UL TX power	A5, A6	Not Present	
CHOICE channel requirement	A1, A2, A3, A4, A7, A8 , A9	Uplink DPCH info	REL-5
- Uplink DPCH power control info			
- DPCCH power offset		-6dB	
- PC Preamble		1 frame	
- SRB delay		7 frames	
- Power Control Algorithm		Algorithm1	
- TPC step size		1dB	
- Scrambling code type		Long	
- Scrambling code number		0 (0 to 16777215)	
- Number of DPDCH		Not Present(1)	
- spreading factor		Reference to TS34.108 clause 6.10 Parameter Set	
- TFCI existence		Reference to TS34.108 clause 6.10 Parameter Set	
- Number of FBI bit		Reference to TS34.108 clause 6.10 Parameter Set	
- Puncturing Limit		Reference to TS34.108 clause 6.10 Parameter Set	
CHOICE channel requirement	A5,A6	Not Present	

Information Element	Condition	Value/remark	Version
CHOICE Mode	A1, A2, A3, A4, A5, A6, A7, A8 , A9	FDD	REL-5
- Downlink PDSCH information		Not Present	
Downlink information common for all radio links	A1, A2, A3 , A9		REL-5
- Downlink DPCH info common for all RL			
- Timing indicator		Maintain	
- CFN-targetSFN frame offset		Not Present	
- Downlink DPCH power control information			
- DPC mode		0 (single)	
- CHOICE mode		FDD	
- Power offset $P_{Pilot-DPDCH}$		0	
- DL rate matching restriction information		Not Present	
- Spreading factor		Reference to TS34.108 clause 6.10 Parameter Set	
- Fixed or Flexible Position		Reference to TS34.108 clause 6.10 Parameter Set	
- TFCI existence		Reference to TS34.108 clause 6.10 Parameter Set	
- CHOICE SF		Reference to TS34.108 clause 6.10 Parameter Set	
- CHOICE mode		FDD	
- DPCH compressed mode info		Not Present	
- TX Diversity mode		None	
- SSDT information		Not Present	
- Default DPCH Offset Value		Not Present	
Downlink information common for all radio links	A4,A7,A8		
- Downlink DPCH info common for all RL			
- Timing indicator		Initialise	
- CFN-targetSFN frame offset		Not Present	
- Downlink DPCH power control information			
- DPC mode		0 (single)	
- CHOICE mode		FDD	
- Power offset $P_{Pilot-DPDCH}$		0	
- DL rate matching restriction information		Not Present	
- Spreading factor		Reference to TS34.108 clause 6.10 Parameter Set	
- Fixed or Flexible Position		Reference to TS34.108 clause 6.10 Parameter Set	
- TFCI existence		Reference to TS34.108 clause 6.10 Parameter Set	
- CHOICE SF		Reference to TS34.108 clause 6.10 Parameter Set	
- CHOICE mode		FDD	
- DPCH compressed mode info		Not Present	
- TX Diversity mode		None	
- SSDT information		Not Present	
- Default DPCH Offset Value		Arbitrary set to value 0..306688 by step of 512	
Downlink HS-PDSCH Information	A1, A2, A3, A4, A5, A6, A7, A8	Not Present	REL-5
Downlink HS-PDSCH Information	A9		REL-5
- HS-SCCH Info			
- CHOICE mode		FDD	
- DL Scrambling Code			
- HS-SCCH Channelisation Code Information			
- HS-SCCH Channelisation Code		1	
- Measurement Feedback Info			
- CHOICE mode		FDD	
- POhsdsch		6 dB	

Information Element	Condition	Value/remark	Version
- CQI Feedback cycle, k		4 ms	
- CQI repetition factor		1	
- Δ_{CQI}		-3 dB	
- CHOICE mode		FDD (no data)	
Downlink information common for all radio links	A5,A6	Not Present	
Downlink information for each radio link list	A1, A2, A3, A4, A7, A8		
- Downlink information for each radio link			
- Choice mode		FDD	
- Primary CPICH info			
- Primary scrambling code		Ref. to the Default setting in TS34.108 clause 6.1 (FDD)	
- PDSCH with SHO DCH info		Not Present	
- PDSCH code mapping		Not Present	
- Serving HS-DSCH radio link indicator		FALSE	REL-5
- Downlink DPCH info for each RL			
- Primary CPICH usage for channel estimation		Primary CPICH may be used	
- DPCH frame offset		Set to value Default DPCH Offset Value (as currently stored in SS) mod 38400	
- Secondary CPICH info		Not Present	
- DL channelisation code			
- Secondary scrambling code		1	
- Spreading factor		Reference to TS34.108 clause 6.10 Parameter Set	
- Code number		0	
- Scrambling code change		No change	
- TPC combination index		0	
- SSDT Cell Identity		Not Present	
- Closed loop timing adjustment mode		Not Present	
- SCCPCH information for FACH		Not Present	
Downlink information for each radio link list	A5		
- Downlink information for each radio link			
- Choice mode		FDD	
- Primary CPICH info			
- Primary scrambling code		Ref. to the Default setting in TS34.108 clause 6.1 (FDD)	
- PDSCH with SHO DCH info		Not Present	
- PDSCH code mapping		Not Present	
- Serving HS-DSCH radio link indicator		FALSE	REL-5
- Downlink DPCH info for each RL		Not present	
- SCCPCH information for FACH		Not Present	
Downlink information for each radio link list	A9		REL-5
- Downlink information for each radio link			
- Choice mode		FDD	
- Primary CPICH info			
- Primary scrambling code		Ref. to the Default setting in TS34.108 clause 6.1 (FDD)	
- PDSCH with SHO DCH info		Not Present	
- PDSCH code mapping		Not Present	
- Serving HS-DSCH radio link indicator		TRUE	
- Downlink DPCH info for each RL			
- Primary CPICH usage for channel estimation		Primary CPICH may be used	
- DPCH frame offset		Set to value Default DPCH Offset Value (as currently stored in SS) mod 38400	
- Secondary CPICH info		Not Present	
- DL channelisation code			
- Secondary scrambling code		1	
- Spreading factor		Reference to TS34.108 clause 6.10 Parameter Set	
- Code number		0	
- Scrambling code change		No change	
- TPC combination index		0	
- SSDT Cell Identity		Not Present	
- Closed loop timing adjustment mode		Not Present	
- SCCPCH information for FACH		Not Present	

Information Element	Condition	Value/remark	Version
Downlink information for each radio link list	A6	Not Present	

Condition	Explanation	Version
A1	This IE need for "Non speech to CELL_DCH from CELL_DCH in CS"	
A2	This IE need for "Speech to CELL_DCH from CELL_DCH in CS"	
A3	This IE need for "Packet to CELL_DCH from CELL_DCH in PS"	
A4	This IE need for "Packet to CELL_DCH from CELL_FACH in PS"	
A5	This IE need for "Packet to CELL_FACH from CELL_DCH in PS"	
A6	This IE need for "Packet to CELL_FACH from CELL_FACH in PS"	
A7	This IE need for "Non speech to CELL_DCH from CELL_FACH in CS"	
A8	This IE need for "Speech to CELL_DCH from CELL_FACH in CS"	
A9	This IE is needed for "Packet to CELL_DCH / HS-DSCH from CELL_DCH in PS"	REL-5

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Contents of RADIO BEARER RECONFIGURATION message: AM or UM

Information Element	Condition	Value/remark	Version
Message Type	A1,A2,A3, A4,A5,A6		
RRC transaction identifier		Arbitrarily selects an integer between 0 and 3	
Integrity check info			
- message authentication code		SS calculates the value of MAC-I for this message and writes to this IE. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.	
- RRC message sequence number		SS provides the value of this IE, from its internal counter.	
Integrity protection mode info		Not Present	
Ciphering mode info		Not Present	
Activation time	A1,A2,A3	(256+CFN-(CFN MOD 8 + 8))MOD 256	
Activation time	A4, A5,A6	Not Present	
New U-RNTI		Not Present	
New C-RNTI	A1, A2, A3, A4,	Not Present	
New C-RNTI	A5, A6	'1010 1010 1010 1010'	
New DSCH-RNTI	A1, A2, A3, A4, A5, A6	Not Present	
New H-RNTI	A1, A2, A3, A4, A5, A6	Not Present	REL-5
RRC State indicator	A1, A2, A3, A4	CELL_DCH	
RRC State indicator	A5, A6	CELL_FACH	
UTRAN DRX cycle length coefficient	A1,A2,A3, A4,A5,A6	Not Present	
CN information info		Not Present	
URA identity		Not Present	
RAB information to reconfigure list		Not Present	
RB information to reconfigure list	A1	TS25.331 specifies that "Although this IE is not always required, need is MP to align with ASN.1".	
- RB information to reconfigure		(UM DCCH for RRC)	
- RB identity		1	
- PDCP info		Not Present	
- PDCP SN info		Not Present	
- RLC info		Not Present	
- RB mapping info		Not Present	
- RB stop/continue		Not Present	
- RB information to reconfigure		(AM DCCH for RRC)	
- RB identity		2	
- PDCP info		Not Present	
- PDCP SN info		Not Present	
- RLC info		Not Present	
- RB mapping info		Not Present	
- RB stop/continue		Not Present	
- RB information to reconfigure		(AM DCCH for NAS_DT High priority)	
- RB identity		3	
- PDCP info		Not Present	
- PDCP SN info		Not Present	
- RLC info		Not Present	
- RB mapping info		Not Present	
- RB stop/continue		Not Present	
- RB information to reconfigure		(AM DCCH for NAS_DT Low priority)	
- RB identity		4	
- PDCP info		Not Present	
- PDCP SN info		Not Present	
- RLC info		Not Present	
- RB mapping info		Not Present	

Information Element	Condition	Value/remark	Version
- RB stop/continue		Not Present	
- RB information to reconfigure		(TM DTCH)	
- RB identity		10	
- PDCP info		Not Present	
- PDCP SN info		Not Present	
- RLC info		Not Present	
- RB mapping info		Not Present	
- RB stop/continue		Not Present	
RB information to reconfigure list	A2	TS25.331 specifies that "Although this IE is not always required, need is MP to align with ASN.1".	
- RB information to reconfigure		(UM DCCH for RRC)	
- RB identity		1	
- PDCP info		Not Present	
- PDCP SN info		Not Present	
- RLC info		Not Present	
- RB mapping info		Not Present	
- RB stop/continue		Not Present	
- RB information to reconfigure		(AM DCCH for RRC)	
- RB identity		2	
- PDCP info		Not Present	
- PDCP SN info		Not Present	
- RLC info		Not Present	
- RB mapping info		Not Present	
- RB stop/continue		Not Present	
- RB information to reconfigure		(AM DCCH for NAS_DT High priority)	
- RB identity		3	
- PDCP info		Not Present	
- PDCP SN info		Not Present	
- RLC info		Not Present	
- RB mapping info		Not Present	
- RB stop/continue		Not Present	
- RB information to reconfigure		(AM DCCH for NAS_DT Low priority)	
- RB identity		4	
- PDCP info		Not Present	
- PDCP SN info		Not Present	
- RLC info		Not Present	
- RB mapping info		Not Present	
- RB stop/continue		Not Present	
- RB information to reconfigure		(TM DTCH)	
- RB identity		10	
- PDCP info		Not Present	
- PDCP SN info		Not Present	
- RLC info		Not Present	
- RB mapping info		Not Present	
- RB stop/continue		Not Present	
- RB information to reconfigure		(TM DTCH)	
- RB identity		11	
- PDCP info		Not Present	
- PDCP SN info		Not Present	
- RLC info		Not Present	
- RB mapping info		Not Present	
- RB stop/continue		Not Present	
- RB information to reconfigure		(TM DTCH) (This IE is needed for 12.2 kbps and 10.2 kbps)	
- RB identity		12	
- PDCP info		Not Present	
- PDCP SN info		Not Present	
- RLC info		Not Present	
- RB mapping info		Not Present	
- RB stop/continue		Not Present	
RB information to reconfigure list	A3,A4,A5, A6	TS25.331 specifies that "Although this IE is not always required, need is MP to align with ASN.1".	
- RB information to reconfigure		(UM DCCH for RRC)	
- RB identity		1	

Information Element	Condition	Value/remark	Version
- PDCP info		Not Present	
- PDCP SN info		Not Present	
- RLC info		Not Present	
- RB mapping info		Not Present	
- RB stop/continue		Not Present	
- RB information to reconfigure		(AM DCCH for RRC)	
- RB identity		2	
- PDCP info		Not Present	
- PDCP SN info		Not Present	
- RLC info		Not Present	
- RB mapping info		Not Present	
- RB stop/continue		Not Present	
- RB information to reconfigure		(AM DCCH for NAS_DT High priority)	
- RB identity		3	
- PDCP info		Not Present	
- PDCP SN info		Not Present	
- RLC info		Not Present	
- RB mapping info		Not Present	
- RB stop/continue		Not Present	
- RB information to reconfigure		(AM DCCH for NAS_DT Low priority)	
- RB identity		4	
- PDCP info		Not Present	
- PDCP SN info		Not Present	
- RLC info		Not Present	
- RB mapping info		Not Present	
- RB stop/continue		Not Present	
- RB information to reconfigure		(AM DTCH)	
- RB identity		20	
- PDCP info		Not Present	
- PDCP SN info		Not Present	
- RLC info		Not Present	
- RB mapping info		Not Present	
- RB stop/continue		Not Present	
RB information to be affected	A1, A2, A3,A4,A5, A6	Not Present	
UL Transport channel information for all transport channels	A1, A2, A5,A6	Not Present	
UL Transport channel information for all transport channels	A3, A4		
- PRACH TFCS		Not Present	
- CHOICE mode		FDD	
- TFC subset		Not Present	
- UL DCH TFCS			
- CHOICE TFCI signalling		Normal	
- TFCI Field 1 information			
- CHOICE TFCS representation		Complete reconfiguration	
- TFCS complete reconfigure information			
- CHOICE CTFC Size		Number of bits used must be enough to cover all combinations of CTFC from TS34.108 clause 6.10.2.4 Parameter Set.	
- CTFC information		This IE is repeated for TFC numbers and reference to TS34.108 clause 6.10.2.4 Parameter Set	
- CTFC		Reference to TS34.108 clause 6.10.2.4 Parameter Set	
- Power offset information			
- CHOICE Gain Factors		Computed Gain Factors(The last TFC is set to Signalled Gain Factors)	
- Gain factor βc		11 (below 64 kbps) 9 (higher than 64 kbps) (Not Present if the CHOICE Gain Factors is set to ComputedGain	

Information Element	Condition	Value/remark	Version
- Gain factor βd		Factors) 15 (Not Present if the CHOICE Gain Factors is set to ComputedGain Factors)	
- Reference TFC ID		0	
- CHOICE mode		FDD	
- Power offset P p-m		Not Present	
Deleted UL TrCH information	A1, A2, A3, A4, A5,A6	Not Present	
Added or Reconfigured UL TrCH information	A1, A2, A5,A6	Not Present	
Added or Reconfigured UL TrCH information	A4	2 TrCHs(DCH for DCCH and DCH for DTCH)	
- Uplink transport channel type		DCH	
- UL Transport channel identity		5	
- TFS			
- CHOICE Transport channel type		Dedicated transport channels	
- Dynamic Transport format information			
- RLC Size		Reference to TS34.108 clause 6.10 Parameter Set	
- Number of TBs and TTI List		(This IE is repeated for TFI number.)	
- Transmission Time Interval		Not Present	
- Number of Transport blocks		Reference to TS34.108 clause 6.10 Parameter Set	
- CHOICE Logical Channel list		All	
- Semi-static Transport Format information			
- Transmission time interval		Reference to TS34.108 clause 6.10 Parameter Set	
- Type of channel coding		Reference to TS34.108 clause 6.10 Parameter Set	
- Coding Rate		Reference to TS34.108 clause 6.10 Parameter Set	
- Rate matching attribute		Reference to TS34.108 clause 6.10 Parameter Set	
- CRC size		Reference to TS34.108 clause 6.10 Parameter Set	
- Uplink transport channel type		DCH	
- UL Transport channel identity		1	
- TFS			
- CHOICE Transport channel type		Dedicated transport channels	
- Dynamic Transport format information			
- RLC Size		Reference to TS34.108 clause 6.10 Parameter Set	
- Number of TBs and TTI List		(This IE is repeated for TFI number.)	
- Transmission Time Interval		Not Present	
- Number of Transport blocks		Reference to TS34.108 clause 6.10 Parameter Set	
- CHOICE Logical Channel list		All	
- Semi-static Transport Format information			
- Transmission time interval		Reference to TS34.108 clause 6.10 Parameter Set	
- Type of channel coding		Reference to TS34.108 clause 6.10 Parameter Set	
- Coding Rate		Reference to TS34.108 clause 6.10 Parameter Set	
- Rate matching attribute		Reference to TS34.108 clause 6.10 Parameter Set	
- CRC size		Reference to TS34.108 clause 6.10 Parameter Set	
Added or Reconfigured UL TrCH information	A3	(DCH for DTCH)	
- Uplink transport channel type		DCH	
- UL Transport channel identity		1	
- TFS			
- CHOICE Transport channel type		Dedicated transport channels	
- Dynamic Transport format information			
- RLC Size		Reference to TS34.108 clause 6.10	

Information Element	Condition	Value/remark	Version
- Number of TBs and TTI List - Transmission Time Interval - Number of Transport blocks - CHOICE Logical Channel list - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size		Parameter Set (This IE is repeated for TFI number.) Not Present Reference to TS34.108 clause 6.10 Parameter Set All Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set	
CHOICE mode - CPCH set ID - Added or Reconfigured TrCH information for DRAC list	A1,A2,A3, A4,A5,A6	FDD Not Present Not Present	
DL Transport channel information common for all transport channel	A1, A2, A5, A6	Not Present	
DL Transport channel information common for all transport channel - SCCPCH TFCS - CHOICE mode - CHOICE DL parameters - DL DCH TFCS - CHOICE TFCI Signalling - TFCI Field 1 Information - CHOICE TFCS representation - TFCS complete reconfigure - CHOICE CTFC Size - CTFC information - CTFC - Power offset information	A3,A4	 Not Present FDD Explicit Normal Complete reconfiguration Number of bits used must be enough to cover all combinations of CTFC from clause TS34.108 clause 6.10.2.4 Parameter Set. This IE is repeated for TFC numbers and reference to TS34.108 clause 6.10.2.4 Reference to TS34.108 clause 6.10.2.4 Parameter Set Not Present	
Deleted DL TrCH information	A1, A2, A3, A4, A5,A6	Not Present	
Added or Reconfigured DL TrCH information	A1, A2, A5, A6	Not Present	
Added or Reconfigured DL TrCH information - Downlink transport channel type - DL Transport channel identity - CHOICE DL parameters - Uplink transport channel type - UL TrCH identity - DCH quality target - BLER Quality value - Downlink transport channel type - DL Transport channel identity - CHOICE DL parameters - TFS - CHOICE Transport channel type - Dynamic transport format information - RLC Size - Number of TBs and TTI List - Dynamic transport format information	A4	2 TrCHs(DCH for DCCH and DCH for DTCH) DCH 10 Same as UL DCH 5 Not Present DCH 6 Explicit Dedicated transport channel Reference to TS34.108 clause 6.10 Parameter Set (This IE is repeated for TFI number.)	

Information Element	Condition	Value/remark	Version
- Transmission Time Interval - Number of Transport blocks - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value		Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set -2.0	
Added or Reconfigured DL TrCH information - Downlink transport channel type - DL Transport channel identity - CHOICE DL parameters - TFS - CHOICE Transport channel type - Dynamic transport format information - RLC Size - Number of TBs and TTI List - Dynamic transport format information - Transmission Time Interval - Number of Transport blocks - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - DCH quality target - BLER Quality value	A3	 DCH 6 Explicit Dedicated transport channel Reference to TS34.108 clause 6.10 Parameter Set (This IE is repeated for TFI number.) Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set -2.0	
Frequency info - UARFCN uplink (Nu) - UARFCN downlink (Nd)	A1,A2,A3, A4,A5	 Reference to clause 5.1 Test frequencies Reference to clause 5.1 Test frequencies	
Frequency info	A6	Not Present	
Maximum allowed UL TX power	A1,A2,A3, A4,A5,A6	33dBm	
CHOICE channel requirement -Uplink DPCH power control info - DPCCH power offset - PC Preamble - SRB delay - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence	A1, A2, A3, A4	Uplink DPCH info -6dB 1 frame 7 frames Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10	

Information Element	Condition	Value/remark	Version
- Number of FBI bit		Parameter Set Reference to TS34.108 clause 6.10	
- Puncturing Limit		Parameter Set Reference to TS34.108 clause 6.10	
CHOICE channel requirement	A5, A6	Parameter Set Not Present	
CHOICE Mode	A1,A2,A3, A4,A5,A6	FDD	
- Downlink PDSCH information		Not Present	
Downlink HS-PDSCH Information	A1, A2, A3, A4, A5, A6	Not Present	REL-5
Downlink information common for all radio links	A5, A6	Not Present	
Downlink information common for all radio links - Downlink DPCH info common for all RL - Timing indicator - CFN-targetSFN frame offset - Downlink DPCH power control information - DPC mode - CHOICE mode - Power offset $P_{Pilot-DPDCH}$ - DL rate matching restriction information - Spreading factor - Fixed or Flexible Position - TFCI existence - CHOICE SF - DPCH compressed mode info - TX Diversity mode - SSDT information - Default DPCH Offset Value	A1, A2, A3	 Maintain Not Present 0 (single) FDD 0 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present None Not Present Not Present	
Downlink information common for all radio links - Downlink DPCH info common for all RL - Timing indicator - CFN-targetSFN frame offset - Downlink DPCH power control information - DPC mode - CHOICE mode - Power offset $P_{Pilot-DPDCH}$ - DL rate matching restriction information - Spreading factor - Fixed or Flexible Position - TFCI existence - CHOICE SF - DPCH compressed mode info - TX Diversity mode - SSDT information - Default DPCH Offset Value	A4	 Initialise Not Present 0 (single) FDD 0 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present None Not Present Present Arbitrary set to value 0..306688 by step of 512	
Downlink information per radio link list -Downlink information for each radio link - Choice mode - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - PDSCH code mapping - Serving HS-DSCH radio link indicator - Downlink DPCH info for each RL	A1, A2, A3	 FDD Ref. to the Default setting in TS34.108 clause 6.1 (FDD) Not Present Not Present FALSE	 REL-5

Information Element	Condition	Value/remark	Version
- Primary CPICH usage for channel estimation		Primary CPICH may be used	
- DPCH frame offset		Set to value Default DPCH Offset Value (as currently stored in SS) mod 38400	
- Secondary CPICH info		Not Present	
- Secondary scrambling code			
- channelisation code			
- DL channelisation code			
- Secondary scrambling code		2	
- Spreading factor		Reference to TS34.108 clause 6.10 Parameter Set	
- Code number		0	
- Scrambling code change		No change	
- TPC combination index		0	
- SSDT Cell Identity		Not Present	
- Closed loop timing adjustment mode		Not Present	
- SCCPCH information for FACH		Not Present	
Downlink information per radio link list	A4		
-Downlink information for each radio link			
- Choice mode		FDD	
- Primary CPICH info			
- Primary scrambling code		Ref. to the Default setting in TS34.108 clause 6.1 (FDD)	
- PDSCH with SHO DCH info		Not Present	
- PDSCH code mapping		Not Present	
- Serving HS-DSCH radio link indicator		FALSE	REL-5
- Downlink DPCH info for each RL			
- Primary CPICH usage for channel estimation		Primary CPICH may be used	
- DPCH frame offset		Set to value : Default DPCH Offset Value mod 38400	
- Secondary CPICH info		Not Present	
- Secondary scrambling code			
- channelisation code			
- DL channelisation code			
- Secondary scrambling code		2	
- Spreading factor		Reference to TS34.108 clause 6.10 Parameter Set	
- Code number		0	
- Scrambling code change		No change	
- TPC combination index		0	
- SSDT Cell Identity		Not Present	
- Closed loop timing adjustment mode		Not Present	
- SCCPCH information for FACH		Not Present	
- Downlink information for each radio link	A5		
- Choice mode		FDD	
- Primary CPICH info			
- Primary scrambling code		Ref. to the Default setting in TS34.108 clause 6.1 (FDD)	
- PDSCH with SHO DCH info		Not Present	
- PDSCH code mapping		Not Present	
- Serving HS-DSCH radio link indicator		FALSE	REL-5
- Downlink DPCH info for each RL		Not present	
- SCCPCH Information for FACH		Not Present	
- Downlink information for each radio link	A6	Not Present	

Condition	Explanation
A1	This IE need for "Non speech in CS"
A2	This IE need for "Speech in CS"
A3	This IE need for "Packet to CELL_DCH from CELL_DCH in PS"
A4	This IE need for "Packet to CELL_DCH from CELL_FACH in PS"
A5	This IE need for "Packet to CELL_FACH from CELL_DCH in PS"
A6	This IE need for "Packet to CELL_FACH from CELL_FACH in PS"

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Contents of RADIO BEARER RELEASE message: AM or UM

Information Element		Value/remark	Version
Message Type	A1, A2, A3, A4, A5, A6, A7, A8 , A9		REL-5
RRC transaction identifier		Arbitrarily selects an integer between 0 and 3	
Integrity check info - message authentication code		SS calculates the value of MAC-I for this message and writes to this IE. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.	
- RRC message sequence number		SS provides the value of this IE, from its internal counter.	
Integrity protection mode info		Not Present	
Ciphering mode info		Not Present	
Activation time	A1, A2, A3, A7, A8 , A9	(256+CFN-(CFN MOD 8 + 8))MOD 256	REL-5
Activation time	A4, A5, A6	Not Present	
New U-RNTI		Not Present	
New C-RNTI	A1,A2,A3, A4 , A9	Not Present	REL-5
New C-RNTI	A5, A6, A7, A8	'1010 1010 1010 1010'	
New DSCH-RNTI	A1, A2, A3, A4, A5, A6, A7, A8 , A9	Not Present	REL-5
RRC State indicator	A1,A2, A3, A4 , A9	CELL_DCH	REL-5
RRC State indicator	A5, A6, A7, A8	CELL_FACH	
UTRAN DRX cycle length coefficient	A1,A2,A3, A4,A5,A6, A7, A8 , A9	Not Present	REL-5
CN information info		Not Present	
Signalling Connection release indication		Not Present	
URA identity		Not Present	
RAB information to reconfigure list		Not Present	
RB information to release - RB identity	A1,A2, A7, A8	10	
RB information to release - RB identity	A2, A8	11	
RB information to release - RB identity	A2, A8	12	
RB information to release - RB identity	A3, A4, A5, A6	20	
RB information to release - RB identity	A9	23	REL-5
RB information to be affected	A1,A2, A3,A4,A5, A6, A7, A8 , A9	Not Present	REL-5

Information Element		Value/remark	Version
Downlink counter synchronisation info	A1,A2,A3, A4,A5,A6, A7, A8 , A9	Not Present	REL-5
UL Transport channel information for all transport channels	A1, A2, A3, A4, A5, A6, A7, A8 , A9	TFCS reconfigured to fit the new transport channel configuration.	REL-5
Deleted UL TrCH Information	A1,A2, A3, A4, A5, A6, A7, A8 , A9		REL-5
- Uplink transport channel type		DCH	
- Transport channel identity		1	
Deleted UL TrCH Information	A2, A8		
- Uplink transport channel type		DCH	
- Transport channel identity		2	
Deleted UL TrCH Information	A2, A8		
- Uplink transport channel type		DCH	
- Transport channel identity		3	
Added or Reconfigured UL TrCH information	A5, A6, A7, A8	Not Present	
Added or Reconfigured UL TrCH information	A1, A2, A3, A4 , A9	TrCHs(DCH for DCCH)	REL-5
- Uplink transport channel type		DCH	
- UL Transport channel identity		5	
- TFS			
- CHOICE Transport channel type		Dedicated transport channels	
- Dynamic Transport format information			
- RLC Size		According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)	
- Number of TBs and TTI List		(This IE is repeated for TFI number.)	
- Transmission Time Interval		According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)	
- Number of Transport blocks		According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)	
- CHOICE Logical Channel list		All	
- Semi-static Transport Format information			
- Transmission time interval		According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)	
- Type of channel coding		According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)	
- Coding Rate		According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)	
- Rate matching attribute		According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)	
- CRC size		According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)	
DL Transport channel information for all transport channels	A1, A2, A3, A4, A5, A6, A7, A8 , A9	TFCS reconfigured to fit the new transport channel configuration.	REL-5
Deleted DL TrCH Information	A1, A2, A3, A4, A5, A6, A7, A8		

Information Element		Value/remark	Version
	, A9		REL-5
- Downlink transport channel type		DCH	
- Transport channel identity		6	
Deleted DL TrCH Information	A2, A8		
- Downlink transport channel type		DCH	
- Transport channel identity		7	
Deleted DL TrCH Information	A2, A8		
- Downlink transport channel type		DCH	
- Transport channel identity		8	
Deleted DL TrCH Information	A9		REL-5
- Downlink transport channel type		HS-DSCH	
- DL HS-DSCH MAC-d flow identity		0	
Added or Reconfigured DL TrCH information	A5, A6, A7, A8	Not Present	
Added or Reconfigured DL TrCH information	A1, A2, A3, A4 , A9	1 TrCHs(DCH for DCCH)	REL-5
- Downlink transport channel type		DCH	
- DL Transport channel identity		10	
- CHOICE DL parameters		Same as UL	
- Uplink transport channel type		DCH	
- UL TrCH identity		5	
- DCH quality target			
- BLER Quality value		Not Present	
Frequency info	A1,A2,A3, A4,A5, A7, A8 , A9		REL-5
- UARFCN uplink (Nu)		Reference to clause 5.1 Test frequencies	
- UARFCN downlink (Nd)		Reference to clause 5.1 Test frequencies	
Maximum allowed UL TX power		33dBm	
Frequency info	A6	Not Present	
CHOICE *channel requirement*	A5, A6, A7, A8	Not Present	
CHOICE channel requirement	A1,A2,A3, A4 , A9	Uplink DPCH info	REL-5
- Uplink DPCH power control info			
- DPCCH power offset		-80dB (i.e. ASN.1 IE value of –40)	
- PC Preamble		1 frame	
- SRB delay		7 frames	
- Power Control Algorithm		Algorithm1	
- TPC step size		1dB	
- Scrambling code type		Long	
- Scrambling code number		0 (0 to 16777215)	
- Number of DPDCH		Not Present(1)	
- spreading factor		Reference to TS34.108 clause 6.10 Parameter Set	
- TFCI existence		Reference to TS34.108 clause 6.10 Parameter Set	
- Number of FBI bit		Reference to TS34.108 clause 6.10 Parameter Set	
- Puncturing Limit		Reference to TS34.108 clause 6.10 Parameter Set	
CHOICE Mode	A1,A2,A3, A4,A5,A6, A7, A8 , A9	FDD	REL-5
- Downlink PDSCH information		Not Present	
Downlink HS-PDSCH Information	A1, A2, A3, A4, A5, A6, A7, A8, A9	Not Present	REL-5

Information Element		Value/remark	Version
Downlink information common for all radio links	A5, A6, A7, A8	Not Present	
Downlink information common for all radio links - Downlink DPCH info common for all RL - Timing indicator - CFN-targetSFN frame offset - Downlink DPCH power control information - DPC mode - CHOICE mode - Power offset $P_{Pilot-DPDCH}$ - DL rate matching restriction information - Spreading factor - Fixed or Flexible Position - TFCI existence - CHOICE SF - DPCH compressed mode info - TX Diversity mode - SSDT information - Default DPCH Offset Value	A1,A2, A3 , A9	 Maintain Not Present 0 (single) FDD 0 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present None Not Present Not Present	REL-5
Downlink information common for all radio links - Downlink DPCH info common for all RL - Timing indicator - CFN-targetSFN frame offset - Downlink DPCH power control information - DPC mode - CHOICE mode - Power offset $P_{Pilot-DPDCH}$ - DL rate matching restriction information - Spreading factor - Fixed or Flexible Position - TFCI existence - CHOICE SF - DPCH compressed mode info - TX Diversity mode - SSDT information - Default DPCH Offset Value	A4	 Initialise Not Present 0 (single) FDD 0 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present None Not Present Arbitrary set to value 0..306688 by step of 512	
Downlink information for each radio link list -Downlink information for each radio link - Choice mode - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - PDSCH code mapping - Serving HS-DSCH radio link indicator - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code	A1,A2,A3 , A9	 FDD Ref. to the Default setting in TS34.108 clause 6.1 (FDD) Not Present Not Present FALSE Primary CPICH may be used Set to value Default DPCH Offset Value (as currently stored in SS) mod 38400 Not Present	REL-5 REL-5

Information Element		Value/remark	Version
- Secondary scrambling code - Spreading factor - Code number - Scrambling code change - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - SCCPCH information for FACH		3 Reference to TS34.108 clause 6.10 Parameter Set 0 No change 0 Not Present Not Present Not Present	
Downlink information for each radio link list -Downlink information for each radio link - Choice mode - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - PDSCH code mapping - Serving HS-DSCH radio link indicator - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - Secondary scrambling code - channelisation code - DL channelisation code - Secondary scrambling code - Spreading factor - Code number - Scrambling code change - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - SCCPCH information for FACH	A4	 FDD Ref. to the Default setting in TS34.108 clause 6.1 (FDD) Not Present Not Present FALSE Primary CPICH may be used Set to value : Default DPCH Offset Value mod 38400 Not Present 3 Reference to TS34.108 clause 6.10 Parameter Set 0 No change 0 Not Present Not Present Not Present	REL-5
- Downlink information for each radio link - Choice mode - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - PDSCH code mapping - Serving HS-DSCH radio link indicator - Downlink DPCH info for each RL - SCCPCH information for FACH	A5, A7, A8	 FDD Ref. to the Default setting in TS34.108 clause 6.1 (FDD) Not Present Not Present FALSE Not present Not Present	REL-5
- Downlink information for each radio link	A6	Not Present	

Condition	Explanation	Version
A1	This IE need for "Non speech in CS"	
A2	This IE need for "Speech in CS"	
A3	This IE need for "Packet to CELL_DCH from CELL_DCH in PS"	
A4	This IE need for "Packet to CELL_DCH from CELL_FACH in PS"	
A5	This IE need for "Packet to CELL_FACH from CELL_DCH in PS"	
A6	This IE need for "Packet to CELL_FACH from CELL_FACH in PS"	
A7	This IE need for "Non speech to CELL_FACH from CELL_DCH in CS"	
A8	This IE need for "Speech to CELL_FACH from CELL_DCH in CS"	
A9	This IE is needed for "Packet to CELL_DCH from CELL_DCH / HS-DSCH in PS"	REL-5

…

Contents of TRANSPORT CHANNEL RECONFIGURATION message: AM or UM

Information Element	Condition	Value/remark	Version
Message Type	A1, A2, A3, A4, A5, A6		
RRC transaction identifier		Arbitrarily selects an integer between 0 and 3	
Integrity check info			
- message authentication code		SS calculates the value of MAC-I for this message and writes to this IE. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.	
- RRC message sequence number		SS provides the value of this IE, from its internal counter.	
Integrity protection mode info		Not Present	
Ciphering mode info		Not Present	
Activation time	A1, A2, A3	(256+CFN-(CFN MOD 8 + 8))MOD 256	
Activation time	A4, A5, A6	Not Present	
New U-RNTI		Not Present	
New C-RNTI	A1, A2, A3, A4	Not Present	
New C-RNTI	A5, A6	'1010 1010 1010 1010'	
New DSCH-RNTI	A1, A2, A3, A4, A5, A6	Not Present	
New H-RNTI	A1, A2, A3, A4, A5, A6	Not Present	REL-5
RRC State indicator	A1, A2, A3, A4	CELL_DCH	
RRC State indicator	A5, A6	CELL_FACH	
UTRAN DRX cycle length coefficient	A1, A2, A3, A4,A5,A6	Not Present	
CN information info		Not Present	
URA identity		Not Present	
Downlink counter synchronisation info		Not Present	
UL Transport channel information for all transport channels	A1, A2, A5, A6	Not Present	

Information Element	Condition	Value/remark	Version
UL Transport channel information for all transport channels	A3, A4		
- PRACH TFCS		Not Present	
- CHOICE mode		FDD	
- TFC subset		Not Present	
- UL DCH TFCS			
- CHOICE TFCI signalling		Normal	
- TFCI Field 1 information			
- CHOICE TFCS representation		Complete reconfiguration	
- TFCS complete reconfigure information			
- CHOICE CTFC Size		Number of bits used must be enough to cover all combinations of CTFC from TS34.108 clause 6.10.2.4 Parameter Set.	
- CTFC information		This IE is repeated for TFC numbers and reference to TS34.108 clause 6.10.2.4 Parameter Set	
- CTFC		Reference to TS34.108 clause 6.10.2.4 Parameter Set	
- Power offset information			
- CHOICE Gain Factors		Computed Gain Factors(The last TFC is set to Signalled Gain Factors)	
- Gain factor βc		11 (below 64 kbps) 9 (higher than 64 kbps) (Not Present if the CHOICE Gain Factors is set to ComputedGain Factors)	
- Gain factor βd		15 (Not Present if the CHOICE Gain Factors is set to ComputedGain Factors)	
- Reference TFC ID		0	
- CHOICE mode		FDD	
- Power offset $P_{p\text{-}m}$		Not Present	
Added or Reconfigured UL TrCH information	A1, A2, A5, A6	Not Present	

Information Element	Condition	Value/remark	Version
Added or Reconfigured UL TrCH information	A4	2 TrCHs(DCH for DCCH and DCH for DTCH)	
- Uplink transport channel type		DCH	
- UL Transport channel identity		5	
- TFS			
- CHOICE Transport channel type		Dedicated transport channels	
- Dynamic Transport format information			
- RLC Size		Reference to TS34.108 clause 6.10 Parameter Set	
- Number of TBs and TTI List		(This IE is repeated for TFI number.)	
- Transmission Time Interval		Not Present	
- Number of Transport blocks		Reference to TS34.108 clause 6.10 Parameter Set	
- CHOICE Logical Channel list		All	
- Semi-static Transport Format information			
- Transmission time interval		Reference to TS34.108 clause 6.10 Parameter Set	
- Type of channel coding		Reference to TS34.108 clause 6.10 Parameter Set	
- Coding Rate		Reference to TS34.108 clause 6.10 Parameter Set	
- Rate matching attribute		Reference to TS34.108 clause 6.10 Parameter Set	
- CRC size		Reference to TS34.108 clause 6.10 Parameter Set	
- Uplink transport channel type		DCH	
- UL Transport channel identity		1	
- TFS			
- CHOICE Transport channel type		Dedicated transport channels	
- Dynamic Transport format information			
- RLC Size		Reference to TS34.108 clause 6.10 Parameter Set	
- Number of TBs and TTI List		(This IE is repeated for TFI number.)	
- Transmission Time Interval		Not Present	
- Number of Transport blocks		Reference to TS34.108 clause 6.10 Parameter Set	
- CHOICE Logical Channel list		All	
- Semi-static Transport Format information			
- Transmission time interval		Reference to TS34.108 clause 6.10 Parameter Set	
- Type of channel coding		Reference to TS34.108 clause 6.10 Parameter Set	
- Coding Rate		Reference to TS34.108 clause 6.10 Parameter Set	
- Rate matching attribute		Reference to TS34.108 clause 6.10 Parameter Set	
- CRC size		Reference to TS34.108 clause 6.10 Parameter Set	
Added or Reconfigured UL TrCH information	A3	(DCH for DTCH)	
- Uplink transport channel type		DCH	
- UL Transport channel identity		1	
- TFS			
- CHOICE Transport channel type		Dedicated transport channels	
- Dynamic Transport format information			
- RLC Size		Reference to TS34.108 clause 6.10 Parameter Set	
- Number of TBs and TTI List		(This IE is repeated for TFI number.)	
- Transmission Time Interval		Not Present	
- Number of Transport blocks		Reference to TS34.108 clause 6.10 Parameter Set	
- CHOICE Logical Channel list		All	
- Semi-static Transport Format information			
- Transmission time interval		Reference to TS34.108 clause 6.10 Parameter Set	
- Type of channel coding		Reference to TS34.108 clause 6.10 Parameter Set	
- Coding Rate		Reference to TS34.108 clause 6.10	

Information Element	Condition	Value/remark	Version
- Rate matching attribute		Parameter Set Reference to TS34.108 clause 6.10 Parameter Set	
- CRC size		Reference to TS34.108 clause 6.10 Parameter Set	
CHOICE *mode*	A1,A2,A3, A4,A5,A6	FDD	
- CPCH set ID		Not Present	
- Added or Reconfigured TrCH information for DRAC list		Not Present	
DL Transport channel information common for all transport channel	A1, A2, A5,A6	Not Present	
DL Transport channel information common for all transport channel	A3,A4		
- SCCPCH TFCS		Not Present	
- CHOICE mode		FDD	
- CHOICE DL parameters		Explicit	
- DL DCH TFCS			
- CHOICE TFCI Signalling		Normal	
- TFCI Field 1 Information			
- CHOICE TFCS representation		Complete reconfiguration	
- TFCS complete reconfigure			
- CHOICE CTFC Size		Number of bits used must be enough to cover all combinations of CTFC from clause TS34.108 clause 6.10.2.4 Parameter Set.	
- CTFC information		This IE is repeated for TFC numbers and reference to TS34.108 clause 6.10.2.4	
- CTFC		Reference to TS34.108 clause 6.10.2.4 Parameter Set	
- Power offset information		Not Present	
Added or Reconfigured DL TrCH information	A1, A2, A5, A6	Not Present	

Information Element	Condition	Value/remark	Version
Added or Reconfigured DL TrCH information	A4	2 TrCHs(DCH for DCCH and DCH for DTCH)	
- Downlink transport channel type		DCH	
- DL Transport channel identity		10	
- CHOICE DL parameters		Same as UL	
- Uplink transport channel type		DCH	
- UL TrCH identity		5	
- DCH quality target			
- BLER Quality value		Not Present	
- Downlink transport channel type		DCH	
- DL Transport channel identity		6	
- CHOICE DL parameters		Explicit	
- TFS			
- CHOICE Transport channel type		Dedicated transport channel	
- Dynamic transport format information			
- RLC Size		Reference to TS34.108 clause 6.10 Parameter Set	
- Number of TBs and TTI List		(This IE is repeated for TFI number.)	
- Dynamic transport format information			
- Transmission Time Interval		Not Present	
- Number of Transport blocks		Reference to TS34.108 clause 6.10 Parameter Set	
- Semi-static Transport Format information			
- Transmission time interval		Reference to TS34.108 clause 6.10 Parameter Set	
- Type of channel coding		Reference to TS34.108 clause 6.10 Parameter Set	
- Coding Rate		Reference to TS34.108 clause 6.10 Parameter Set	
- Rate matching attribute		Reference to TS34.108 clause 6.10 Parameter Set	
- CRC size		Reference to TS34.108 clause 6.10 Parameter Set	
- DCH quality target			
- BLER Quality value		-2.0	
Added or Reconfigured DL TrCH information	A3		
- Downlink transport channel type		DCH	
- DL Transport channel identity		6	
- CHOICE DL parameters		Explicit	
- TFS			
- CHOICE Transport channel type		Dedicated transport channel	
- Dynamic transport format information			
- RLC Size		Reference to TS34.108 clause 6.10 Parameter Set	
- Number of TBs and TTI List		(This IE is repeated for TFI number.)	
- Dynamic transport format information			
- Transmission Time Interval		Not Present	
- Number of Transport blocks		Reference to TS34.108 clause 6.10 Parameter Set	
- Semi-static Transport Format information			
- Transmission time interval		Reference to TS34.108 clause 6.10 Parameter Set	
- Type of channel coding		Reference to TS34.108 clause 6.10 Parameter Set	
- Coding Rate		Reference to TS34.108 clause 6.10 Parameter Set	
- Rate matching attribute		Reference to TS34.108 clause 6.10 Parameter Set	
- CRC size		Reference to TS34.108 clause 6.10 Parameter Set	
- DCH quality target			
- BLER Quality value		-2.0	
Frequency info	A1,A2,A3, A4,A5		
- UARFCN uplink (Nu)		Reference to clause 5.1 Test frequencies	
- UARFCN downlink (Nd)		Reference to clause 5.1 Test	

Information Element	Condition	Value/remark	Version
		frequencies	
Frequency info	A6	Not Present	
Maximum allowed UL TX power	A1,A2,A3, A4,A5,A6	33dBm	
CHOICE *channel requirement*	A5, A6	Not Present	
CHOICE channel requirement -Uplink DPCH power control info - DPCCH power offset - PC Preamble - SRB delay - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit	A1, A2, A3, A4	Uplink DPCH info -6dB 1 frame 7 frames Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set	
CHOICE Mode - Downlink PDSCH information	A1,A2,A3, A4,A5,A6	FDD Not Present	
Downlink HS-PDSCH Information	A1, A2, A3, A4, A5, A6	Not Present	REL-5
Downlink information common for all radio links	A5, A6	Not Present	
Downlink information common for all radio links - Downlink DPCH info common for all RL - Timing indicator - CFN-targetSFN frame offset - Downlink DPCH power control information - DPC mode - CHOICE mode - Power offset $P_{Pilot-DPDCH}$ - DL rate matching restriction information - Spreading factor - Fixed or Flexible Position - TFCI existence - CHOICE SF - DPCH compressed mode info - TX Diversity mode - SSDT information - Default DPCH Offset Value	A1, A2, A3	 Maintain Not Present 0 (single) FDD 0 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Not Present None Not Present Not Present	
Downlink information common for all radio links - Downlink DPCH info common for all RL - Timing indicator - CFN-targetSFN frame offset - Downlink DPCH power control information - DPC mode - CHOICE mode - Power offset $P_{Pilot-DPDCH}$ - DL rate matching restriction information - Spreading factor - Fixed or Flexible Position - TFCI existence	A4	 Initialise Not Present 0 (single) FDD 0 Not Present Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10	

Information Element	Condition	Value/remark	Version
- CHOICE SF		Parameter Set Reference to TS34.108 clause 6.10 Parameter Set	
- DPCH compressed mode info		Not Present	
- TX Diversity mode		None	
- SSDT information		Not Present	
- Default DPCH Offset Value		Arbitrary set to value 0..306688 by step of 512	
Downlink information for each radio link list	A1, A2, A3		
- Downlink information for each radio links			
- CHOICE mode		FDD	
- Primary CPICH info			
- Primary scrambling code		Ref. to the Default setting in TS34.108 clause 6.1 (FDD)	
- PDSCH with SHO DCH info		Not Present	
- PDSCH code mapping		Not Present	
- Serving HS-DSCH radio link indicator		FALSE	REL-5
- Downlink DPCH info for each RL			
- Primary CPICH usage for channel estimation		Primary CPICH may be used	
- DPCH frame offset		Set to value Default DPCH Offset Value (as currently stored in SS) mod 38400	
- Power offset $P_{Pilot-DPDCH}$		0	
- Secondary CPICH info		Not Present	
- DL channelisation code			
- Secondary scrambling code		4	
- Spreading factor		Reference to TS34.108 clause 6.10 Parameter Set	
- Code number		0	
- Scrambling code change		No change	
- TPC combination index		0	
- SSDT Cell Identity		Not Present	
- Closed loop timing adjustment mode		Not Present	
- SCCPCH information for FACH		Not Present	
Downlink information for each radio link list	A4		
- Downlink information for each radio links			
- CHOICE mode		FDD	
- Primary CPICH info			
- Primary scrambling code		Ref. to the Default setting in TS34.108 clause 6.1 (FDD)	
- PDSCH with SHO DCH info		Not Present	
- PDSCH code mapping		Not Present	
- Serving HS-DSCH radio link indicator		FALSE	REL-5
- Downlink DPCH info for each RL			
- Primary CPICH usage for channel estimation		Primary CPICH may be used	
- DPCH frame offset		Set to value: Default DPCH Offset Value mod 38400	
- Power offset $P_{Pilot-DPDCH}$		0	
- Secondary CPICH info		Not Present	
- DL channelisation code			
- Secondary scrambling code		4	
- Spreading factor		Reference to TS34.108 clause 6.10 Parameter Set	
- Code number		0	
- Scrambling code change		No change	
- TPC combination index		0	
- SSDT Cell Identity		Not Present	
- Closed loop timing adjustment mode		Not Present	
- SCCPCH information for FACH		Not Present	
- Downlink information for each radio link	A5		
- Choice mode		FDD	
- Primary CPICH info			
- Primary scrambling code		Ref. to the Default setting in TS34.108 clause 6.1 (FDD)	
- PDSCH with SHO DCH info		Not Present	
- PDSCH code mapping		Not Present	

Information Element	Condition	Value/remark	Version
- Serving HS-DSCH radio link indicator - Downlink DPCH info for each RL - SCCPCH information for FACH		FALSE Not present Not Present	REL-5
- Downlink information for each radio link	A6	Not Present	

Condition	Explanation
A1	This IE need for "Non speech in CS"
A2	This IE need for "Speech in CS"
A3	This IE need for "Packet to CELL_DCH from CELL_DCH in PS"
A4	This IE need for "Packet to CELL_DCH from CELL_FACH in PS"
A5	This IE need for "Packet to CELL_FACH from CELL_DCH in PS"
A6	This IE need for "Packet to CELL_FACH from CELL_FACH in PS"

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Hyderabad, India, 2 - 6 February, 2004

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CR-Form-v7

CHANGE REQUEST

⌘ **34.108** **CR** **293** ⌘**rev** **-** ⌘ Current version: **3.15.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	DL physical channel configuration in Default message contents for RF
Source:	⌘	Rohde & Schwarz
Work item code:	⌘	***Date:*** ⌘ 27/01/2004
Category:	⌘ **F**	***Release:*** ⌘ R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	The usage of the secondary scrambling code for RF tests is not intended. DPCH is intended to be a member of an orthogonal code set comprising CPICH, PCCPCH,SCCPCH, DPCH and OCNS
Summary of change:	⌘	The physical channel configuration of the DPCH is changed to use the primary scrambling code. The DL channel code set to a value where no code conflicts with other DL channels exits.
Consequences if not approved:	⌘	Configuration used for RF testing is different to the configuration defined in25.101 and 25.133 in minimum requirements. E.g. the definition of OCNS in RF testing is meaningless as the DPCH channel in the tests is on the secondary scrambling code.

Clauses affected:	⌘	9.2.1

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

Other comments:	⌘	

9.2 Default Message Contents for RF

This clause contains the default values of common messages for RF test. The parameters of the UL/DL reference measurement channel 12.2kbps, the DL reference measurement channel for BTFD, UE test loop mode 1 without Dummy DCCH transmission and UE test loop mode 2 with Dummy DCCH transmission are set to default message contents.

9.2.1 Default Message Contents for RF (FDD)

Contents of Activate RB Test Mode message

Information Element	Value/remark
Protocol discriminator	F (Length 1/2)
Skip indicator	0 (Length 1/2)
Message Type	44h

Contents of Close UE Test Loop message (UE test loop mode 1 without Dummy DCCH transmission)

Information Element	Value/remark
Protocol discriminator	F (Length 1/2)
Skip indicator	0 (Length 1/2)
Message Type	40h
UE test loop mode	00h
UE test loop mode 1 LB setup	03h 00h F4h 0Ah

Contents of Close UE Test Loop message (UE test loop mode 2 without Dummy DCCH transmission)

Information Element	Value/remark
Protocol discriminator	F (Length 1/2)
Skip indicator	0 (Length 1/2)
Message Type	40h
UE test loop mode	01h

Contents of Open UE Test Loop message

Information Element	Value/remark
Protocol discriminator	F (Length 1/2)
Skip indicator	0 (Length 1/2)
Message Type	42h

Contents of PAGING TYPE 1 message: TM (CS)

Information Element	Value/remark
Message Type	
Paging record list	
-Paging record	
- CHOICE Used paging identity	CN identity
- Paging cause	Terminating Streaming Call
- CN domain identity	CS domain
- CHOICE UE identity	
- IMSI (GSM-MAP)	Set to the same octet string as in the IMSI stored in the USIM card
BCCH modification info	Not Present

Contents of PAGING TYPE 1 message: TM (PS)

Information Element	Value/remark
Message Type	
Paging record list	
-Paging record	
- CHOICE Used paging identity	CN identity
- Paging cause	Terminating Interactive Call
- CN domain identity	PS domain
- CHOICE UE identity	
- IMSI (GSM-MAP)	Set to the same octet string as in the IMSI stored in the USIM card
BCCH modification info	Not Present

Contents of RADIO BEARER SETUP message: AM or UM

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects an integer between 0 and 3
Integrity check info	
- message authentication code	SS calculates the value of MAC-I for this message and writes to this IE. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC message sequence number	SS provides the value of this IE, from its internal counter.
Integrity protection mode info	Not Present
Ciphering mode info	Not Present
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Signalling RB information to setup	Not Present
RAB information for setup list	
- RAB information for setup	
- RAB info	
- RAB identity	0000 0001B The first/ leftmost bit of the bit string contains the most significant bit of the RAB identity.
- CN domain identity	CS domain
- NAS Synchronization Indicator	Not Present
- Re-establishment timer	UseT314
- RB information to setup list	
- RB information to setup	
- RB identity	10
- PDCP info	Not Present
- CHOICE RLC info type	RLC info
- CHOICE Uplink RLC mode	TM RLC
- Transmission RLC discard	Not Present
- Segmentation indication	FALSE
- CHOICE Downlink RLC mode	TM RLC
- Segmentation indication	FALSE
- RB mapping info	
- Information for each multiplexing option	
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	1
- Logical channel identity	Not Present
- CHOICE RLC size list	Configured
- MAC logical channel priority	7
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	6
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	Not Present
RB information to be affected list	Not Present
Downlink counter synchronisation info	Not Present
UL Transport channel information for all transport channels	
- PRACH TFCS	Not Present
- CHOICE mode	FDD
- TFC subset	Not Present
- UL DCH TFCS	
- CHOICE TFCI signalling	Normal
- TFCI Field 1 information	
- CHOICE TFCS representation	Complete reconfiguration

Information Element	Value/remark
- TFCS complete reconfigure information	
- CHOICE CTFC Size	2 bit CTFC
- CTFC information	4 TFCs
- 2bit CTFC	0
- Power offset Information	
- CHOICE Gain Factors	Computed Gain Factors
- Reference TFC ID	0
- CHOICE mode	FDD
- Power offset P_{p-m}	Not Present
- 2bit CTFC	2
- Power offset Information	
- CHOICE Gain Factors	Computed Gain Factors
- Reference TFC ID	0
- CHOICE mode	FDD
- Power offset P_{p-m}	Not Present
- 2bit CTFC	1
- Power offset Information	
- CHOICE Gain Factors	Computed Gain Factors
- Reference TFC ID	0
- CHOICE mode	FDD
- Power offset P_{p-m}	Not Present
- 2bit CTFC	3
- Power offset Information	
- CHOICE Gain Factors	Signalled Gain Factors
- CHOICE mode	FDD
- Gain factor ßc	8
- Gain factor ßd	15
- Reference TFC ID	0
- CHOICE mode	FDD
- Power offset P_{p-m}	Not Present
Deleted UL TrCH information list	Not Present
Added or Reconfigured UL TrCH information list	1
- Added or Reconfigured UL TrCH information	
- Uplink transport channel type	DCH
- UL Transport channel identity	1
- TFS	
- CHOICE Transport channel type	Dedicated transport channels
- Dynamic Transport Format Information	
- RLC size	244 bits
- Number of TBs and TTI List	2
- Transmission Time Interval	Not Present
- Number of Transport blocks	0
- Transmission Time Interval	Not Present
- Number of Transport blocks	1
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format Information	
- Transmission time interval	20
- Type of channel coding	Convolutional
- Coding Rate	1/3
- Rate matching attribute	256
- CRC size	16
CHOICE mode	FDD
- CPCH set ID	Not Present
- Added or Reconfigured TrCH information for DRAC list	Not Present
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- CHOICE mode	FDD
- CHOICE DL parameters	Same as UL
Deleted DL TrCH information list	Not Present
Added or Reconfigured DL TrCH information list	1
- Added or Reconfigured DL TrCH information	
- Downlink transport channel type	DCH
- DL Transport channel identity	6
- CHOICE DL parameters	Same as UL
- Uplink transport channel type	DCH

Information Element	Value/remark
- UL TrCH identity	1
- DCH quality target	
- BLER Quality value	-2.0
Frequency info	Not Present
Maximum allowed UL TX power	33dBm
CHOICE channel requirement	Uplink DPCH info
- Uplink DPCH power control info	
- CHOICE mode	FDD
- DPCCH power offset	-6dB
- PC Preamble	1 frame
- SRB delay	7 frames
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- CHOICE mode	FDD
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	1
- spreading factor	64
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	1
CHOICE Mode	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing indicator	Maintain
- CFN-targetSFN frame offset	Not Present
- Downlink DPCH power control information	
- CHOICE mode	FDD
- DPC mode	0 (single)
- CHOICE mode	FDD
- Power offset $P_{Pilot\text{-}DPDCH}$	0
- DL rate matching restriction information	Not Present
- Spreading factor	128
- Fixed or Flexible Position	Fixed
- TFCI existence	TRUE
- CHOICE SF	128
- Number of bits for Pilot bits	8
- CHOICE mode	FDD
- DPCH compressed mode info	Not Present
- TX Diversity mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for per radio link list	
- Downlink information for each radio link	
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	Set to value Default DPCH Offset Value (as currently stored in SS) mod 38400
- Secondary CPICH info	Not Present
- DL channelisation code	
- Secondary scrambling code	~~1~~ Not Present
- Spreading factor	128
- Code number	~~0~~ 96
- Scrambling code change	No change
- TPC combination index	0
- SSDT Cell Identity	Not Present
- Closed loop timing adjustment mode	Not Present
- SCCPCH information for FACH	Not Present

Contents of RADIO BEARER SETUP message: BTFD RMC

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects an integer between 0 and 3
Integrity check info	
- message authentication code	SS calculates the value of MAC-I for this message and writes to this IE. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC message sequence number	SS provides the value of this IE, from its internal counter.
Integrity protection mode info	Not Present
Ciphering mode info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If ciphering is indicated to be active, this IE present with the values of the sub IEs as stated below. Else, this IE is omitted.
- Ciphering mode command	Start/restart
- Ciphering algorithm	Use one of the supported ciphering algorithms
- Ciphering activation time for DPCH	Set by operator
- Radio bearer downlink ciphering activation time info	Not Present
Activation time	Set by operator
New U-RNTI	Not Present
New C-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Signalling RB information to setup	Not Present
RAB information for setup	
- RAB info	
- RAB identity	0000 0001B The first/ leftmost bit of the bit string contains the most significant bit of the RAB identity.
- CN domain identity	CS domain
- NAS Synchronization Indicator	Not Present
- Re-establishment timer	UseT314
- RB information to setup	
- RB identity	10
- PDCP info	Not Present
- CHOICE RLC info type	RLC info
- CHOICE Uplink RLC mode	TM RLC
- Transmission RLC discard	Not Present
- Segmentation indication	FALSE
- CHOICE Downlink RLC mode	TM RLC
- Segmentation indication	FALSE
- RB mapping info	
- Information for each multiplexing option	
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	1
- Logical channel identity	Not Present
- CHOICE RLC size list	Configured
- MAC logical channel priority	1
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	6
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	Not Present
RB information to be affected	Not Present
Downlink counter synchronisation info	Not Present
	RMC for BTFD
UL Transport channel information for all transport channels	
- PRACH TFCS	Not Present
- CHOICE mode	FDD

Information Element	Value/remark
- TFC subset	Not Present
- UL DCH TFCS	
- CHOICE TFCI signalling	Normal
- TFCI Field 1 information	
- CHOICE TFCS representation	Complete reconfiguration
- TFCS complete reconfigure information	
- CHOICE CTFC Size	ctfc6Bit
- ctfc6Bit	22
- ctfc6	0
-powerOffsetInformation(OP)	
-gainFactorInformation	ComputedGainFactors
- Reference TFC ID	0
- ctfc6	11
-powerOffsetInformation(OP)	
-gainFactorInformation	ComputedGainFactors
- Reference TFC ID	0
- ctfc6	1
-powerOffsetInformation(OP)	
-gainFactorInformation	ComputedGainFactors
- Reference TFC ID	0
- ctfc6	12
-powerOffsetInformation(OP)	
-gainFactorInformation	SignalledGainFactors
-modeSpecificInfo	Fdd
-fdd	
- Gain factor ßc	8
- Gain factor ßd	15
- Reference TFC ID	0
- ctfc6	2
-powerOffsetInformation(OP)	
-gainFactorInformation	ComputedGainFactors
- Reference TFC ID	0
- ctfc6	13
-powerOffsetInformation(OP)	
-gainFactorInformation	ComputedGainFactors
- Reference TFC ID	0
- ctfc6	3
-powerOffsetInformation(OP)	
-gainFactorInformation	ComputedGainFactors
- Reference TFC ID	0
- ctfc6	14
-powerOffsetInformation(OP)	
-gainFactorInformation	ComputedGainFactors
- Reference TFC ID	0
- ctfc6	4
-powerOffsetInformation(OP)	
-gainFactorInformation	ComputedGainFactors
- Reference TFC ID	0
- ctfc6	15
-powerOffsetInformation(OP)	
-gainFactorInformation	ComputedGainFactors
- Reference TFC ID	0
- ctfc6	5
-powerOffsetInformation(OP)	
-gainFactorInformation	ComputedGainFactors
- Reference TFC ID	0
- ctfc6	16
-powerOffsetInformation(OP)	
-gainFactorInformation	ComputedGainFactors
- Reference TFC ID	0
- ctfc6	6
-powerOffsetInformation(OP)	
-gainFactorInformation	ComputedGainFactors
- Reference TFC ID	0

Information Element	Value/remark
- ctfc6	17
-powerOffsetInformation(OP)	
-gainFactorInformation	ComputedGainFactors
- Reference TFC ID	0
- ctfc6	7
-powerOffsetInformation(OP)	
-gainFactorInformation	ComputedGainFactors
- Reference TFC ID	0
- ctfc6	18
-powerOffsetInformation(OP)	
-gainFactorInformation	ComputedGainFactors
- Reference TFC ID	0
- ctfc6	8
-powerOffsetInformation(OP)	
-gainFactorInformation	ComputedGainFactors
- Reference TFC ID	0
- ctfc6	19
-powerOffsetInformation(OP)	
-gainFactorInformation	ComputedGainFactors
- Reference TFC ID	0
- ctfc6	9
-powerOffsetInformation(OP)	
-gainFactorInformation	ComputedGainFactors
- Reference TFC ID	0
- ctfc6	20
-powerOffsetInformation(OP)	
-gainFactorInformation	ComputedGainFactors
- Reference TFC ID	0
- ctfc6	10
-powerOffsetInformation(OP)	
-gainFactorInformation	ComputedGainFactors
- Reference TFC ID	0
- ctfc6	21
-powerOffsetInformation(OP)	
-gainFactorInformation	ComputedGainFactors
- Reference TFC ID	0
Added or Reconfigured UL TrCH information	
-ul-AddReconfTransChInfoList	1
- Uplink transport channel type	DCH
- UL Transport channel identity	1
- TFS	
- CHOICE Transport channel type	Dedicated transport channels
-DedicatedDynamicTF-Info	
RLC size	256
-numberOfTbSizeList	
-NumberOfTransportBlocks	Zero
-NumberOfTransportBlocks	One
- Choice Logical Channel List	ALL
RLC size	216
-numberOfTbSizeList	
-NumberOfTransportBlocks	One
RLC size	171
- Choice Logical Channel List	ALL
-numberOfTbSizeList	
-NumberOfTransportBlocks	One
- Choice Logical Channel List	ALL
RLC size	160
-numberOfTbSizeList	
-NumberOfTransportBlocks	One
- Choice Logical Channel List	ALL
RLC size	146
-numberOfTbSizeList	
-NumberOfTransportBlocks	one

Information Element	Value/remark
- Choice Logical Channel List	ALL
RLC size	130
-numberOfTbSizeList	
-NumberOfTransportBlocks	one
- Choice Logical Channel List	ALL
RLC size	115
-numberOfTbSizeList	
-NumberOfTransportBlocks	one
- Choice Logical Channel List	ALL
RLC size	107
-numberOfTbSizeList	
-NumberOfTransportBlocks	one
- Choice Logical Channel List	ALL
RLC size	51
-numberOfTbSizeList	
-NumberOfTransportBlocks	one
- Choice Logical Channel List	ALL
RLC size	12
-numberOfTbSizeList	
-NumberOfTransportBlocks	one
- Choice Logical Channel List	ALL
-Semistatic Transport Format Information	
-Transmission Time interval	20 ms
-channelCodingType	Convolutional
-convolutional	1/3
- Rate matching attribute	256
- CRC size	0
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- CHOICE mode	FDD
- CHOICE DL parameters	Explicit
- DL DCH TFCS	
- CHOICE TFCI signalling	Normal
- TFCI Field 1 information	
- CHOICE TFCS representation	Complete reconfiguration
- TFCS complete reconfigure information	
- CHOICE CTFC Size	Ctfc6Bit
- ctfc6Bit	20
- ctfc6	9
- ctfc6	19
- ctfc6	10
- ctfc6	1
- ctfc6	11
- ctfc6	2
- ctfc6	12
- ctfc6	3
- ctfc6	13
- ctfc6	4
- ctfc6	14
- ctfc6	5
- ctfc6	15
- ctfc6	6
- ctfc6	16
- ctfc6	7
- ctfc6	17
- ctfc6	8
- ctfc6	18
Deleted DL TrCH information	Not Present
Added or Reconfigured DL TrCH information	
-dl-AddReconfTransChInfoList(OP)	1
- Downlink transport channel type	DCH

Information Element	Value/remark
- DL Transport channel identity	6
- CHOICE DL parameters	Explicit
- TFS	
- CHOICE Transport channel type	Dedicated transport channels
-DedicatedDynamicTF-Info	
RLC size	244
-numberOfTbSizeList	
-NumberOfTransportBlocks	One
- Choice Logical Channel List	ALL
RLC size	204
-numberOfTbSizeList	
-NumberOfTransportBlocks	One
RLC size	159
- Choice Logical Channel List	ALL
-numberOfTbSizeList	
-NumberOfTransportBlocks	One
- Choice Logical Channel List	ALL
RLC size	148
-numberOfTbSizeList	
-NumberOfTransportBlocks	One
- Choice Logical Channel List	ALL
RLC size	134
-numberOfTbSizeList	
-NumberOfTransportBlocks	one
- Choice Logical Channel List	ALL
RLC size	118
-numberOfTbSizeList	
-NumberOfTransportBlocks	one
- Choice Logical Channel List	ALL
RLC size	103
-numberOfTbSizeList	
-NumberOfTransportBlocks	one
- Choice Logical Channel List	ALL
RLC size	95
-numberOfTbSizeList	
-NumberOfTransportBlocks	one
- Choice Logical Channel List	ALL
RLC size	39
-numberOfTbSizeList	
-NumberOfTransportBlocks	one
- Choice Logical Channel List	ALL
RLC size	0
-numberOfTbSizeList	
-NumberOfTransportBlocks	one
- Choice Logical Channel List	ALL
-Semistatic Transport Format Information	
-Transmission Time interval	20 ms
-channelCodingType	Convolutional
-convolutional	1/3
- Rate matching attribute	256
- CRC size	12
- DCH quality target	
- BLER Quality value	-2.0
- Transparent mode signalling info	Not Present
Frequency info	Not Present
Maximum allowed UL TX power	33 dBm
CHOICE channel requirement	Uplink DPCH info
- Uplink DPCH power control info	
- DPCCH power offset	0
- PC Preamble	1 frame
- SRB delay	7 frames
- Power Control Algorithm	Algorithm1

Information Element	Value/remark
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0
- Number of DPDCH	1
- spreading factor	64
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	1
CHOICE Mode	FDD
- Downlink PDSCH information	Not Present(0)
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	FDD
- Timing indicator	Maintain
- CFN-targetSFN frame offset	Not Present
- Downlink DPCH power control information	
- DPC mode	0 (single)
- CHOICE mode	FDD
- Power offset $P_{Pilot-DPDCH}$	0
- DL rate matching restriction information	Not Present
- Spreading factor	128
- Number of bits for Pilot bits(SF=128,256)	4
- Fixed or Flexible Position	Fixed
- TFCI existence	FALSE
- DPCH compressed mode info	Not Present
- TX Diversity mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for each radio link list	
- Primary CPICH info	Not Present
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	Set to value Default DPCH Offset Value (as currently stored in SS) mod 38400
- Secondary CPICH info	Not Present
- DL channelisation code	
- Secondary scrambling code	~~0~~ Not Present
- Spreading factor	128
- Code number	~~Set to value stored in SS~~ 96
- Scrambling code change	No change
- TPC combination index	0
- SSDT Cell Identity	Not Present
- Closed loop timing adjustment mode	Not Present
- SCCPCH information for FACH	Not Present

Contents of RRC CONNECTION RELEASE message: UM

Information Element	Value/remark
Message Type	
U-RNTI	This IE is set to the following value when the message is transmitted on the CCCH. When transmitted on DCCH, this is absent.
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
RRC transaction identifier	Arbitrarily selects an integer between 0 and 3
Integrity check info	This IE is present when this message is transmitted on downlink DCCH. Else, this IE and the sub-IEs are omitted.
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
N308	2 (for CELL_DCH state). Not Present (for UE in other connected mode states).
Release cause	Normal event
Rplmn information	Not Present

Contents of RRC CONNECTION SETUP message: UM

Information Element	Value/remark
Message Type	
Initial UE identity	Select the same identity as in the IE "Initial UE Identity" in received RRC CONNECTION REQUEST" message
RRC transaction identifier	Arbitrarily selects an integer between 0 and 3
Activation time	Not Present(Now)
New U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
New C-RNTI	Not Present
RRC State Indicator	CELL_DCH
UTRAN DRX cycle length coefficient	9
Capability update requirement	
- UE radio access FDD capability update requirement	TRUE
- UE radio access TDD capability update requirement	FALSE
- System specific capability update requirement list	Gsm
Signalling RB information to setup list	4 SRBs
- Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	Not Present
- CHOICE RLC info type	RLC info
- CHOICE Uplink RLC mode	UM RLC
- Transmission RLC discard	Not Present
- CHOICE Downlink RLC mode	UM RLC
- RB mapping info	
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- Logical channel identity	1
- CHOICE RLC size list	Configured
- MAC logical channel priority	1
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	1
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	1
- CHOICE RLC size list	Configured
- RLC size index	Reference to TS34.108 clause 6 Parameter Set
- MAC logical channel priority	1
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	1
- Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	Not Present
- CHOICE RLC info type	
- RLC info	

Information Element	Value/remark
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No Discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	500
- Max_RST	1
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_PDU	Not Present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Windows	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- Logical channel identity	2
- CHOICE RLC size list	Configured
- MAC logical channel priority	2
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	2
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	2
- CHOICE RLC size list	Explicit List
- RLC size index	Reference to TS34.108 clause 6 Parameter Set
- MAC logical channel priority	2
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	2
- Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	Not Present
- CHOICE RLC info type	
- RLC info	
- CHOICE Uplink RLC mode	AM RLC

Information Element	Value/remark
- Transmission RLC discard	
- SDU discard mode	No Discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	500
- Max_RST	1
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_PDU	Not Present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Windows	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
-UL Transport channel identity	5
- Logical channel identity	3
- CHOICE RLC size list	Configured
- MAC logical channel priority	3
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	3
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	3
- CHOICE RLC size list	Explicit List
- RLC size index	Reference to TS34.108 clause 6 Parameter Set
- MAC logical channel priority	3
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	3
- Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	Not Present
- CHOICE RLC info type	
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	

Information Element	Value/remark
- SDU discard mode	No Discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	500
- Max_RST	1
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_PDU	Not Present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Windows	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- Logical channel identity	4
- CHOICE RLC size list	Configured
- MAC logical channel priority	4
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	4
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	4
- CHOICE RLC size list	Explicit List
- RLC size index	Reference to TS34.108 clause 6 Parameter Set
- MAC logical channel priority	4
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	4
UL Transport channel information for all transport channels	
- PRACH TFCS	Not Present
- CHOICE Mode	FDD
- TFC subset	Not Present
- UL DCH TFCS	
- CHOICE TFCI signalling	Normal

Information Element	Value/remark
- TFCI Field 1 information	
- CHOICE TFCS representation	Complete reconfiguration
- TFCS complete reconfiguration information	
- CHOICE CTFC Size	2 bit CTFC
- CTFC information	2 TFCs
- 2bit CTFC	0
- Power offset Information	
- CHOICE Gain Factors	computedGainFactors
- Reference TFC ID	0
- CHOICE mode	FDD
- Power offset Pp-m	Not Present
- 2bit CTFC	1
- Power offset Information	
- CHOICE Gain Factors	signalledGainFactors
- CHOICE mode	FDD
- Gain factor ßc	15
- Gain factor ßd	15
- Reference TFC ID	0
- CHOICE mode	FDD
- Power offset Pp-m	Not Present
Added or Reconfigured UL TrCH information list	1
- Added or Reconfigured UL TrCH information	
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- TFS	
- CHOICE Transport channel type	Dedicated transport channels
- Dynamic Transport Format Information	
- RLC size	96 bits
- Number of TBs and TTI List	2
- Transmission Time Interval	Not Present
- Number of Transport blocks	0
- Transmission Time Interval	Not Present
- Number of Transport blocks	1
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format Information	
- Transmission time interval	40
- Type of channel coding	Convolutional
- Coding Rate	1/3
- Rate matching attribute	256
- CRC size	12
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- CHOICE mode	FDD
- CHOICE DL parameters	Same as UL
Added or Reconfigured DL TrCH information list	1
- Added or Reconfigured DL TrCH information	
- Downlink transport channel type	DCH
- DL Transport channel identity	10
- CHOICE DL parameters	SameasUL
- Uplink transport channel type	DCH
- UL TrCH Identity	5
- DCH quality target	
- BLER Quality value	-2.0
Frequency info	Not Present
Maximum allowed UL TX power	Not Present
CHOICE channel requirement	Uplink DPCH info
- Uplink DPCH power control info	

Information Element	Value/remark
- DPCCH power offset	-6dB
- PC Preamble	1 frame
- SRB delay	7 frames
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- CHOICE mode	FDD
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not present (1)
- Spreading factor	256
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	1
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indication	Initialise
- CFN-targetSFN frame offset	Not present
- Downlink DPCH power control information	
- CHOICE mode	FDD
- DPC mode	0 (single)
- CHOICE mode	FDD
- Power offset $P_{Pilot\text{-}DPDCH}$	0
- DL rate matching restriction information	Not Present
- Spreading factor	256
- Fixed or Flexible Position	Fixed
- TFCI existence	FALSE
- CHOICE SF	
- Number of bits for Pilot bits	8
- DPCH compressed mode info	Not Present
- TX Diversity mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	Arbitrary set to value 0..306688 by step of 512
Downlink information for per radio links list	
-Downlink information for each radio links	
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	100
- PDSCH with SHO DCH info	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	Set to value: Default DPCH Offset Value mod 38400
- Secondary CPICH info	Not Present
- DL channelisation code	
- Secondary scrambling code	~~1~~ Not Present
- Spreading factor	256
- Code number	~~0~~ 192
- Scrambling code change	Not present
- TPC combination index	0
- SSDT Cell Identity	Not Present
- Closed loop timing adjustment mode	Not Present
- SCCPCH information for FACH	Not Present

Contents of SECURITY MODE COMMAND message: AM

Information Element	Condition	Value/remark
Message Type	A1, A2	
RRC transaction identifier		Arbitrarily selects an integer between 0 and 3
Integrity check info		
- Message authentication code		Set to an arbitrarily selected 32-bits integer. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.
- RRC Message Sequence Number		Set to an arbitrarily selected integer between 0 and 15
Security capability		
- Ciphering algorithm capability		
- UEA0		If the UE has indicated support for ciphering algorithm UEA0 in the IE "security capability" in the RRC CONNECTION SETUP COMPLETE message, this IE is set to TRUE.
- UEA1		If the UE has indicated support for ciphering algorithm UEA1 in the IE "security capability" in the RRC CONNECTION SETUP COMPLETE message, this IE is set to TRUE.
- Spare		Spare 2-15 = FALSE
- Integrity protection algorithm capability		0000000000000010B (UIA1)
- UIA1		TRUE
- Spare		Spare 0 and Spare 2-15 = FALSE
Ciphering mode info		This presence of this IE is dependent on IXIT statements in TS 34.123-2. If ciphering is indicated to be active, this IE present with the values of the sub IEs as stated below. Else, this IE is omitted.
- Ciphering mode command		Start/restart
- Ciphering algorithm		UEA0 or UEA1. The indicated algorithm must be one of the algorithms supported by the UE as indicated in the IE "security capability" in the RRC CONNECTION SETUP COMPLETE message.
- Ciphering activation time for DPCH		Not Present
- Radio bearer downlink ciphering activation time info		
- Radio bearer activation time		
- RB identity		1
- RLC sequence number		Current RLC SN+2
- RB identity		2
- RLC sequence number		Current RLC SN+2
- RB identity		3
- RLC sequence number		Current RLC SN + 2
- RB identity		4
- RLC sequence number		Current RLC SN + 2
Integrity protection mode info		
- Integrity protection mode command		Start
- Downlink integrity protection activation info		Not Present
- Integrity protection algorithm		UIA1
- Integrity protection initialisation number		SS selects an arbitrary 32 bits number for FRESH. The first/ leftmost bit of the bit string contains the most significant bit of the FRESH.
CN domain identity		CS or PS
UE system specific security capability	A1	Not Present
UE system specific security capability	A2	
- Inter-RAT UE security capability		
- CHOICE *system*		GSM
- GSM security capability		The indicated algorithms must be the same as the algorithms supported by the UE as indicated in the IE " UE system specific capability " in the RRC CONNECTION SETUP COMPLETE message.

Condition	Explanation
A1	UE not supporting GSM
A2	UE supporting GSM

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Hyderabad, India, 2-6 Feb 2004

Tdoc ⌘T1-040109

CR-Form-v7

CHANGE REQUEST

⌘ **34.108** **CR** **292** ⌘**rev** **-** ⌘ Current version: **4.9.0** ⌘

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

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [ ] Core Network [ ]

Title:	⌘	CR to 34.108 Rel-4: new I/B UL:64 DL:768 kbps PS RAB misplaced
Source:	⌘	Nortel Networks
Work item code:	⌘	TEI
Date:	⌘	20/1/2003
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	The oneliner definition of the new Rel-5 RAB for I/B UL:64 DL:768 kbps PS was placed into the Rel-4 part of the specification
Summary of change:	⌘	Oneliner definition put into the annex of 34.108 Rel-4.
Consequences if not approved:	⌘	Inconsistency

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

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

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

<Start of modification>

6.10.2 RAB and signalling RB for FDD

6.10.2.1 RABs and signalling RBs

In the following clauses, 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 6.10.2.1.1: Prioritised RABs.

#	Traffic class [15]	SSD [15]	Max. rate, kbps	CS/PS
1	Conversational	Speech	UL:12.2 DL:12.2	CS
1a	Conversational	Speech	UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75)	CS
2	Conversational	Speech	UL:10.2 DL:10.2	CS
2a	Conversational	Speech	UL:(10.2, 6.7, 5.9, 4.75) DL:(10.2, 6.7, 5.9, 4.75)	CS
3	Conversational	Speech	UL:7.95 DL:7.95	CS
4	Conversational	Speech	UL:7.4 DL:7.4	CS
4a	Conversational	Speech	UL:(7.4, 6.7, 5.9, 4.75) DL:(7.4, 6.7, 5.9, 4.75)	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
11a	Conversational	Unknown	UL:8 DL:8	PS
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	Void			
15a	Streaming	Unknown	UL:16 DL:64	PS
16	Void			
17	Void			
18	Void			
19	Void			
20	Interactive or Background	N/A	UL:32 DL:8	PS
20a	Interactive or Background	N/A	UL:8 DL:8	PS
20b	Interactive or Background	N/A	UL:16 DL:16	PS
20c	Interactive or Background	N/A	UL:32 DL:32	PS
21	Void			
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	Void			
32	Interactive or Background	N/A	UL:64 DL:256	PS
33	Interactive or Background	N/A	UL:0 DL:32	PS
34	Interactive or Background	N/A	UL:32 DL: 0	PS
35	Interactive or Background	N/A	UL:64 DL:144	PS
36	Interactive or Background	N/A	UL:144 DL:144	PS
37	Reserved for future use			
38	Reserved for future use			
39	Reserved for future use ~~Interactive or Background~~	~~N/A~~	~~UL:64 DL:768~~	~~PS~~

Table 6.10.2.1.2: 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

6.10.2.2 Combinations of RABs and Signalling RBs

In the present 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.

4a) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

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

5a) Conversational / speech / UL:(10.2, 6.7, 5.9, 4.75) DL:(10.2, 6.7, 5.9, 4.75) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

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.

7a) Conversational / speech / UL:(7.4, 6.7, 5.9, 4.75) DL:(7.4, 6.7, 5.9, 4.75) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

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) Void

19) Void.

20) Void.

21) Void.

22) Void.

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

23a) Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

23b) Interactive or background / UL:16 DL:16 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

23c) Interactive or background / UL:32 DL:32 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

23d) Interactive or background / UL:32 DL:32 kbps / PS RAB (20 ms TTI)
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

24) Void

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) Void

37) Void

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.

38a) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:0 DL:0 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

38b) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

38c) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:32 DL:32 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

38d) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

38e) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:0 DL:0 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

38f) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

38g) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:16 DL:16 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

38h) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:32 DL:32 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

38i) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

38j) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

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) Void

47) Void.

48) Void.

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.

49a) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

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.

51a) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or Background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

51b) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or Background / UL:16 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

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) Void

55) Void.

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

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

58) Streaming / unknown / UL:16 DL:64 kbps / PS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

59) Reserved for future use.

60) Reserved for future use.

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

62) Reserved for future use.

63) Reserved for future use.

Combinations on DSCH and DPCH

1) Void

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

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

4) Void

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.

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.

Combinations on SCCPCH

1) Stand-alone 24 kbps SRB for PCCH.

2) Interactive or background / DL:32 kbps / PS RAB
+ SRB for CCCH
+ SRBs for DCCH
+ SRB for BCCH.

3) Interactive or background / DL:32 kbps / PS RAB
+ SRB for PCCH
+ SRB for CCCH
+ SRBs for DCCH
+ SRB for BCCH.

4) RB for CTCH
+ SRB for CCCH
+SRB for BCCH

Combinations on PRACH

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

<End of modification>

<Start of modification>

Annex B (informative): RAB combinations for Rel-5

This annex contains information intented to be included in a future TS 34.108 Release 5. For practical reasons, it will be maintained in this Release 4 until T1 agrees to publish the Release 5 version based on the quantity of material to justify its creation.

It should be noted that the parameters of the RAB combinations were approved by RAN1 and RAN 2 and that T1 agreed that the RABs should be subjected to test coverage at the appropriate time. The fact that this annex is informative does not in any way reduce the validity of the RABs.

For ease of administration, the framework of section 6.10.2 is provided with the changes to that section with appropriate numbering in order that it can be merged into a future Release 5 version of TS 34.108.

6.10.2 RAB and signalling RB for FDD

6.10.2.1 RABs and signalling RBs

In the following clauses, 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 6.10.2.1.1: Prioritised RABs.

37	Conversational	N/A	UL:42.8 DL:42.8	PS
38	Conversational	Speech	UL:(12.65 8.85 6.6) DL:(12.65 8.85 6.6)	CS
39	Interactive or Background	N/A	UL:64 DL:768	PS

Table 6.10.2.1.2: Signalling RBs

#	Maximum rate, kbps	Logical channel	PhyCh onto which SRBs are mapped
9	DL: 0.15	DCCH	DPCH

6.10.2.2 Combinations of RABs and Signalling RBs

Combinations on DPCH

59) Conversational / Speech / UL:42.8 DL:42.8 kbps / PS RAB
+ Interactive or background / UL:16 DL:16 kbps / PS RAB

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

60) Conversational / Speech / UL:42.8 DL:42.8 kbps / PS RAB
+ Interactive or background / UL:16 DL:16 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

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

63) Interactive or background / UL:64 DL:768 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH.

6.10.2.4.1.59 Conversational / speech / UL:42.8 DL:42.8 kbps / PS RAB + Interactive / UL:16 DL:16 kbps / PS RAB + Interactive / UL:16 DL:16 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.59.1 Uplink

6.10.2.4.1.59.1.1 Transport channel parameters

6.10.2.4.1.59.1.1.1 Transport channel parameters for Conversational / speech / UL:42.8 kbps / PS RAB

Higher layer	RAB/Signalling RB		**RAB**
PDCP	PDCP header size, bit		8
RLC	Logical channel type		DTCH
	RLC mode		UM
	Payload sizes, bit		920, 304, 96
	Max data rate, bps		46000
	UMD PDU header, bit		8
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		928, 312, 104
	TFS	TF0, bits	0x928
		TF1, bits	1x104
		TF2, bits	1x312
		TF3, bits	1x928
	TTI, ms		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		2844
	Uplink: Max number of bits/radio frame before rate matching		1422
	RM attribute		180-220

6.10.2.4.1.59.1.1.2 Transport channel parameters for Interactive / UL:16kbps / PS RAB + UL:16 kbps / PS RAB

Higher Layer	RAB/Signalling RB		**RAB**	**RAB**
RLC	Logical channel type		DTCH	DTCH
	RLC mode		AM	AM
	Payload sizes, bit		320	320
	Max data rate, bps		16000	16000
	AMD PDU header, bit		16	16
MAC	MAC header, bit		4	4
	MAC multiplexing		2 logical channel multiplexing	
Layer 1	TrCH type		DCH	
	TB sizes, bit		340	
	TFS	TF0, bits	0x340	
		TF1, bits	1x340	
		TF2, bits	2X340	
	TTI, ms		40	
	Coding type		TC	
	CRC, bit		16	
	Max number of bits/TTI after channel coding		2148	
	Uplink: Max number of bits/radio frame before rate matching		537	
	RM attribute		135-175	

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

See clause 6.10.2.4.1.2.1.1.1

6.10.2.4.1.59.1.1.4 TFCS

TFCS size	24
TFCS	(42.8 kbps Conversational RAB, Interactive 16kbps+16kbps RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF0, TF1), (TF0,TF1, TF0),(TF0, TF1,TF1), (TF0,TF2, TF0), (TF0,TF2, TF1) (TF1, TF0, TF0), (TF1, TF0, TF1), (TF1,TF1, TF0), (TF1, TF1,TF1), (TF1,TF2, TF0), (TF1,TF2, TF1) (TF2, TF0, TF0), (TF2, TF0, TF1), (TF2,TF1, TF0), (TF2, TF1,TF1), (TF2,TF2, TF0), (TF2,TF2, TF1) (TF3, TF0, TF0), (TF3, TF0, TF1), (TF3,TF1, TF0), (TF3, TF1,TF1), (TF3,TF2, TF0), (TF3,TF2, TF1)

6.10.2.4.1.59.1.2 Physical channel parameters

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

6.10.2.4.1.59.2 Downlink

6.10.2.4.1.59.2.1 Transport channel parameters

6.10.2.4.1.59.2.1.1 Transport channel parameters for Conversational / speech / DL:42.8 kbps / PS RAB

Higher layer	RAB/Signalling RB		**RAB**
PDCP	PDCP header size, bit		8
RLC	Logical channel type		DTCH
	RLC mode		UM
	Payload sizes, bit		920, 304, 96
	Max data rate, bps		46000
	UMD PDU header, bit		8
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		928, 312, 104
	TFS	TF0, bits	0x928
		TF1, bits	1x104
		TF2, bits	1x312
		TF3, bits	1x928
	TTI, ms		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		2844
	RM attribute		180-220

6.10.2.4.1.59.2.1.2 Transport channel parameters for Interactive / DL:16kbps / PS RAB + DL:16 kbps / PS RAB

Higher Layer	RAB/Signalling RB		**RAB**	**RAB**
RLC	Logical channel type		DTCH	DTCH
	RLC mode		AM	AM
	Payload sizes, bit		320	320
	Max data rate, bps		16000	16000
	AMD PDU header, bit		16	16
MAC	MAC header, bit		4	4
	MAC multiplexing		2 logical channel multiplexing	
Layer 1	TrCH type		DCH	
	TB sizes, bit		340	
	TFS	TF0, bits	0x340	
		TF1, bits	1x340	
		TF2, bits	2X340	
	TTI, ms		40	
	Coding type		TC	
	CRC, bit		16	
	Max number of bits/TTI after channel coding		2148	
	RM attribute		135-175	

6.10.2.4.1. 59.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1

6.10.2.4.1.59.2.1.4 TFCS

TFCS size	24
TFCS	(42.8 kbps Conversational RAB, Interactive 16kbps+16kbps RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF0, TF1), (TF0,TF1, TF0),(TF0, TF1,TF1), (TF0,TF2, TF0), (TF0,TF2, TF1) (TF1, TF0, TF0), (TF1, TF0, TF1), (TF1,TF1, TF0), (TF1, TF1,TF1), (TF1,TF2, TF0), (TF1,TF2, TF1) (TF2, TF0, TF0), (TF2, TF0, TF1), (TF2,TF1, TF0), (TF2, TF1,TF1), (TF2,TF2, TF0), (TF2,TF2, TF1) (TF3, TF0, TF0), (TF3, TF0, TF1), (TF3,TF1, TF0), (TF3, TF1,TF1), (TF3,TF2, TF0), (TF3,TF2, TF1)

6.10.2.4.1.59.2.2 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

6.10.2.4.1.60 Conversational / speech / UL:42.8 DL:42.8 kbps / PS RAB + Interactive / UL:16 DL:16 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.60.1 Uplink

6.10.2.4.1.60.1.1 Transport channel parameters

6.10.2.4.1.60.1.1.1 Transport channel parameters for Conversational / speech / UL:42.8 kbps / PS RAB

Higher layer	RAB/Signalling RB		**RAB**
PDCP	PDCP header size, bit		8
RLC	Logical channel type		DTCH
	RLC mode		UM
	Payload sizes, bit		920, 304, 96
	Max data rate, bps		46000
	UMD PDU header, bit		8
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		928, 312, 104
	TFS	TF0, bits	0x928
		TF1, bits	1x104
		TF2, bits	1x312
		TF3, bits	1x928
	TTI, ms		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		2844
	Uplink: Max number of bits/radio frame before rate matching		1422
	RM attribute		180-220

6.10.2.4.1.60.1.1.2 Transport channel parameters for Interactive / UL:16kbps / PS RAB

See clause 6.10.2.4.1.23b.1.1.1

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

See clause 6.10.2.4.1.2.1.1.1

6.10.2.4.1.60.1.1.4 TFCS

TFCS size	24
TFCS	(42.8 kbps Conversational RAB, Interactive 16kbps RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF0, TF1), (TF0,TF1, TF0),(TF0, TF1,TF1), (TF0,TF2, TF0), (TF0,TF2, TF1) (TF1, TF0, TF0), (TF1, TF0, TF1), (TF1,TF1, TF0), (TF1, TF1,TF1), (TF1,TF2, TF0), (TF1,TF2, TF1) (TF2, TF0, TF0), (TF2, TF0, TF1), (TF2,TF1, TF0), (TF2, TF1,TF1), (TF2,TF2, TF0), (TF2,TF2, TF1) (TF3, TF0, TF0), (TF3, TF0, TF1), (TF3,TF1, TF0), (TF3, TF1,TF1), (TF3,TF2, TF0), (TF3,TF2, TF1)

6.10.2.4.1.60.1.2 Physical channel parameters

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

6.10.2.4.1.60.2 Downlink

6.10.2.4.1.60.2.1 Transport channel parameters

6.10.2.4.1.60.2.1.1 Transport channel parameters for Conversational / speech / DL:42.8 kbps / PS RAB

Higher layer	RAB/Signalling RB		**RAB**
PDCP	PDCP header size, bit		8
RLC	Logical channel type		DTCH
	RLC mode		UM
	Payload sizes, bit		920, 304, 96
	Max data rate, bps		46000
	UMD PDU header, bit		8
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		928, 312, 104
	TFS	TF0, bits	0x928
		TF1, bits	1x104
		TF2, bits	1x312
		TF3, bits	1x928
	TTI, ms		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		2844
	RM attribute		180-220

6.10.2.4.1.60.2.1.2 Transport channel parameters for Interactive / DL:16kbps PS RAB

See clause 6.10.2.4.1.23b.2.1.1

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

See clause 6.10.2.4.1.2.2.1.1

6.10.2.4.1.60.2.1.4 TFCS

TFCS size	24
TFCS	(42.8 kbps Conversational RAB, Interactive 16kbps RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF0, TF1), (TF0,TF1, TF0),(TF0, TF1,TF1), (TF0,TF2, TF0), (TF0,TF2, TF1) (TF1, TF0, TF0), (TF1, TF0, TF1), (TF1,TF1, TF0), (TF1, TF1,TF1), (TF1,TF2, TF0), (TF1,TF2, TF1) (TF2, TF0, TF0), (TF2, TF0, TF1), (TF2,TF1, TF0), (TF2, TF1,TF1), (TF2,TF2, TF0), (TF2,TF2, TF1) (TF3, TF0, TF0), (TF3, TF0, TF1), (TF3,TF1, TF0), (TF3, TF1,TF1), (TF3,TF2, TF0), (TF3,TF2, TF1)

6.10.2.4.1.60.2.2 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

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

6.10.2.4.1.62.1.1 Transport channel parameters

6.10.2.4.1.62.1.1.1 Transport channel parameters for Conversational / speech / UL: (12.65 8.85 6.6) 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		40, 54, 64, 72 (alt. 0, 40, 54, 64, 72)	78, 113, 181
	Max data rate, bps		12650	
	TrD PDU header, bit		0	
MAC	MAC header, bit		0	
	MAC multiplexing		N/A	
Layer 1	TrCH type		DCH	DCH
	TB sizes, bit		40, 54, 64, 72 (alt. 0, 40, 54, 64, 72)	78, 113, 181
	TFS	TF0, bits	0x72(alt. 1x0) (note)	0x181
		TF1, bits	1x40	1x78
		TF2 bits	1x54	1x113
		TF3, bits	1x64	1x181
		TF4, bits	1x72	N/A
	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		276	567
	Uplink: Max number of bits/radio frame before rate matching		138	284
	RM attribute		180-220	170-210
NOTE: In case of using this alternative, 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 clause 4.2.1.1 in TS 25.212).				

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

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.62.1.1.3 TFCS

TFCS size	10
TFCS	(RAB subflow#1, RAB subflow#2, DCCH)= (TF0,TF0,TF0), (TF1,TF0,TF0), (TF2,TF1,TF0), (TF3,TF2,TF0), (TF4,TF3,TF0), (TF0,TF0,TF1), (TF1,TF0,TF1), (TF2,TF1,TF1), (TF3,TF2,TF1), (TF4,TF3,TF1)

6.10.2.4.1.62.1.1.4 TFC subset list

TFC subset list size	3
TFC subset list	0 = {(TF0,TF0,TF0), (TF1,TF0,TF0), (TF2,TF1,TF0), (TF0,TF0,TF1), (TF1,TF0,TF1), (TF2,TF1,TF1)}, 1 = {(TF0,TF0,TF0), (TF1,TF0,TF0), (TF2,TF1,TF0), (TF3,TF2,TF0), (TF0,TF0,TF1), (TF1,TF0,TF1), (TF2,TF1,TF1), (TF3,TF2,TF1)}, 2 = {(TF0,TF0,TF0), (TF1,TF0,TF0), (TF2,TF1,TF0), (TF3,TF2,TF0), (TF4,TF3,TF0), (TF0,TF0,TF1), (TF1,TF0,TF1), (TF2,TF1,TF1), (TF3,TF2,TF1), (TF4,TF3,TF1)}

6.10.2.4.1.62.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	64
	Max number of DPDCH data bits/radio frame	600
	Puncturing Limit	0.84

6.10.2.4.1.62.2 Downlink

6.10.2.4.1.62.2.1 Transport channel parameters

6.10.2.4.1.62.2.1.1 Transport channel parameters for Conversational / speech / DL: (12.65 8.85 6.6) 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, 40, 54, 64, 72	78, 113, 181
	Max data rate, bps		12 650	
	TrD PDU header, bit		0	
MAC	MAC header, bit		0	
	MAC multiplexing		N/A	
Layer 1	TrCH type		DCH	DCH
	TB sizes, bit		0, 40, 54, 64, 72	78, 113, 181
	TFS (note 1)	TF0, bits	1x0 (note 2)	0x181
		TF1, bits	1x40	1x78
		TF2, bits	1x54	1x113
		TF3, bits	1x64	1x181
		TF4, bits	1x72	N/A
	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		276	567
	RM attribute		180-220	170-210

NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212).
NOTE 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 clause 4.2.1.1 in TS 25.212.).

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

See clause 6.10.2.4.1.2.2.1.1

6.10.2.4.1.62.2.1.3 Transport channel parameters for DL:0.15 kbps SRB#5 for DCCH

Higher layer	RAB/signalling RB		**SRB#5**
	User of Radio Bearer		RRC
RLC	Logical channel type		DCCH
	RLC mode		TM
	Payload sizes, bit		3
	Max data rate, bps		150
	TrD PDU header, bit		0
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		3 (alt 0, 3) (note)
	TFS	TF0, bits	0x3 (alt 1x0) (note)
		TF1, bits	1x3
	TTI, ms		20
	Coding type		CC 1/3
	CRC, bit		8
	Max number of bits/TTI before rate matching		57
	RM attribute		155-256
NOTE: alternative parameters enable the measurement "transport channel BLER" in the UE.			

6.10.2.4.1.62.2.1.4 TFCS

TFCS size	20
TFCS	(RAB subflow#1, RAB subflow#2, DCCH 3.4, DCCH 0.15)= (TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0), (TF2,TF1,TF0,TF0), (TF3,TF2,TF0,TF0), (TF4,TF3,TF0,TF0), (TF0,TF0,TF1,TF0), (TF1,TF0,TF1,TF0), (TF2,TF1,TF1,TF0), (TF3,TF2,TF1,TF0), (TF4,TF3,TF1,TF0), (TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF1), (TF2,TF1,TF0,TF1), (TF3,TF2,TF0,TF1), (TF4,TF3,TF0,TF1), (TF0,TF0,TF1,TF1), (TF1,TF0,TF1,TF1), (TF2,TF1,TF1,TF1), (TF3,TF2,TF1,TF1), (TF4,TF3,TF1,TF1)

6.10.2.4.1.62.2.2 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

6.10.2.4.1.63 Interactive or background / UL:64 DL:768 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

6.10.2.4.1.63.1 Uplink

See clause 6.10.2.4.1.26.1.

6.10.2.4.1.63.2 Downlink

6.10.2.4.1.63.2.1 Transport channel parameters

6.10.2.4.1.63.2.1.1 Transport channel parameters for Interactive or background / DL:768 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		768000
	AMD PDU 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	16 x336
		TF7, bits	20 x336
		TF8, bits	24 x336
		TF9, bits	N/A (alt 28x336)
		TF10, bits	N/A (alt 32x336)
		TF11, bits	N/A (alt 36x336)
		TF12, bits	N/A (alt 40x336)
		TF13, bits	N/A (alt 44x336)
		TF14, bits	N/A (alt 48x336)
	TTI, ms		10 (alt 20)
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		25368 (alt 50736)
	RM attribute		110-150

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

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.63.2.1.3 TFCS

TFCS size	18 (alt. 30)
TFCS	(768 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), (TF6, TF0), (TF7, TF0), (TF8, TF0), (TF9, TF0), (TF10, TF0), (TF11, TF0), (TF12, TF0), (TF13, TF0), (TF14, TF0) (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF1), (TF8, TF1) (TF9, TF1), (TF10, TF1), (TF11, TF1), (TF12, TF1), (TF13, TF1), (TF14, TF1))

6.10.2.4.1.63.2.2 Physical channel parameters

DPCH Downlink	DTX position		Flexible
	Spreading factor		8
	Number of DPCH		2
	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

<End of modification>

3GPP TSG-T1 Meeting #22
Hyderabad, India, 2nd – 6th February 2004

T1 ⌘040103

CR-Form-v7

CHANGE REQUEST

⌘ **34.108** **CR** **291** ⌘ **rev** **-** ⌘ Current version: **4.9.0** ⌘

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

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	Corrections to TDD HCR RABs	
Source:	⌘	InterDigital, Siemens AG	
Work item code:	⌘	TEI	***Date:*** ⌘ 02/02/04
Category:	⌘	**A**	***Release:*** ⌘ Rel-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 *(GSM Phase 2)*
R96 *(Release 1996)*
R97 *(Release 1997)*
R98 *(Release 1998)*
R99 *(Release 1999)*
Rel-4 *(Release 4)*
Rel-5 *(Release 5)*
Rel-6 *(Release 6)*

Reason for change: ⌘

1. Test coverage for TDD UE capability classifications is incomplete. RAB configurations need to be adjusted to verify TDD capabilities.
2. TDD interactive / background RABs need to be modified to allow for TrCH switching between RACH/FACH and DCH or USCH/DSCH.
3. Multicode requirement should be removed from UL RABs, for which the corresponding UE capability class does not support. Exceptions to the supporting UE class for these RABs should be minimized.
4. Physical channel puncturing limit definitions do not correctly take into account TrCH rate matching parameters.
5. To maintain proper channel quality CRC's needed when no data is present on TrCH's for which BLER quality targets are specified. Transport configurations are aligned with FDD.
6. Test coverage is necessary for TDD physical channel frame repetition functionality.
7. Test coverage is necessary for the TDD multiple dedicated CCTrCH's capability. Operation is identical to TDD shared channels when simultaneous RT and NRT services are supported.
8. Alignment between TDD RAB definitions and TDD UE capability classifications needs to be improved to reduce the number of exceptions listed for each supporting UE class in 25.993.
9. S-CCPCH RAB configurations alternate configurations need to be defined for

	deployment scenarios where maximum transmission rate is limited. 10. Shared channel RABs need to be modified to avoid inefficient signaling and signaling blocking conditions 11. An additional RAB is needed to demonstrate high rate TDD capabilities 12. TDD RABs are aligned with recent changes approved for FDD RAB's. Services supported by FDD should be common with TDD mode 13. Other minor corrections
Summary of change: ⌘	1. Maximum codes/slot, codes/frame, slots/frame, min SF… levels within TDD UE capability classifications are modified in TDD RABs to provide test coverage. 2. DTCH added to RACH and FACH TrCH definitions. Reduced UL 128bit PDU size added to interactive / background UL DCH and USCH RABs to align with payload offered by the TDD PRACH. 3. Physical channel configurations adjusted across more slots or SF reduced to eliminate the UL multicode requirement in low rate RAB's. 4. Puncturing limits are correctly calculated according to the specified TrcH rate matching mid-values. 5. Alternate TB size 0 TFCs are added to SRB and speech RAB's. 6. An alternate low rate SRB only RAB with physical channel frame repetition is introduced. 7. Alternate dedicated 2 CCTrCH configurations are added to existing dedicated combination service RABs specifying separate CCTrCH's for the RT and NRT services. Updated are aligned already specified TDD shared channel RABs. 8. Reduction/modification of 2Mb TFCS to avoid greatly increased UE capability requirement, allow for test coverage and reduce class exceptions. Reduction of other RAB TFCS's and removal of alternate 40ms TTI configurations when no benefit is realized to eliminate bits/tti and TB/tti UE class exceptions. Reconfiguration of physical channels across more DL slots to eliminate maximum codes per slot exceptions. 9. S-CCPCH RABs are defined with alternate reduced TFS/TFCS and corresponding reduced code configurations. 10. DCCHs are added to DSCH and USCH transport channels to minimize the requirement for simultaneous RACH and FACH transmission and reception. 11. A TDD shared channel 384kbps UL & 2Mb DL interactive / background RAB is introduced. 12. TDD RABs are added or removed to match RABs currently specified for FDD. 13. Corrections for MAC header bit calculations, TFCI code word sizes... are introduced.
Consequences if not approved: ⌘	1. TDD UE class test coverage will be incomplete 2. TrCH switching functionallity will not be possible 3. UL Multicode UE class exceptions will be required 4. Specified PL's will not allow for complete TFCS 5. TrCH BLER will not be tracked on SRBs and speech RABs 6. No test coverage for TDD frame repetition functionality

	7. No test coverage for multiple CCTrCH functionallity 8. Inconsistency between RAB definitions and UE classifications 9. Inefficient S-CCPCH configuration 10. Signaling blocking conditions will occur on shared channel RABs 11. High rate TDD services will not have test case 12. TDD services will not match FDD services 13. RABs will have inconsistent configurations

Clauses affected:	⌘	6.10.3			
		Y	**N**		
Other specs affected:	⌘			Other core specifications	⌘
				Test specifications	
				O&M Specifications	
Other comments:	⌘				

How to create CRs using this form:

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

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

6.10.3 RAB and signalling RB for TDD

6.10.3.1 RABs and signalling RBs

In the following clauses, 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 6.10.3.1.1: Prioritised RABs.

#	Traffic class[3]	SSD[3]	Max. rate, kbps	CS/PS
1	Conversational	Speech	UL:12.2 DL:12.2	CS
1a	Conversational	Speech	UL: (12.2 7.95 5.9 4.75) DL(12.2 7.95 5.9 4.75)	CS
2	Conversational	Speech	UL:10.2 DL:10.2	CS
2a	Conversational	Speech	UL:(10.2 , 6.7, 5.9, 4.75) DL:10.2, 6.7, 5.9, 4.75)	CS
3	Conversational	Speech	UL:7.95 DL:7.95	CS
4	Conversational	Speech	UL:7.4 DL:7.4	CS
4a	Conversational	Speech	UL:(12.2 7.95 5.9 4.75, DL:(12.2 7.95 5.9 4.75)	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
11a	Conversational	Unknown	UL:8 DL:8	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	Void ~~Streaming~~	~~Unknown~~	~~UL:0 DL:64~~	~~CS~~
15a	Streaming	Unknown	UL:16 DL:64	PS
16	Void ~~Streaming~~	~~Unknown~~	~~UL:64 DL:0~~	~~CS~~
17	Void ~~Streaming~~	~~Unknown~~	~~UL:0 DL:128~~	~~CS~~
18	Void ~~Streaming~~	~~Unknown~~	~~UL:128 DL:0~~	~~CS~~
19	Void ~~Streaming~~	~~Unknown~~	~~UL:0 DL:384~~	~~CS~~
20	Interactive or Background	N/A	UL:32 DL:8	PS
20a	Interactive or Background	N/A	UL:8 DL:8	PS
20b	Interactive or Background	N/A	UL:16 DL:16	PS
20c	Interactive or Background	N/A	UL:32 DL:32	PS
21	Void ~~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	Void ~~Interactive or Background~~	~~N/A~~	~~UL:384 DL:2048~~	~~PS~~
32	Interactive or Background	N/A	UL:64 DL:256	PS
33	Interactive or Background	N/A	UL:0 DL:32	PS
34	Interactive or Background	N/A	UL:32 DL:0	PS
35	Interactive or Background	N/A	UL:64 DL:144	PS
36	Interactive or Background	N/A	UL:144 DL:144	PS

Table 6.10.3.1.2: 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~~13.6)	DCCH	SCCPCH
5	UL:16.8~~16.6~~	CCCH	PRACH
6	DL:32~~30.4~~ (alt. ~~45.6~~16)	CCCH	SCCPCH
7	DL:33.6~~33.2~~ (alt. ~~49.8~~16.8)	BCCH:	SCCPCH
8	DL:~~24~~12 (alt. ~~6.4~~8)	PCCH	SCCPCH
9	UL:16.8	SHCCH	PRACH
10	UL:16.8	SHCCH	PRACH or PUSCH
11	DL:32 (alt. 16)	SHCCH	SCCPCH
12	DL:16	SHCCH	SCCPCH or PDSCH

6.10.3.2 Combinations of RABs and Signalling RBs

In the present 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.

1a) Stand-alone UL:1.7 DL:1.7 kbps SRBs for DCCH (multiframe)

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.

4a) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

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

5a) Conversational / speech / UL:(10.2, 6.7, 5.9, 4.75) DL:(10.2, 6.7, 5.9, 4.75) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

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.

7a) Conversational / speech / UL:(7.4, 6.7, 5.9, 4.75) DL:(7.4, 6.7, 5.9, 4.75) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

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 RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~ Void.

19) ~~Streaming / unknown / UL:64 DL:0 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~. Void.

20) ~~Streaming / unknown / UL:0 DL:128 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~. Void.

21) ~~Streaming / unknown / UL:128 DL:0 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~. Void.

22) ~~Streaming / unknown / UL:0 DL:384 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~ Void..

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

23a) Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

23b) Interactive or background / UL:16 DL:16 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

23c) Interactive or background / UL:32 DL:32 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

23d) Interactive or background / UL:32 DL:32 kbps / PS RAB (20 ms TTI)
+ 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~~ Void..

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.

38a) Conversational / speech / 12.2 kbps / CS RAB
+ Interactive or background / UL:0 DL:0 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

38b) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background/ UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

38c) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background/ UL:32 DL:32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

38d) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background/ UL:64 DL:64 kbps / PS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

38e) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:0 DL:0 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

38f) Conversational / speech / (12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

38g) Conversational / speech / (12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:16 DL:16 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

38h) Conversational / speech / (12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:32 DL:32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

38i) Conversational / speech / (12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

38j) Conversational / speech / (12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

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.~~ Void

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.~~ Void

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.~~ Void

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.

49a) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

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.

51a) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or Background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

51b) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or Background / UL:16 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

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~~ Void.

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.~~ Void

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

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

58) Streaming / unknown / UL:16 DL:64 kbps / PS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

59) Reserved for future use

60) Reserved for future use

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

Combinations on PDSCH, SCCPCH, PUSCH and PRACH

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

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

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

4) Interactive or background / UL:384 DL:2048 kbps / PS RAB
+ UL:3.4/16.8 DL: 3.4/33.6 kbps SRBs for DCCH, CCCH and BCCH
+ UL: 16.8 DL: 16 kbps SRBs for SHCCH.

Combinations on PDSCH, SCCPCH, DPCH, PUSCH and PRACH

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

+ UL:16.8 kbps SRBs for CCCH and SHCCH
+ DL: 33.6 kbps SRBs for CCCH, SHCCH and BCCH.

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

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

Combinations on SCCPCH

1) Stand-alone ~~24~~ 12 kbps SRB for PCCH.

2) Interactive or background / DL:32 kbps / PS RAB
+ SRB for CCCH
+ SRBs for DCCH
+ SRB for BCCH.

2a) Interactive/Background 32 kbps PS RAB + Interactive/Background 32 kbps PS RAB
+ SRBs for CCCH
+ SRB for DCCH
+ SRB for BCCH

2b) SRBs for CCCH
+ SRB 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.

3a) SRB for PCCH
+ SRB for CCCH
+ SRB for DCCH
+ SRB for BCCH

4) RB for CTCH
+ SRB for CCCH
+ SRB for BCCH

Combinations on PRACH

1) Interactive or background / UL:~~32~~ 12.8 kbps / PS RAB
+ SRB for CCCH
+ SRBs for DCCH.

6.10.3.3 Example of linkage between RABs and services

RABs, which are included in the present document, can provide the services as shown in table 6.10.1.1: Traffic classes. Furthermore, the required BER for each RAB, which is assumed in the present document, is shown in table 6.10.3.3.1.

Table 6.10.3.3.1: 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	$1x10^{-3}$ 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 1: SMS can be provided via the signalling RB (DCCH) on DPCH or SCCPCH.

NOTE 2: CBS can be provided via the signalling RB (CTCH) on SCCPCH

NOTE 3: UDI *n*B can be provided via *n* RABs of conversational 64 kbps.

6.10.3.4 Typical radio parameter sets

6.10.3.4.1 Combinations on DPCH

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

6.10.3.4.1.1.1 Uplink

####### 6.10.3.4.1.1.1.1 Transport channel parameters

######## 6.10.3.4.1.1.1.1.1 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 priority	NAS_DT Low priority
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
	AMD/UMD PDU 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 (alt. 0,148) (note)			
	TFS	TF0, bits	0x148 (alt 1x0) (note)			
		TF1, bits	1x148			
	TTI, ms		80			
	Coding type		CC 1/3			
	CRC, bit		16			
	Max number of bits/TTI before rate matching		516			
	Max number of bits/radio frame before rate matching		65			
	RM attribute		155-185			
NOTE: alternative parameters enable the measurement "transport channel BLER" in the UTRAN.						

######## 6.10.3.4.1.1.1.1.2 TFCS

TFCS size	2
TFCS	SRBs for DCCH = (TF0), (TF1)
Note: The first TFC is required for the alt. case, optional otherwise.	

####### 6.10.3.4.1.1.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	~~238~~ 234
	TFCI code word	~~4~~ 8 bits
	TPC	2 bits
	Puncturing Limit	1
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 4 bits		

6.10.3.4.1.1.2 Downlink

6.10.3.4.1.1.2.1 Transport channel parameters

6.10.3.4.1.1.2.1.1 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 priority	NAS_DT Low priority
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
	AMD/UMD PDU 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 (alt. 0,148) (note)			
	TFS	TF0, bits	0 x148 (alt. 1x0) (note)			
		TF1, bits	1x148			
	TTI, ms		80			
	Coding type		CC 1/3			
	CRC, bit		16			
	Max number of bits/TTI before rate matching		516			
	Max number of bits/radio frame before rate matching		65			
	RM attribute		155-185			
NOTE: alternative parameters enable the measurement "transport channel BLER" in the UE.						

6.10.3.4.1.1.2.1.2 TFCS

TFCS size	2
TFCS	SRBs for DCCH = (TF0), (TF1)
Note: The first TFC is required for the alt. case, optional otherwise.	

6.10.3.4.1.1.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	~~240~~ 236bits
	TFCI code word	~~4~~ 8bits
	Puncturing limit	1
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 4 bits		

6.10.3.4.1.1a Stand-alone UL:1.7 DL:1.7 kbps SRBs for DCCH (multiframe)

6.10.3.4.1.1a.1 Uplink

6.10.3.4.1.1a.1.1 Transport channel parameters

6.10.3.4.1.1a.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 priority	NAS_DT Low priority
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
	AMD/UMD PDU 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		20			
	Coding type		CC 1/3			
	CRC, bit		16			
	Max number of bits/TTI before rate matching		516			
	Max number of bits/radio frame before rate matching		258			

6.10.3.4.1.1a.1.1.2 TFCS

TFCS size	2
TFCS	SRBs for DCCH = (TF0), (TF1)

6.10.3.4.1.1a.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	266
	TFCI code word	8 bits
	TPC	2 bits
	Puncturing Limit	1
	Repetition period	8
	Repetition length	2
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 4 bits		

6.10.3.4.1.1a.2 Downlink

6.10.3.4.1.1a.2.1 Transport channel parameters

6.10.3.4.1.1a.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 priority	NAS_DT Low priority
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
	AMD/UMD PDU 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	0 x148			
		TF1, bits	1x148			
	TTI, ms		20			
	Coding type		CC 1/3			
	CRC, bit		16			
	Max number of bits/TTI before rate matching		516			
	Max number of bits/radio frame before rate matching		258			

6.10.3.4.1.1a.2.1.2 TFCS

TFCS size	2
TFCS	SRBs for DCCH = (TF0), (TF1)
Note: The first TFC is optional	

6.10.3.4.1.1a.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	268 bits
	TFCI code word	8 bits
	Puncturing limit	1
	Repetition period	8
	Repetition length	2
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 4 bits		

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

6.10.3.4.1.2.1 Uplink

6.10.3.4.1.2.1.1 Transport channel parameters

6.10.3.4.1.2.1.1.1 Transport channel parameters for UL:3.4 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 priority	NAS_DT Low priority
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
	AMD/UMD PDU 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 (alt. 0,148) (note)			
	TFS	TF0, bits	0x148 (alt. 1x0) (note)			
		TF1, bits	1x148			
	TTI, ms		40			
	Coding type		CC 1/3			
	CRC, bit		16			
	Max number of bits/TTI before rate matching		516			
	Max number of bits/radio frame before rate matching		129			
	RM attribute		155-165			
NOTE: alternative parameters enable the measurement "transport channel BLER" in the UTRAN.						

6.10.3.4.1.2.1.1.2 TFCS

TFCS size	2
TFCS	SRBs for DCCH = (TF0), (TF1)
Note: The first TFC is required for the alt. case, optional otherwise.	

6.10.3.4.1.2.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	~~238~~ 234 bits
	TFCI code word	~~4~~ 8bits
	TPC	2 bit
	Puncturing Limit	1
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 4 bits		

6.10.3.4.1.2.2 Downlink

6.10.3.4.1.2.2.1 Transport channel parameters

6.10.3.4.1.2.2.1.1 Transport channel parameters for DL:3.4 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 priority	NAS_DT Low priority
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
	AMD/UMD PDU 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 (alt. 0, 148) (note)			
	TFS	TF0, bits	0x148 (alt. 1x0) (note)			
		TF1, bits	1x148			
	TTI, ms		40			
	Coding type		CC 1/3			
	CRC, bit		16			
	Max number of bits/TTI before rate matching		516			
	Max number of bits/radio frame before rate matching		129			
	RM attribute		155-165			
NOTE: alternative parameters enable the measurement "transport channel BLER" in the UE.						

6.10.3.4.1.2.2.1.2 TFCS

TFCS size	2
TFCS	SRBs for DCCH = (TF0), (TF1)
Note: The first TFC is required for the alt. case, optional otherwise.	

6.10.3.4.1.2.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	~~240~~ 236
	TFCI code word	~~4~~ 8bits
	Puncturing limit	1
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 4 bits		

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

6.10.3.4.1.3.1 Uplink

6.10.3.4.1.3.1.1 Transport channel parameters

6.10.3.4.1.3.1.1.1 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 priority	NAS_DT Low priority
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
	AMD/UMD PDU 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 (alt. 0,148) (note)			
	TFS	TF0, bits	0x148 (alt. 1x0) (note)			
		TF1, bits	1x148			
	TTI, ms		10			
	Coding type		CC 1/3			
	CRC, bit		16			
	Max number of bits/TTI before rate matching		516			
	Max number of bits/radio frame before rate matching		516			
NOTE: alternative parameters enable the measurement "transport channel BLER" in the UTRAN.						

6.10.3.4.1.3.1.1.2 TFCS

TFCS size	2
TFCS	SRBs for DCCH = (TF0), (TF1)
Note: The first TFC is required for the alt. case, optional otherwise.	

6.10.3.4.1.3.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	~~476~~ 468 bits
	TFCI code word	~~4~~ 8bits
	TPC	2 bits
	Puncturing Limit	~~0.92~~ 0.88
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 4 bits		

6.10.3.4.1.3.2 Downlink

6.10.3.4.1.3.2.1 Transport channel parameters

6.10.3.4.1.3.2.1.1 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 priority	NAS_DT Low priority
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
	AMD/UMD PDU 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 (alt. 0,148) (note)			
	TFS	TF0, bits	0x148 (alt. 1x0) (note)			
		TF1, bits	1x148			
	TTI, ms		10			
	Coding type		CC 1/3			
	CRC, bit		16			
	Max number of bits/TTI before rate matching		516			
	Max number of bits/radio frame before rate matching		516			
NOTE: alternative parameters enable the measurement "transport channel BLER" in the UE						

6.10.3.4.1.3.2.1.2 TFCS

TFCS size	2
TFCS	SRBs for DCCH = (TF0), (TF1)
Note: The first TFC is required for the alt. case, optional otherwise.	

6.10.3.4.1.3.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	~~484~~ 480bits
	TFCI code word	~~4~~ 8 bits
	Puncturing limit	0.92
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 4 bits		

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

6.10.3.4.1.4.1 Uplink

6.10.3.4.1.4.1.1 Transport channel parameters

6.10.3.4.1.4.1.1.1 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		
	TrD PDU 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)	103	60
	TFS	TF0, bits	0x81(alt. 1x0) (note)	0x103	0x60
		TF1, bits	1x39	1x103	1x60
		TF2, bits	1x81	N/A	N/A
	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
	Max number of bits/radio frame before rate matching		152	167	68
	RM attribute		180-220	170-210	215-256
NOTE: In case of using this alternative, 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 clause 4.2.1.1 in TS ~~25.212~~ 25.222).					

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

See clause ~~6.10.3.4.1.2.1.1.~~ 6.10.3.4.1.2.1.1.1

6.10.3.4.1.4.1.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.4.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	452 bits
	TFCI code word	16 bits
	TPC	2 bit
	Puncturing Limit	0.72~~0.84~~

6.10.3.4.1.4.2 Downlink

6.10.3.4.1.4.2.1 Transport channel parameters

6.10.3.4.1.4.2.1.1 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		39,81 (alt. 0, 39, 81)	103	60
	Max data rate, bps		12200		
	TrD PDU 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~~ 39,81 (alt. 0,39,81)	103	60
	TFS (note 1)	TF0, bits	0x81 (alt. 1x0) (note ~~2~~)	0x103	0x60
		TF1, bits	1x39	1x103	1x60
		TF2, bits	1x81	N/A	N/A
	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
	Max number of bits/radio frame before rate matching		152	167	68
	RM attribute		180-220	170-210	215-256

~~NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212).~~

NOTE ~~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 clause 4.2.1.1 in TS ~~25.212~~ 25.222).

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.4.2.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.4.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	0.76~~0.88~~

6.10.3.4.1.4a Conversational / speech / UL:(12.2, 7.95, 5.9, 4.75) DL:(12.2, 7.95, 5.9, 4.75) kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.4a.1 Uplink

6.10.3.4.1.4a.1.1 Transport channel parameters

6.10.3.4.1.4a.1.1.1 Transport channel parameters for Conversational / speech / UL: (12.2, 7.95, 5.9, 4.75) 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, 42, 55, 75, 81 (alt. 0, 39, 42, 55, 75, 81)	53, 63, 84, 103	60
	Max data rate, bps		12200		
	TrD PDU header, bit		0		
MAC	MAC header, bit		0		
	MAC multiplexing		N/A		
Layer 1	TrCH type		DCH	DCH	DCH
	TB sizes, bit		39, 42, 55, 75, 81 (alt. 0, 39, 42, 55, 75, 81)	53, 63, 84, 103	60
	TFS	TF0, bits	0x81(alt. 1x0) (note)	0x103	0x60
		TF1, bits	1x39	1x53	1x60
		TF2 bits	1x42	1x63	N/A
		TF3, bits	1x55	1x84	N/A
		TF4, bits	1x75	1x103	N/A
		TF5, bits	1x81	N/A	N/A
	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
	Max number of bits/radio frame before rate matching		152	167	68
	RM attribute		180-220	170-210	215-256
NOTE: In case of using this alternative, 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 clause 4.2.1.1 in TS 25.222).					

6.10.3.4.1.4a.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.4a.1.1.3 TFCS

TFCS size	12
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, DCCH)= (TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0), (TF2,TF1,TF0,TF0), (TF3,TF2,TF0,TF0), (TF4,TF3,TF0,TF0), (TF5,TF4,TF1,TF0), (TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF1), (TF2,TF1,TF0,TF1), (TF3,TF2,TF0,TF1), (TF4,TF3,TF0,TF1), (TF5,TF4,TF1,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.4a.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	452 bits
	TFCI code word	16 bits
	TPC	2 bit
	Puncturing Limit	0.72

6.10.3.4.1.4a.2 Downlink

6.10.3.4.1.4a.2.1 Transport channel parameters

6.10.3.4.1.4a.2.1.1 Transport channel parameters for Conversational / speech / DL: (12.2, 7.95, 5.9, 4.75) 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, 42, 55, 75, 81 (alt. 0, 39, 42, 55, 75, 81)	53, 63, 84, 103	60
	Max data rate, bps		12 200		
	TrD PDU header, bit		0		
MAC	MAC header, bit		0		
	MAC multiplexing		N/A		
Layer 1	TrCH type		DCH	DCH	DCH
	TB sizes, bit		39, 42, 55, 75, 81 (alt. 0, 39, 42, 55, 75, 81)	53, 63, 84, 103	60
	TFS	TF0, bits	0x81(alt. 1x0) (note)	0x103	0x60
		TF1, bits	1x39	1x53	1x60
		TF2, bits	1x42	1x63	N/A
		TF3, bits	1x55	1x84	N/A
		TF4, bits	1x75	1x103	N/A
		TF5, bits	1x81	N/A	N/A
	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
	Max number of bits/radio frame before rate matching		152	167	68
	RM attribute		180-220	170-210	215-256
NOTE: In case of using this alternative, 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 clause 4.2.1.1 in TS 25.222).					

6.10.3.4.1.4a.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1

6.10.3.4.1.4a.2.1.3 TFCS

TFCS size	12
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, DCCH)= (TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0), (TF2,TF1,TF0,TF0), (TF3,TF2,TF0,TF0), (TF4,TF3,TF0,TF0), (TF5,TF4,TF1,TF0), (TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF1), (TF2,TF1,TF0,TF1), (TF3,TF2,TF0,TF1), (TF4,TF3,TF0,TF1), (TF5,TF4,TF1,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.4a.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	0.76

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

6.10.3.4.1.5.1 Uplink

6.10.3.4.1.5.1.1 Transport channel parameters

6.10.3.4.1.5.1.1.1 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)	99	40
	Max data rate, bps		10200		
	TrD PDU 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)	99	40
	TFS	TF0, bits	0x65 (alt. 1x0) (note)	0x99	0x40
		TF1, bits	1x39	1x99	1x40
		TF2, bits	1x65	N/A	N/A
	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
	Max number of bits/radio frame before rate matching		128	161	48
	RM attribute		180-220	170-210	215-256
NOTE: In case of using this alternative, 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 clause 4.2.1.1 in ~~TS 25.212~~ 25.222).					

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.5.1.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.5.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	226 bits
	TFCI code word	16 bits
	TPC	2 bit
	Puncturing Limit	0.40~~0.48~~

6.10.3.4.1.5.2 Downlink

6.10.3.4.1.5.2.1 Transport channel parameters

6.10.3.4.1.5.2.1.1 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		39,65 (alt. 0, 39, 65)	99	40
	Max data rate, bps		10200		
	TrD PDU 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~~ 39, 65 (alt.0,39,65)	99	40
	TFS (note 1)	TF0, bits	0x65 (alt,1x0) (note ~~2~~)	0x99	0x40
		TF1, bits	1x39	1x99	1x40
		TF2, bits	1x65	N/A	N/A
	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
	Max number of bits/radio frame before rate matching		128	161	48
	RM attribute		180-220	170-210	215-256

~~NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212~~).

NOTE ~~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 clause 4.2.1.1 in TS ~~25.212~~ 25.222).

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.5.2.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.5.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	228 bits
	TFCI code word	16 bits
	Puncturing limit	~~0,48~~0.40

6.10.3.4.1.5a Conversational / speech / UL:(10.2, 6.7, 5.9, 4.75) DL:(10.2, 6.7, 5.9, 4.75) kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.5a.1 Uplink

6.10.3.4.1.5a.1.1 Transport channel parameters

6.10.3.4.1.5a.1.1.1 Transport channel parameters for Conversational / speech / UL:(10.2, 6.7, 5.9, 4.75) 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, 42, 55, 58, 65 (alt. 0, 39, 42, 55, 58, 65)	53, 63, 76, 99	40
	Max data rate, bps		10200		
	TrD PDU header, bit		0		
MAC	MAC header, bit		0		
	MAC multiplexing		N/A		
Layer 1	TrCH type		DCH	DCH	DCH
	TB sizes, bit		39, 42, 55, 58, 65 (alt. 0, 39, 42, 55, 58, 65)	53, 63, 76, 99	40
	TFS	TF0, bits	0x65 (alt. 1x0) (note)	0x99	0x40
		TF1, bits	1x39	1x53	1x40
		TF2, bits	1x42	1x63	N/A
		TF3, bits	1x55	1x76	N/A
		TF4, bits	1x58	1x99	N/A
		TF5, bits	1x65	N/A	N/A
	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
	Max number of bits/radio frame before rate matching		128	161	48
	RM attribute		180-220	170-210	215-256
NOTE: In case of using this alternative, 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 clause 4.2.1.1 in TS 25.222).					

6.10.3.4.1.5a.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1

6.10.3.4.1.5a.1.1.3 TFCS

TFCS size	12
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3,DCCH)= (TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0), (TF2,TF1,TF0,TF0), (TF3,TF2,TF0,TF0), (TF4,TF3,TF0,TF0), (TF5,TF4,TF1,TF0), (TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF1), (TF2,TF1,TF0,TF1), (TF3,TF2,TF0,TF1), (TF4,TF3,TF0,TF1), (TF5,TF4,TF1,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.5a.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	226 bits
	TFCI code word	16 bits
	TPC	2 bit
	Puncturing Limit	0.40

6.10.3.4.1.5a.2 Downlink

6.10.3.4.1.5a.2.1 Transport channel parameters

6.10.3.4.1.5a.2.1.1 Transport channel parameters for Conversational / speech / DL: DL:(10.2, 6.7, 5.9, 4.75) 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, 42, 55, 58, 65 (alt. 0, 39, 42, 55, 58, 65)	0, 53, 63, 76, 99	40
	Max data rate, bps		10 200		
	TrD PDU header, bit		0		
MAC	MAC header, bit		0		
	MAC multiplexing		N/A		
Layer 1	TrCH type		DCH	DCH	DCH
	TB sizes, bit		39, 42, 55, 58, 65 (alt. 0, 39, 42, 55, 58, 65)	0, 53, 63, 76, 99	40
	TFS	TF0, bits	0x65 (alt. 1x0) (note)	0x99	0x40
		TF1, bits	1x39	1x53	1x40
		TF2, bits	1x42	1x63	N/A
		TF3, bits	1x55	1x76	N/A
		TF4, bits	1x58	1x99	N/A
		TF5, bits	1x65	N/A	N/A
	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
	Max number of bits/radio frame before rate matching	128	161	48
	RM attribute	180-220	170-210	215-256
NOTE: In case of using this alternative, 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 clause 4.2.1.1 in TS 25.222).				

6.10.3.4.1.5a.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1

6.10.3.4.1.5a.2.1.3 TFCS

TFCS size	12
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3,DCCH)= (TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0), (TF2,TF1,TF0,TF0), (TF3,TF2,TF0,TF0), (TF4,TF3,TF0,TF0), (TF5,TF4,TF1,TF0), (TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF1), (TF2,TF1,TF0,TF1), (TF3,TF2,TF0,TF1), (TF4,TF3,TF0,TF1), (TF5,TF4,TF1,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.5a.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 1 codes x 1 time slot
	Max. Number of data bits/radio frame	228 bits
	TFCI code word	16 bits
	Puncturing limit	0.40

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

6.10.3.4.1.6.1 Uplink

6.10.3.4.1.6.1.1 Transport channel parameters

6.10.3.4.1.6.1.1.1 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)	84
	Max data rate, bps		7950	
	TrD PDU 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)	84
	TFS	TF0, bits	0x75 (alt. 1x0) (note)	0x84
		TF1, bits	1x39	1x84

		TF2, bits	1x75	N/A
	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
	Max number of bits/radio frame before rate matching		143	138
	RM attribute		180-220	170-210
NOTE:	In case of using this alternative, 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 clauses 4.2.1.1 in TS ~~25.212~~25.222).			

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.6.1.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.6.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	226 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	~~0.52~~0.44

6.10.3.4.1.6.2 Downlink

6.10.3.4.1.6.2.1 Transport channel parameters

6.10.3.4.1.6.2.1.1 Transport channel parameters for Conversational / speech / DL:7.95 kbps / CS RAB

			RAB subflow #1	**RAB subflow #2**
Higher Layer	RAB/Signalling RB			
RLC	Logical channel type		DTCH	
	RLC mode		TM	TM
	Payload sizes, bit		39, 75 (alt. 0, 39, 75)	84
	Max data rate, bps		7950	
	TrD PDU 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)	84
	TFS (note 1)	TF0, bits	0x75 (alt. 1x0) (note ~~2~~)	0x84
		TF1, bits	1x39	1x84

	TF2, bits	1x75	N/A
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
Max number of bits/radio frame before rate matching		143	138
RM attribute		180-220	170-210

~~NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212).~~

NOTE ~~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 clause 4.2.1.1 in TS ~~25.212~~ 25.222).

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.6.2.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.6.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	228 bits
	TFCI code word	16 bits
	Puncturing limit	~~0,52~~0.48

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

6.10.3.4.1.7.1 Uplink

6.10.3.4.1.7.1.1 Transport channel parameters

6.10.3.4.1.7.1.1.1 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)	87
	Max data rate, bps		7400	
	TrD PDU 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)	87
	TFS	TF0, bits	0x61 (alt. 1x0) (note)	0x87
		TF1, bits	1x39	1x87

		TF2, bits	1x61	N/A
	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
	Max number of bits/radio frame before rate matching		122	143
	RM attribute		180-220	170-210
NOTE:	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 clause 4.2.1.1 in TS ~~25.212~~25.222).			

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.7.1.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.7.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	226 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	~~0.56~~0.48

6.10.3.4.1.7.2 Downlink

6.10.3.4.1.7.2.1 Transport channel parameters

6.10.3.4.1.7.2.1.1 Transport channel parameters for Conversational / speech / DL:7.4 kbps / CS RAB

			RAB subflow #1	**RAB subflow #2**
Higher Layer	RAB/Signalling RB			
RLC	Logical channel type		DTCH	
	RLC mode		TM	TM
	Payload sizes, bit		39, 61 (alt. 0, 39, 61)	87
	Max data rate, bps		7400	
	TrD PDU 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)	87
	TFS (note 1)	TF0, bits	0x61(alt. 1x0) (note ~~2~~)	0x87
		TF1, bits	1x39	1x87
		TF2, bits	1x61	N/A
	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
	Max number of bits/radio frame before rate matching	122	143
	RM attribute	180-220	170-210
~~NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212~~).			
NOTE ~~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 #1 (see clause 4.2.1.1 in TS ~~25.212~~25.222).			

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.7.2.1.3 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)
Note: in case TB size zero is configured for any transport channel, the first TFC is required; optional otherwise	

6.10.3.4.1.7.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	228 bits
	TFCI code word	16 bits
	Puncturing limit	~~0,56~~0.48

6.10.3.4.1.7a Conversational / speech / UL:(7.4, 6.7, 5.9, 4.75) DL:(7.4, 6.7, 5.9, 4.75) kbps / CS RAB+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.7a.1 Uplink

6.10.3.4.1.7a.1.1 Transport channel parameters

6.10.3.4.1.7a.1.1.1 Transport channel parameters for Conversational / speech / UL:(7.4, 6.7, 5.9, 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, 55, 58, 61 (alt. 0, 39, 42, 55, 58, 61)	53, 63, 76, 87
	Max data rate, bps		7400	
	TrD PDU header, bit		0	
MAC	MAC header, bit		0	
	MAC multiplexing		N/A	
Layer 1	TrCH type		DCH	DCH
	TB sizes, bit		39, 42, 55, 58, 61 (alt. 0, 39, 42, 55, 58, 61)	53, 63, 76, 87
	TFS	TF0, bits	0x61 (alt. 1x0) (note)	0x87
		TF1, bits	1x39	1x53

		TF2, bits	1x42	1x63
		TF3, bits	1x55	1x76
		TF4, bits	1x58	1x87
		TF5, bits	1x61	N/A
	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
	Max number of bits/radio frame before rate matching		122	143
	RM attribute		180-220	170-210
NOTE: In case of using this alternative, 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 clause 4.2.1.1 in TS 25.222).				

6.10.3.4.1.7a.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1

6.10.3.4.1.7a.1.1.3 TFCS

TFCS size	12
TFCS	(RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF3, TF2, TF0), (TF4, TF3, TF0), (TF5, TF4, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1), (TF3, TF2, TF1), (TF4, TF3, TF1), (TF5, TF4, TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.7a.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	226 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.48

6.10.3.4.1.7a.2 Downlink

6.10.3.4.1.7a.2.1 Transport channel parameters

6.10.3.4.1.7a.2.1.1 Transport channel parameters for Conversational / speech / DL:(7.4, 6.7, 5.9, 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, 55, 58, 61 (alt. 0, 39, 42, 55, 58, 61)	53, 63, 76, 87
	Max data rate, bps		7400	
	TrD PDU header, bit		0	
MAC	MAC header, bit		0	
	MAC multiplexing		N/A	
Layer 1	TrCH type		DCH	DCH
	TB sizes, bit		39, 42, 55, 58, 61 (alt. 0, 39, 42, 55, 58, 61)	53, 63, 76, 87
	TFS	TF0, bits	0x61 (alt. 1x0) (note)	0x87

		TF1, bits	1x39	1x53
		TF2, bits	1x42	1x63
		TF3, bits	1x55	1x76
		TF4, bits	1x58	1x87
		TF5, bits	1x61	N/A
	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
	Max number of bits/radio frame before rate matching		122	143
	RM attribute		180-220	170-210
NOTE: In case of using this alternative, 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 clause 4.2.1.1 in TS 25.222).				

6.10.3.4.1.7a.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1

6.10.3.4.1.7a.2.1.3 TFCS

TFCS size	12
TFCS	(RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF3, TF2, TF0), (TF4, TF3, TF0), (TF5, TF4, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1), (TF3, TF2, TF1), (TF4, TF3, TF1), (TF5, TF4, TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.7a.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	228 bits
	TFCI code word	16 bits
	Puncturing limit	0.48

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

6.10.3.4.1.8.1 Uplink

6.10.3.4.1.8.1.1 Transport channel parameters

6.10.3.4.1.8.1.1.1 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)	76
	Max data rate, bps		6700	
	TrD PDU 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)	76
	TFS	TF0, bits	0x58 (alt. 1x0) (note)	0x76
		TF1, bits	1x39	1x76

		TF2, bits	1x58	N/A
	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
	Max number of bits/radio frame before rate matching		117	126
	RM attribute		180-220	170-210
NOTE:	In case of using this alternative, 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 clause 4.2.1.1 in TS ~~25.212~~25.222).			

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.8.1.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.8.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	226 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	~~0.60~~0.52

6.10.3.4.1.8.2 Downlink

6.10.3.4.1.8.2.1 Transport channel parameters

6.10.3.4.1.8.2.1.1 Transport channel parameters for Conversational / speech / DL:6.7 kbps / CS RAB

			RAB subflow #1	**RAB subflow #2**
Higher Layer	RAB/Signalling RB			
RLC	Logical channel type		DTCH	
	RLC mode		TM	TM
	Payload sizes, bit		39, 58 (alt. 0, 39, 58)	76
	Max data rate, bps		6700	
	TrD PDU 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~~ ~~39~~ ~~58~~	76
	TFS (note 1)	TF0, bits	0x58 (alt.1x0) (note ~~2~~)	0x76
		TF1, bits	1x39	1x76

	TF2, bits	1x58	N/A
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
Max number of bits/radio frame before rate matching		117	126
RM attribute		180-220	170-210

~~NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212~~).

NOTE ~~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 clause 4.2.1.1 in TS ~~25.212~~ 25.222).

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.8.2.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.8.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	228 bits
	TFCI code word	16 bits
	Puncturing limit	0.52~~0,6~~

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

6.10.3.4.1.9.1 Uplink

6.10.3.4.1.9.1.1 Transport channel parameters

6.10.3.4.1.9.1.1.1 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)	63
	Max data rate, bps		5900	
	TrD PDU 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)	63
	TFS	TF0, bits	0x55 (alt. 1x0) (note)	0x63
		TF1, bits	1x39	1x63

		TF2, bits	1x55	N/A
	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
	Max number of bits/radio frame before rate matching		113	107
	RM attribute		180-220	170-210
NOTE: In case of using this alternative, 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 clause 4.2.1.1 in TS ~~25.212~~ 25.222).				

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.9.1.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.9.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	226 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.56~~0.64~~

6.10.3.4.1.9.2 Downlink

6.10.3.4.1.9.2.1 Transport channel parameters

6.10.3.4.1.9.2.1.1 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		39, 55 (alt. 0, 39, 55)	63
	Max data rate, bps		5900	
	TrD PDU 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)	63
	TFS (note 1)	TF0, bits	0x55 (alt. 1x0) (note ~~2~~)	0x63
		TF1, bits	1x39	1x63
		TF2, bits	1x55	N/A
	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
Max number of bits/radio frame before rate matching	113	107
RM attribute	180-220	170-210

~~NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212).~~

NOTE ~~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 clause 4.2.1.1 in TS ~~25.212~~25.222).

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.9.2.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.9.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	228 bits
	TFCI code word	16 bits
	Puncturing limit	~~0,64~~0.56

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

6.10.3.4.1.10.1 Uplink

6.10.3.4.1.10.1.1 Transport channel parameters

6.10.3.4.1.10.1.1.1 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)	54
	Max data rate, bps		5150	
	TrD PDU 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)	54
	TFS	TF0, bits	0x49 (alt. 1x0) (note)	0x54
		TF1, bits	1x39	1x54

		TF2, bits	1x49	N/A
	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
	Max number of bits/radio frame before rate matching		104	93
	RM attribute		180-220	170-210
NOTE: In case of using this alternative, 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 clause 4.2.1.1 in TS ~~25.212~~25.222).				

6.10.3.4.1.10.1.1.2 Transport channel parameters for UL:~~3.4~~1.7 kbps SRBs for DCCH

See clause 6.10.3.4.1.~~2~~1.1.1.1.

6.10.3.4.1.10.1.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.10.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	226 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.72~~0.68~~

6.10.3.4.1.10.2 Downlink

6.10.3.4.1.10.2.1 Transport channel parameters

6.10.3.4.1.10.2.1.1 Transport channel parameters for Conversational / speech / DL:5.15 kbps / CS RAB

			RAB subflow #1	**RAB subflow #2**
Higher Layer	RAB/Signalling RB			
RLC	Logical channel type		DTCH	
	RLC mode		TM	TM
	Payload sizes, bit		39, 49 (alt. 0, 39, 49)	54
	Max data rate, bps		5150	
	TrD PDU 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)	54
	TFS (note 1)	TF0, bits	0x49 (alt. 1x0) (note ~~2~~)	0x54
		TF1, bits	1x39	1x54
		TF2, bits	1x49	N/A
	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
	Max number of bits/radio frame before rate matching	104	93
	RM attribute	180-220	170-210

~~NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212).~~

NOTE ~~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 clause 4.2.1.1 in TS ~~25.212~~25.222).

6.10.3.4.1.10.2.1.2 Transport channel parameters for DL:~~3.4~~ 1.7 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1. 6.10.3.4.1.1.2.1.1.

6.10.3.4.1.10.2.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.10.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	228 bits
	TFCI code word	16 bits
	Puncturing limit	0.72~~0.68~~

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

6.10.3.4.1.11.1 Uplink

6.10.3.4.1.11.1.1 Transport channel parameters

6.10.3.4.1.11.1.1.1 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)	53
	Max data rate, bps		4750	
	TrD PDU 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)	53
	TFS	TF0, bits	0x42 (alt. 1x0) (note)	0x53
		TF1, bits	1x39	1x53
		TF2, bits	1x42	N/A
	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
	Max number of bits/radio frame before rate matching	93	92
	RM attribute	180-220	170-210
NOTE:	In case of using this alternative, 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 clause 4.2.1.1 in TS ~~25.212~~ 25.222).		

6.10.3.4.1.11.1.1.2 Transport channel parameters for UL:~~3.4~~1.7 kbps SRBs for DCCH

See clause ~~6.10.3.4.1.2.1.1.1.~~ 6.10.3.4.1.1.1.1.1.

6.10.3.4.1.11.1.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.11.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	226 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.76~~0.68~~

6.10.3.4.1.11.2 Downlink

6.10.3.4.1.11.2.1 Transport channel parameters

6.10.3.4.1.11.2.1.1 Transport channel parameters for Conversational / speech / DL:4.75 kbps / CS RAB

			RAB subflow #1	**RAB subflow #2**
Higher Layer	RAB/Signalling RB			
RLC	Logical channel type		DTCH	
	RLC mode		TM	TM
	Payload sizes, bit		~~0,~~ 39, 42 (alt. 0, 39, 42)	53
	Max data rate, bps		4750	
	TrD PDU 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)	53
	TFS (note 1)	TF0, bits	0X42 (alt.1x0)(note ~~2~~)	0x53
		TF1, bits	1x39	1x53
		TF2, bits	1x42	N/A
	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
	Max number of bits/radio frame before rate matching	93	92
	RM attribute	180-220	170-210

~~NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212).~~

NOTE ~~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 clause 4.2.1.1 in TS ~~25.212~~25.222).

6.10.3.4.1.11.2.1.2 Transport channel parameters for DL:~~3.4~~1.7 kbps SRBs for DCCH

See clause ~~6.10.3.4.1.2.2.1.1.~~ 6.10.3.4.1.1.2.1.1.

6.10.3.4.1.11.2.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.11.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	228 bits
	TFCI code word	16 bits
	Puncturing limit	0.760~~,72~~

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

6.10.3.4.1.12.1 Uplink

6.10.3.4.1.12.1.1 Transport channel parameters

6.10.3.4.1.12.1.1.1 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
	TrD PDU 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~~ 20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		3564
	Max number of bits/radio frame before rate matching		891
	RM attribute		160-200

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.12.1.1.3 TFCS

TFCS size	~~6~~4
TFCS	(28.8 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), ~~(TF2, TF0),~~ (TF0, TF1), (TF1, TF1)~~, (TF2, TF1)~~
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.12.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	~~SF8~~ SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	~~452~~ 904 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	~~0.44~~~~0.80~~0.76
Note: In case the first TFC in a TFCS is not configured, the TFCI code word will be 8 bits		

6.10.3.4.1.12.2 Downlink

6.10.3.4.1.12.2.1 Transport channel parameters

6.10.3.4.1.12.2.1.1 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
	TrD PDU 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~~20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		3564
	Max number of bits/radio frame before rate matching		891
	RM attribute		160-200

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.12.2.1.3 TFCS

TFCS size	~~6~~4
TFCS	(28.8 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), ~~(TF2, TF0),~~ (TF0, TF1), (TF1, TF1)~~, (TF2, TF1)~~
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.12.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	~~0,44~~0.40
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 8 bits		

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

6.10.3.4.1.13.1 Uplink

6.10.3.4.1.13.1.1 Transport channel parameters

6.10.3.4.1.13.1.1.1 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
	TrD PDU 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)~~
	Max number of bits/radio frame before rate matching		1974~~(alt. 1971)~~
	RM attribute		150-195

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.13.1.1.3 TFCS

TFCS size	4
TFCS	(64 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.13.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	~~{SF16 x 1 code + SF4 x 1 code} x 1 time slot~~ SF16 x 1 code x 1 time slot + SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	~~1210 bits~~1148 bits
	TFCI code word	~~8 bits~~16 bits
	TPC	2 bits
	Puncturing Limit	0.48~~0.56~~
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 8 bits.		

6.10.3.4.1.13.2 Downlink

6.10.3.4.1.13.2.1 Transport channel parameters

6.10.3.4.1.13.2.1.1 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
	TrD PDU 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)~~
	Max number of bits/radio frame before rate matching		1974~~(alt. 1971)~~
	RM attribute		150-195

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.13.2.1.3 TFCS

TFCS size	4
TFCS	(64 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.13.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 5 codes x 1 time slot
	Max. Number of data bits/radio frame	~~1212~~ 1204 bits
	TFCI code word	~~8~~ 16 bits
	Puncturing limit	~~0,56~~0.52
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 8 bits		

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

6.10.3.4.1.14.1 Uplink

6.10.3.4.1.14.1.1 Transport channel parameters

6.10.3.4.1.14.1.1.1 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
	TrD PDU 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)~~
	Max number of bits/radio frame before rate matching		990~~(alt. 987)~~
	RM attribute		165-210

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

See clause 6.10.3.4.1.2.1.1.1.

~~6.10.3.4.1.13.1.1.3~~ 6.10.3.4.1.14.1.1.3 TFCS

TFCS size	4
TFCS	(32 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.14.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	~~936~~ 904 bits
	TFCI code word	~~8~~ 16 bits
	TPC	2 bits
	Puncturing Limit	~~0.80~~0.68
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 8 bits		

6.10.3.4.1.14.2 Downlink

6.10.3.4.1.14.2.1 Transport channel parameters

6.10.3.4.1.14.2.1.1 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
	TrD PDU 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)~~
	Max number of bits/radio frame before rate matching		990~~(alt. 987)~~
	RM attribute		165-210

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.14.2.1.3 TFCS

TFCS size	4
TFCS	(32 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.14.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 3 codes x 1 time slot
	Max. Number of data bits/radio frame	~~724~~ 716 bits
	TFCI code word	~~8~~ 16 bits
	Puncturing limit	0.52~~0,64~~
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 8 bits		

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

6.10.3.4.1.15.1 Uplink

6.10.3.4.1.15.1.1 Transport channel parameters

6.10.3.4.1.15.1.1.1 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		14400
	TrD PDU 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
	Max number of bits/radio frame before rate matching		447
	RM attribute		145-185

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.15.1.1.3 TFCS

TFCS size	4
TFCS	(14.4 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.15.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	~~468~~ 452bits
	TFCI code word	~~8~~ 16 bits
	TPC	2 bits
	Puncturing Limit	~~0.80~~ 0.76
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 8 bits		

6.10.3.4.1.15.2 Downlink

6.10.3.4.1.15.2.1 Transport channel parameters

6.10.3.4.1.15.2.1.1 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		14400
	TrD PDU 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
	Max number of bits/radio frame before rate matching		447
	RM attribute		145-185

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.15.2.1.3 TFCS

TFCS size	4
TFCS	(14.4 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.15.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	~~480~~ 472 bits
	TFCI code word	~~8~~ 16 bits
	Puncturing limit	0~~.~~.80
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 8 bits		

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

6.10.3.4.1.16.1 Uplink

6.10.3.4.1.16.1.1 Transport channel parameters

6.10.3.4.1.16.1.1.1 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
	TrD PDU 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~~20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		3564
	Max number of bits/radio frame before rate matching		891
	RM attribute		135-175

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.16.1.1.3 TFCS

TFCS size	~~6~~4
TFCS	(28.8kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), ~~(TF2, TF0),~~ (TF0, TF1), (TF1, TF1)~~, (TF2, TF1)~~
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.16.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	452 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.44
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 8 bits		

6.10.3.4.1.16.2 Downlink

6.10.3.4.1.16.2.1 Transport channel parameters

6.10.3.4.1.16.2.1.1 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
	TrD PDU 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~~ 20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		3564
	Max number of bits/radio frame before rate matching		891
	RM attribute		135-175

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.16.2.1.3 TFCS

TFCS size	~~6~~ 4
TFCS	(28.8kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), ~~(TF2, TF0),~~ (TF0, TF1), (TF1, TF1)~~, (TF2, TF1)~~
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.16.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	0~~.~~.44
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 8 bits		

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

6.10.3.4.1.17.1 Uplink

6.10.3.4.1.17.1.1 Transport channel parameters

6.10.3.4.1.17.1.1.1 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
	TrD PDU 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
	Max number of bits/radio frame before rate matching		1779
	RM attribute		125-165

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.17.1.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.17.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	904 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.44

6.10.3.4.1.17.2 Downlink

6.10.3.4.1.17.2.1 Transport channel parameters

6.10.3.4.1.17.2.1.1 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
	TrD PDU 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
	Max number of bits/radio frame before rate matching		1779
	RM attribute		125-165

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.17.2.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.17.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 4 codes x 1 time slot
	Max. Number of data bits/radio frame	960 bits
	TFCI code word	16 bits
	Puncturing limit	0.48

6.10.3.4.1.18 Void

6.10.3.4.1.19 Void

6.10.3.4.1.20 Void

6.10.3.4.1.21 Void

6.10.3.4.1.22 Void

~~6.10.3.4.1.18 Streaming / unknown / UL:0 DL:64 kbps / CS or PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~

~~6.10.3.4.1.18.1 Uplink~~

~~6.10.3.4.1.18.1.1 Transport channel parameters~~

~~6.10.3.4.1.18.1.1.1 Transport channel parameters for Streaming / unknown / UL:0 kbps / CS or PS RAB~~

~~N/A~~

~~6.10.3.4.1.18.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.1.1.1.~~

~~6.10.3.4.1.18.1.1.3 TFCS~~

~~See clause 6.10.3.4.1.2.1.1.2.~~

~~6.10.3.4.1.18.1.2 Physical channel parameters~~

~~See clause 6.10.3.4.1.2.1.2.~~

~~6.10.3.4.1.18.2 Downlink~~

~~6.10.3.4.1.18.2.1 Transport channel parameters~~

~~6.10.3.4.1.18.2.1.1 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~~
	~~TrD PDU 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~~
	~~Max number of bits/radio frame before rate matching~~		~~2019~~
	~~RM attribute~~		~~125-165~~

~~6.10.3.4.1.18.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.2.1.1.~~

~~6.10.3.4.1.18.2.1.3 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)~~

~~6.10.3.4.1.18.2.2 Physical channel parameters~~

~~DPCH Downlink~~	~~Midamble~~	~~512 chips~~
	~~Codes and time slots~~	~~SF16 x 5 codes x 1 time slot~~
	~~Max. Number of data bits/radio frame~~	~~1204 bits~~
	~~TFCI code word~~	~~16 bits~~
	~~Puncturing limit~~	~~0,56~~

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

6.10.3.4.1.19.1 Uplink

6.10.3.4.1.19.1.1 Transport channel parameters

6.10.3.4.1.19.1.1.1 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
	TrD PDU 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
	Max number of bits/radio frame before rate matching		2019
	RM attribute		125-165

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.19.1.1.3 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)

6.10.3.4.1.19.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	{SF16 x 1 code + SF4 x 1 code} x 1 time slot
	Max. Number of data bits/radio frame	1202 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.52

~~6.10.3.4.1.19.2 Downlink~~

~~6.10.3.4.1.19.2.1 Transport channel parameters~~

~~6.10.3.4.1.19.2.1.1 Transport channel parameters for Streaming / unknown / DL:0 kbps / CS or PS RAB~~

~~N/A~~

~~6.10.3.4.1.19.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.2.1.1.~~

~~6.10.3.4.1.19.2.1.3 TFCS~~

~~See clause 6.10.3.4.1.2.2.1.2.~~

~~6.10.3.4.1.19.2.2 Physical channel parameters~~

~~See clause 6.10.3.4.1.2.2.2.~~

~~6.10.3.4.1.20 Streaming / unknown / UL:0 DL:128 kbps / CS or PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~

~~6.10.3.4.1.20.1 Uplink~~

~~6.10.3.4.1.20.1.1 Transport channel parameters~~

~~6.10.3.4.1.20.1.1.1 Transport channel parameters for Streaming / unknown / UL:0 kbps / CS or PS RAB~~

~~N/A~~

~~6.10.3.4.1.20.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.1.1.1.~~

~~6.10.3.4.1.20.1.1.3 TFCS~~

~~See clause 6.10.3.4.1.2.1.1.2.~~

~~6.10.3.4.1.20.1.2 Physical channel parameters~~

~~See clause 6.10.3.4.1.2.1.2.~~

6.10.3.4.1.20.2 Downlink

6.10.3.4.1.20.2.1 Transport channel parameters

6.10.3.4.1.20.2.1.1 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
	TrD PDU 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
	Max number of bits/radio frame before rate matching		4038
	RM attribute		125-165

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.20.2.1.3 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)

6.10.3.4.1.20.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 1 time slot
	Max. Number of data bits/radio frame	2192 bits
	TFCI code word	16 bits
	Puncturing limit	0,52

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

6.10.3.4.1.21.1 Uplink

6.10.3.4.1.21.1.1 Transport channel parameters

6.10.3.4.1.21.1.1.1 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
	TrD PDU 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

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.21.1.3 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)

6.10.3.4.1.21.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	2064 bits
	TFCI code word	16 bit
	TPC	2 bits
	Puncturing Limit	0.48

~~6.10.3.4.1.21.2 Downlink~~

~~6.10.3.4.1.21.2.1 Transport channel parameters~~

~~6.10.3.4.1.21.2.1.1 Transport channel parameters for Streaming / unknown / DL:0 kbps / CS or PS RAB~~

~~N/A~~

~~6.10.3.4.1.21.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.2.1.1.~~

~~6.10.3.4.1.21.2.1.3 TFCS~~

~~See clause 6.10.3.4.1.2.2.1.1.~~

~~6.10.3.4.1.21.2.2 Physical channel parameters~~

~~See clause 6.10.3.4.1.2.2.2.~~

~~6.10.3.4.1.22 Streaming / unknown / UL:0 DL:384 kbps / CS or PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~

~~6.10.3.4.1.22.1 Uplink~~

~~6.10.3.4.1.22.1.1 Transport channel parameters~~

~~6.10.3.4.1.22.1.1.1 Transport channel parameters for Streaming / unknown / UL:0 kbps / CS or PS RAB~~

~~N/A~~

~~6.10.3.4.1.22.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.1.1.1.~~

~~6.10.3.4.1.22.1.1.3 TFCS~~

~~See clause 6.10.3.4.1.2.1.1.2.~~

~~6.10.3.4.1.22.1.2 Physical channel parameters~~

~~See clause 6.10.3.4.1.2.1.2.~~

6.10.3.4.1.22.2 Downlink

6.10.3.4.1.22.2.1 Transport channel parameters

6.10.3.4.1.22.2.1.1 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
	TrD PDU 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
	Max number of bits/radio frame before rate matching		12108
	RM attribute		110-150

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.22.2.1.3 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)

6.10.3.4.1.22.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 3 time slots
	Max. Number of data bits/radio frame	6608 bits
	TFCI code word	16 bits
	Puncturing limit	0,52

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

6.10.3.4.1.23.1 Uplink

6.10.3.4.1.23.1.1 Transport channel parameters

6.10.3.4.1.23.1.1.1 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 (alt. 128)
	Max data rate, bps		32000
	AMD PDU header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336 (alt.144)
	TFS	TF0, bits	0x336 (alt. 0x144)
		TF1, bits	1x336 (alt. 1x144)
		TF2, bits	2x336 ~~(alt. N/A)~~ (alt. 5x144)
	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. 2412) ~~(alt. 1080)~~
	Max number of bits/radio frame before rate matching		1062 (alt. 1206) ~~(alt. 1080)~~
	RM attribute		135-175

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.23.1.1.3 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))~~
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.23.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	904 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.72 (alt. 0.64)~~0.76~~

6.10.3.4.1.23.2 Downlink

6.10.3.4.1.23.2.1 Transport channel parameters

6.10.3.4.1.23.2.1.1 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
	AMD PDU 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)~~
	Max number of bits/radio frame before rate matching		267 ~~(alt. 270)~~
	RM attribute		135-175

6.10.3.4.1.23.2.1.2 Transport channel parameters for ~~UL~~ DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.23.2.1.3 TFCS

TFCS size	4
TFCS	(8 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.23.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	~~236~~ 228 bits
	TFCI code word	~~8~~ 16 bits
	Puncturing limit	0~~.~~.56
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 8 bits.		

6.10.3.4.1.23a Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.23a.1 Uplink

6.10.3.4.1.23a.1.1 Transport channel parameters

6.10.3.4.1.23a.1.1.1 Transport channel parameters for Interactive or background / UL:8 kbps / PS RAB

Higher Layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		AM
	Payload sizes, bit		320 (alt. 128)
	Max data rate, bps		8000
	AMD PDU header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336 (alt. 144)
	TFS	TF0, bits	0x336 (alt. 0x144)
		TF1, bits	1x336 (alt. 1x144)
		TF2, bits	N/A (alt. 5x144)
	TTI, ms		40 (alt. 80)
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		1068 (alt. 2412)
	Max number of bits/radio frame before rate matching		267 (alt.302)
	RM attribute		135-175

6.10.3.4.1.23a.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.23a.1.1.3 TFCS

TFCS size	4 (alt. 6)
TFCS	(8 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1) (alt. (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1))
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.23a.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	226 bits
	TFCI code word	16 bits
	TPC	2 bit
	Puncturing Limit	0.56 (alt. 0.48)

6.10.3.4.1.23a.2 Downlink

See clause 6.10.3.4.1.23.2

6.10.3.4.1.23b Interactive or background / UL:16 DL:16 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.23b.1 Uplink

6.10.3.4.1.23b.1.1 Transport channel parameters

6.10.3.4.1.23b.1.1.1 Transport channel parameters for Interactive or background / UL:16 kbps / PS RAB

Higher layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		AM
	Payload sizes, bit		320 (alt. 128)
	Max data rate, bps		16000
	AMD PDU header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336 (alt. 144)
	TFS	TF0, bits	0x336 (alt. 0x144)
		TF1, bits	1x336 (alt. 1x144)
		TF2, bits	2x336 (alt. 5x144)
	TTI, ms		40
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		2124 (alt. 2412)
	Max number of bits/radio frame before rate matching		531 (alt. 603)
	RM attribute		135-175

6.10.3.4.1.23b.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.23b.1.1.3 TFCS

TFCS size	6
TFCS	(16 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.23b.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	452 bits
	TFCI code word	16 bits
	TPC	2 bit
	Puncturing Limit	0.68 (alt. 0.60)

6.10.3.4.1.23b.2 Downlink

6.10.3.4.1.23b.2.1 Transport channel parameters

6.10.3.4.1.23b.2.1.1 Transport channel parameters for Interactive or background / DL:16 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		16000
	AMD PDU 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
	TTI, ms		40
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		2124
	Max number of bits/radio frame before rate matching		531
	RM attribute		135-175

6.10.3.4.1.23b.2.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.23b.2.1.3 TFCS

TFCS size	6
TFCS	(16 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.2.4.1.23b.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	0.68

6.10.3.4.1.23c Interactive or background / UL:32 DL:32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.23c.1 Uplink

6.10.3.4.1.23c.1.1 Transport channel parameters

6.10.3.4.1.23c.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 (alt. 128)
	Max data rate, bps		32000
	AMD PDU header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336 (alt. 144)
	TFS	TF0, bits	0x336 (alt. 0x144)
		TF1, bits	1x336 (alt. 1x144)
		TF2, bits	2x336 (alt. 5x144)
		TF3, bits	3x336 (alt. 7x144)
		TF4, bits	4x336 (alt. 10x144)
	TTI, ms		40
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		4236 (alt. 4812)
	Max number of bits/radio frame before rate matching		1059 (alt. 1203)
	RM attribute		135-175

6.10.3.4.1.23c.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.23c.1.1.3 TFCS

TFCS size	10
TFCS	(32 kbps RAB, DCCH)= (TF0,TF0), (TF1,TF0), (TF2,TF0), (TF3,TF0), (TF4,TF0), (TF0,TF1), (TF1,TF1), (TF2,TF1), (TF3,TF1), (TF4,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.23c.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	904 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.72 (alt. 0.64)

6.10.3.4.1.23c.2 Downlink

6.10.3.4.1.23c.2.1 Transport channel parameters

6.10.3.4.1.23c.2.1.1 Transport channel parameters for Interactive or background / DL: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
	AMD PDU 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		40
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		4236
	Max number of bits/radio frame before rate matching		1059
	RM attribute		135-175

6.10.3.4.1.23c.2.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.23c.2.1.3 TFCS

TFCS size	10
TFCS	(32 kbps RAB, DCCH)= (TF0,TF0), (TF1,TF0), (TF2,TF0), (TF3,TF0), (TF4,TF0), (TF0,TF1), (TF1,TF1), (TF2,TF1), (TF3,TF1), (TF4,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.23c.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 3 codes x 1 time slot
	Max. Number of data bits/radio frame	716
	TFCI code word	16 bits
	Puncturing limit	0.60

6.10.3.4.1.23d Interactive or background / UL:32 DL:32 kbps / PS RAB (20 ms TTI)+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.23d.1 Uplink

6.10.3.4.1.23d.1.1 Transport channel parameters

6.10.3.4.1.23d.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 (alt. 128)
	Max data rate, bps		32000
	AMD PDU header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336 (alt. 144)
	TFS	TF0, bits	0x336 (alt. 0x144)
		TF1, bits	1x336 (alt 1x144)
		TF2, bits	2x336 (alt. 5x144)
	TTI, ms		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		2124 (alt. 2412)
	Max number of bits/radio frame before rate matching		1062 (alt. 1206)
	RM attribute		135-175

6.10.3.4.1.23d.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.23d.1.1.3 TFCS

TFCS size	6
TFCS	(32 kbps RAB, DCCH)= (TF0,TF0), (TF1,TF0), (TF2,TF0), (TF0,TF1), (TF1,TF1), (TF2,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.23d.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	904 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.72 (alt. 0.64)

6.10.3.4.1.23d.2 Downlink

6.10.3.4.1.23d.2.1 Transport channel parameters

6.10.3.4.1.23d.2.1.1 Transport channel parameters for Interactive or background / DL: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
	AMD PDU 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
	TTI, ms		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		2124
	Max number of bits/radio frame before rate matching		1062
	RM attribute		135-175

6.10.3.4.1.23d.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.23d.2.1.3 TFCS

TFCS size	6
TFCS	(32 kbps RAB, DCCH)= (TF0,TF0), (TF1,TF0), (TF2,TF0), (TF0,TF1), (TF1,TF1), (TF2,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.23d.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 3 codes x 1 time slot
	Max. Number of data bits/radio frame	716 bits
	TFCI code word	16 bits
	Puncturing limit	0.56

6.10.3.4.1.24 Void

~~6.10.3.4.1.24 Interactive or background / UL:64 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~

~~6.10.3.4.1.24.1 Uplink~~

~~6.10.3.4.1.24.1.1 Transport channel parameters~~

~~6.10.3.4.1.24.1.1.1 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~~
	~~AMD PDU 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~~
	~~Max number of bits/radio frame before rate matching~~		~~2118~~
	~~RM attribute~~		~~130-170~~

~~6.10.3.4.1.24.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.1.1.1.~~

~~6.10.3.4.1.24.1.1.3 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)~~

~~6.10.3.4.1.24.1.2 Physical channel parameters~~

~~DPCH Uplink~~	~~Midamble~~	~~512 chips~~
	~~Codes and time slots~~	~~{SF16 x 1 code + SF4 x 1 code} x 1 time slot~~
	~~Max. Number of data bits/radio frame~~	~~1202 bits~~
	~~TFCI code word~~	~~16 bits~~
	~~TPC~~	~~2 bits~~
	~~Puncturing Limit~~	~~0.52~~

~~6.10.3.4.1.24.2 Downlink~~

~~See clause 6.10.3.4.1.23.2.~~

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

6.10.3.4.1.25.1 Uplink

See clause 6.10.3.4.1.23.1.

6.10.3.4.1.25.2 Downlink

6.10.3.4.1.25.2.1 Transport channel parameters

6.10.3.4.1.25.2.1.1 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
	AMD PDU 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
	Max number of bits/radio frame before rate matching		2118
	RM attribute		130-170

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.25.2.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.25.2.2 Physical channel parameters

DPCH Downlink		Physical Configuration 1	Physical Configuration 2
	Midamble	512 chips	512 chips
	Codes and time slots	SF16 x 35 codes x 1 time slot + SF16 x 2 codes x 1 time slot	SF16 x 9 codes x 1 time slot
	Max. Number of data bits/radio frame	1204 bits	2180 bits
	TFCI code word	16 bits	16 bits
	Puncturing limit	0.52	0.96

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

6.10.3.4.1.26.1 Uplink

~~See clause 6.10.3.4.1.24.1.~~

6.10.3.4.1.26.1.1 Transport channel parameters

6.10.3.4.1.26.1.1.1 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 (alt.128)
	Max data rate, bps		64000
	AMD PDU header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336 (alt. 144)
	TFS	TF0, bits	0x336 (alt. 0x144)
		TF1, bits	1x336 (alt. 1x144)
		TF2, bits	2x336 (alt. 3x144)
		TF3, bits	3x336 (alt. 7x144)
		TF4, bits	4x336 (alt. 10x144)
	TTI, ms		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		4236 (alt. 4812)
	Max number of bits/radio frame before rate matching		2118 (alt. 2406)
	RM attribute		130-170

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.26.1.1.3 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)

6.10.3.4.1.26.1.2 Physical channel parameters

DPCH Uplink		Physical Configuration 1	Physical Configuration 2
	Midamble	512 chips	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot + SF4 x 1 code x 1 time slot	SF2 x 1 code x 1 time slot + SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	1148 bits	2784 bits
	TFCI code word	16 bits	16 bits
	TPC	2 bits	2 bits
	Puncturing Limit	0.48 (alt. 0.44)	1

6.10.3.4.1.26.2 Downlink

See clause 6.10.3.4.1.25.2.

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

6.10.3.4.1.27.1 Uplink

See clause ~~6.10.3.4.1.24.1.~~ 6.10.3.4.1.26.1

6.10.3.4.1.27.2 Downlink

6.10.3.4.1.27.2.1 Transport channel parameters

6.10.3.4.1.27.2.1.1 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
	AMD PDU 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
	Max number of bits/radio frame before rate matching		4230
	RM attribute		120-160

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.27.2.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.27.2.2 Physical channel parameters

DPCH Downlink		Physical Configuration 1	Physical Configuration 2
	Midamble	256 chips	256 chips
	Codes and time slots	SF16 x 8 codes x 1 time slot	SF16 x 4 codes x 2 time slots + SF16 x 3 codes x 2 time slots
	Max. Number of data bits/radio frame	2192 bits	3848 bits
	TFCI code word	16 bits	16 bits
	Puncturing limit	0.48	0.880.84

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

6.10.3.4.1.28.1 Uplink

6.10.3.4.1.28.1.1 Transport channel parameters

6.10.3.4.1.28.1.1.1 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 (alt. 128)
	Max data rate, bps		128000
	AMD PDU header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336 (alt. 144)
	TFS	TF0, bits	0x336 (alt. 0x144)
		TF1, bits	1x336 (alt. 1x144)
		TF2, bits	2x336 (alt. 7x144)
		TF3, bits	4 x336 (alt 14x144)
		TF4, bits	8 x336 (alt. 20x144)
	TTI, ms		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		8460 (alt. 9612)
	Max number of bits/radio frame before rate matching		4230 (alt. 4806)
	RM attribute		120-160

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.28.1.1.3 TFCS

TFCS size	9 (alt.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)~~ (alt, (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1))
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.28.1.2 Physical channel parameters

DPCH Uplink		Physical Configuration 1	Physical Configuration 2
	Midamble	256 chips	256 chips
	Codes and time slots	SF2 x 1 code x 1 time-slot	SF2 x 1 code x 2 timeslots + SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	2064 bits	5376 bits
	TFCI code word	16 bits	16 bits
	TPC	2 bits	2 bits
	Puncturing Limit	~~0.48~~0.44 (alt. 0.40)	1

6.10.3.4.1.28.2 Downlink

See clause 6.10.3.4.1.27.2.

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

6.10.3.4.1.29.1 Uplink

See clause ~~6.10.3.4.1.24.1.~~ 6.10.3.4.1.26.1

6.10.3.4.1.29.2 Downlink

6.10.3.4.1.29.2.1 Transport channel parameters

6.10.3.4.1.29.2.1.1 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
	AMD PDU 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
	Max number of bits/radio frame before rate matching		4758
	RM attribute		140-180

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.29.2.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.29.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 9 codes x 1 time slot
	Max. Number of data bits/radio frame	2468 bits
	TFCI code word	16 bits
	Puncturing limit	0.48

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

6.10.3.4.1.30.1 Uplink

6.10.3.4.1.30.1.1 Transport channel parameters

6.10.3.4.1.30.1.1.1 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 (alt. 128)
	Max data rate, bps		144000
	AMD PDU header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336 (alt. 144)
	TFS	TF0, bits	0x336 (alt. 0x144)
		TF1, bits	1x336 (alt. 1x144)
		TF2, bits	2x336 (alt. 10x144)
		TF3, bits	4 x336 (alt. 20x144)
		TF4, bits	8 x336 (alt. 30x144)
		TF5, bits	9 x336 (alt. 45x144)
	TTI, ms		20 (alt. 40)
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		9516 (alt. 21624)
	Max number of bits/radio frame before rate matching		4758 (alt. 5406)
	RM attribute		140-180

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.30.1.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.30.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	~~{~~SF16 x 1 code x 1 time slot + SF2 x 1 code~~}~~ x 1 time slot
	Max. Number of data bits/radio frame	~~2466~~ 2340 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.44(alt. 0.40)~~0.52~~

6.10.3.4.1.30.2 Downlink

See clause 6.10.3.4.1.29.2.

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

6.10.3.4.1.31.1 Uplink

See clause ~~6.10.3.4.1.24.1.~~ 6.10.3.4.1.26.1

6.10.3.4.1.31.2 Downlink

6.10.3.4.1.31.2.1 Transport channel parameters

6.10.3.4.1.31.2.1.1 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
	AMD PDU 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	N/A (alt. 12x336)
		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)
	Max number of bits/radio frame before rate matching		8460 (alt. 8460)
	RM attribute		135-175

6.10.3.4.1.31.2.1.2 Transport channel parameters for ~~UL~~ DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.31.2.1.3 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))
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.31.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 2 time slots
	Max. Number of data bits/radio frame	4400 bits
	TFCI code word	16 bits
	Puncturing limit	0~~.~~48

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

6.10.3.4.1.32.1 Uplink

See ~~clause 6.10.3.4.1.24.1.~~ 6.10.3.4.1.26.1

6.10.3.4.1.32.2 Downlink

6.10.3.4.1.32.2.1 Transport channel parameters

6.10.3.4.1.32.2.1.1 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
	AMD PDU 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	N/A (alt. 16 x336)
		TF7, bits	N/A (alt. 20 x336)
		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)
	Max number of bits/radio frame before rate matching		12684 (alt. 12684)
	RM attribute		110-150

6.10.3.4.1.32.2.1.2 Transport channel parameters for ~~UL~~ DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.32.2.1.3 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))
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.32.2.2 Physical channel parameters

DPCH Downlink		Physical Configuration 1	Physical Configuration 2
	Midamble	256 chips	256 chips
	Codes and time slots	SF16 x 8 codes x 3 time slots	SF16 x 6 codes x 4 time slots + SF16 x 4 codes x 1 time slot (alt. SF1 x 1 code x 3 time slots)
	Max. Number of data bits/radio frame	6608 bits	7712 bits (alt. 13232 bits)
	TFCI code word	16 bits	16 bits
	Puncturing Limit	~~0,52~~0.48	0.60 (alt. 1)

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

6.10.3.4.1.33.1 Uplink

See clause 6.10.3.4.1.28.1.

6.10.3.4.1.33.2 Downlink

See clause 6.10.3.4.1.32.2.

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

6.10.3.4.1.34.1 Uplink

6.10.3.4.1.34.1.1 Transport channel parameters

6.10.3.4.1.34.1.1.1 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
	AMD PDU 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	N/A (alt. 16x336) ~~(alt. N/A)~~
		TF7, bits	N/A (alt. 20x336) ~~(alt. N/A)~~
		TF8, bits	N/A (alt. 24 x336) ~~(alt. N/A)~~
	TTI, ms		10 ~~20~~ (alt. 20 ~~10~~)
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		12684 (alt. 25368)
	Max number of bits/radio frame before rate matching		12684
	RM attribute		110-150

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.34.1.1.3 TFCS

TFCS size	~~18~~ 12 (alt.~~12~~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)) ~~(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))~~
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.34.1.2 Physical channel parameters

DPCH Uplink		Physical Configuration 1	Physical Configuration 2
	Midamble	256 chips	256 chips
	Codes and time slots	SF2 x 1 code x 3 time slots	SF2 x 1 code x 5 timeslots + SF4 x 1 code x 2 timeslots (alt. {SF2 x 1 code + SF4 x 1 code} x 4 timeslots)
	Max. Number of data bits/radio frame	6480 bits	13104 bits
	TFCI code word	16 bits	16 bits
	TPC	2 bits	2 bits
	Puncturing Limit	0.48	1

6.10.3.4.1.34.2 Downlink

See clause 6.10.3.4.1.32.2.

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

6.10.3.4.1.35.1 Uplink

6.10.3.4.1.35.1.1 Transport channel parameters

See clause ~~6.10.3.4.1.24.1.~~ 6.10.3.4.1.26.1.1

6.10.3.4.1.35.1.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	2064 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	~~{~~0.88~~}~~ (alt. 0.80)

6.10.3.4.1.35.2 Downlink

6.10.3.4.1.35.2.1 Transport channel parameters

6.10.3.4.1.35.2.1.1 Transport channel parameters for Interactive or background / DL:2048 kbps / PS RAB

			RAB
Higher Layer	RAB/Signalling RB		
RLC	Logical channel type		DTCH
	RLC mode		AM
	Payload sizes, bit		640
	Max data rate, bps		2048000
	AMD PDU header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		656
	TFS	TF0, bits	0x656
		TF1, bits	1x656
		TF2, bits	2x656
		TF3, bits	4 x656

Higher Layer	RAB/Signalling RB		**RAB**
		TF4, bits	8 x656
		TF5, bits	12x656
		TF6, bits	16x656
		TF7, bits	20x656
		TF8, bits	24x656
		TF9, bits	28x656
		TF10, bits	~~32~~ 31x656 (alt. 32x656)
		TF11, bits	N/A (alt. 36x656)
		TF12, bits	N/A (alt. 40x656)
		TF13, bits	N/A (alt. 44x656)
		TF14, bits	N/A (alt. 48x656)
		TF15, bits	N/A (alt. 52x656)
		TF16, bits	N/A (alt. 56x656)
		TF17, bits	N/A (alt. 60x656)
		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		~~64575~~ 62565(alt. 129141)
	Max number of bits/radio frame before rate matching		~~64575~~ 62565(alt. 64571)
	RM attribute		130-170

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.35.2.1.3 TFCS

TFCS size	~~22~~ 21 (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, TF~~0~~1), (TF12, TF~~0~~1), (TF13, TF~~0~~1), (TF14, TF~~0~~1), (TF15, TF~~0~~1), (TF16, TF~~0~~1), (TF17, TF~~0~~1)~~,~~ (TF18, TF~~0~~1))
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.35.2.2 Physical channel parameters

DPCH Downlink		Physical Configuration 1	Physical Configuration 2
	Midamble	256 chips	256 chips
	Codes and time slots	SF1 x 1 code x ~~12~~11 time slots	SF16 x 13 codes x 4 time slots + SF16 x 12 codes x 7 time slot
	Max. Number of data bits/radio frame	~~52976~~ 48560 bits (alt. 48544)	37520 bits (alt. 37504)
	TFCI code word	16 bits (alt. 32 bits)	16 bits (alt. 32 bits)
	Puncturing limit	0.76 (alt.0.72)~~0,80~~	0.56

6.10.3.4.1.36 Void

6.10.3.4.1.37 Void

~~6.10.3.4.1.36 Interactive or background / UL:128 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~

~~6.10.3.4.1.36.1 Uplink~~

~~See clause 6.10.3.4.1.28.1.~~

~~6.10.3.4.1.36.2 Downlink~~

~~See clause 6.10.3.4.1.35.2.~~

~~6.10.3.4.1.37 Interactive or background / UL:384 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~

~~6.10.3.4.1.37.1 Uplink~~

~~See clause 6.10.3.4.1.34.1.~~

~~6.10.3.4.1.37.2 Downlink~~

~~See clause 6.10.3.4.1.35.2.~~

~~6.10.2.4.1.38~~ 6.10.3.4.1.38 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

6.10.3.4.1.38.1 Uplink

6.10.3.4.1.38.1.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.1.1.1

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

See clause 6.10.3.4.1.23.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.38.1.1.4 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))~~
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	904 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.52 (alt. 0.48)~~0.56~~

6.10.3.4.1.38.2 Downlink

6.10.3.4.1.38.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

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

See clause 6.10.3.4.1.23.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.

6.10.3.4.1.38.2.1.4 TFCS

TFCS size	12
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3,8kbps 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	~~0,60~~0.52

6.10.3.4.1.38a Conversational / speech / 12.2 kbps / CS RAB + Interactive or background / UL:0 DL:0 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.38a.1 Uplink

6.10.3.4.1.38a.1.1 Transport channel parameters

6.10.3.4.1.38a.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.1.1.1.

6.10.3.4.1.38a.1.1.2 Transport channel parameters for Interactive or background / UL:0 kbps / PS RAB

Higher Layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		AM
	Payload sizes, bit		320 (alt. 128)
	Max data rate, bps		0
	AMD PDU header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336 (alt. 144)
	TFS	TF0, bits	0x336 (alt 0x144)
	TTI, ms		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		0
	Max number of bits/radio frame before rate matching		0
	RM attribute		130-170

6.10.3.4.1.38a.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.38a.1.1.4 TFCS

TFCS size	6
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 0kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF1,TF0,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF1,TF0,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38a.1.2 Physical channel parameters.

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	452 bits
	TFCI code word	16 bits
	TPC	2 bit
	Puncturing Limit	~~0.72~~0.68

6.10.3.4.1.38a.2 Downlink

6.10.3.4.1.38a.2.1 Transport channel parameters

6.10.3.4.1.38a.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.38a.2.1.2 Transport channel parameters for Interactive or background / DL:0 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	0
	AMD PDU 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
	TTI, ms	20
	Coding type	TC
	CRC, bit	16
	Max number of bits/TTI after channel coding	0
	Max number of bits/radio frame before rate matching	0
	RM attribute	130-170

6.10.3.4.1.38a.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1

6.10.3.4.1.38a.2.1.4 TFCS

TFCS size	6
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 0kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF1,TF0,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF1,TF0,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38a.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	~~0.76~~0.68

6.10.3.4.1.38b Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.38b.1 Uplink

6.10.3.4.1.38b.1.1 Transport channel parameters

6.10.3.4.1.38b.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.1.1.1.

6.10.3.4.1.38b.1.1.2 Transport channel parameters for Interactive or background / UL:8 kbps / PS RAB

See clause 6.10.3.4.1.23a.1.1.1.

6.10.3.4.1.38b.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.38b.1.1.4 TFCS

TFCS size	12 (alt. 17)
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 8 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) (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,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))
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38b.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	452 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.48 (alt. 0.56)

6.10.3.4.1.38b.2 Downlink

6.10.3.4.1.38b.2.1 Transport channel parameters

6.10.3.4.1.38b.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.38b.2.1.2 Transport channel parameters for Interactive or background / DL:8 kbps / PS RAB

See clause 6.10.3.4.1.23.2.1.1

6.10.3.4.1.38b.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.38b.2.1.4 TFCS

TFCS size	12
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 8 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)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38b.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	0.52

6.10.3.4.1.38c Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.38c.1 Uplink

6.10.3.4.1.38c.1.1 Transport channel parameters

6.10.3.4.1.38c.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.1.1.1.

6.10.3.4.1.38c.1.1.2 Transport channel parameters for Interactive or background / UL:32 kbps / PS RAB

See clause 6.10.3.4.1.23d.1.1.1.

6.10.3.4.1.38c.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.38c.1.1.4 TFCS

TFCS size	18 (alt. 17)
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 32 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,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,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))
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38c.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	904 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.52 (alt. 0.52)

6.10.3.4.1.38c.2 Downlink

6.10.3.4.1.38c.2.1 Transport channel parameters

6.10.3.4.1.38c.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.38c.2.1.2 Transport channel parameters for Interactive or background / DL:32 kbps / PS RAB

See clause 6.10.3.4.1.23d.2.1.1.

6.10.3.4.1.38c.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.38c.2.1.4 TFCS

TFCS size	18
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 32 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,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)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38c.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 4 codes x 1 time slot
	Max. Number of data bits/radio frame	960
	TFCI code word	16 bits
	Puncturing limit	0.56

6.10.3.4.1.38d Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.38d.1 Uplink

6.10.3.4.1.38d.1.1 Transport channel parameters

6.10.3.4.1.38d.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.1.1.1.

6.10.3.4.1.38d.1.1.2 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB + UL:64 kbps / PS RAB

Higher Layer	RAB/Signalling RB		**RAB**	**RAB**
RLC	Logical channel type		DTCH	DTCH
	RLC mode		AM	AM
	Payload sizes, bit		320 (alt. 128)	320 (alt. 128)
	Max data rate, bps		64000	64000
	AMD PDU header, bit		16	16
MAC	MAC header, bit		4	4
	MAC multiplexing		2 logical channel multiplexing	
Layer 1	TrCH type		DCH	
	TB sizes, bit		340 (alt. 148)	
	TFS	TF0, bits	0x340 (alt 0x148)	
		TF1, bits	1x340 (alt 1x148)	
		TF2, bits	2x340 (alt 3x148)	
		TF3, bits	3x340 (alt 7x148)	
		TF4, bits	4x340 (alt 10x148)	
	TTI, ms		20	
	Coding type		TC	
	CRC, bit		16	
	Max number of bits/TTI after channel coding		4284 (alt. 4932)	
	Max number of bits/radio frame before rate matching		2142 (alt. 2466)	
	RM attribute		130-170	

6.10.3.4.1.38d.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.38d.1.1.4 TFCS

TFCS size	30
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB + 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)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38d.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	2064 bits
	TFCI code word	16 bit
	TPC	2 bits
	Puncturing Limit	0.72 (alt. 0.64)

6.10.3.4.1.38d.2 Downlink

6.10.3.4.1.38d.2.1 Transport channel parameters

6.10.3.4.1.38d.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.38d.2.1.2 Transport channel parameters for Interactive or background / DL:64 kbps / PS RAB + DL:64 kbps / PS RAB

Higher Layer	RAB/Signalling RB		**RAB**	**RAB**
RLC	Logical channel type		DTCH	DTCH
	RLC mode		AM	AM
	Payload sizes, bit		320	320
	Max data rate, bps		64000	64000
	AMD PDU header, bit		16	16
MAC	MAC header, bit		4	4
	MAC multiplexing		2 logical channel multiplexing	
Layer 1	TrCH type		DCH	
	TB sizes, bit		340	
	TFS	TF0, bits	0x340	
		TF1, bits	1x340	
		TF2, bits	2x340	
		TF3, bits	3x340	
		TF4, bits	4x340	
	TTI, ms		20	
	Coding type		TC	
	CRC, bit		16	
	Max number of bits/TTI after channel coding		4284	
	Max number of bits/radio frame before rate matching		2142	
	RM attribute		130-170	

6.10.3.4.1.38d.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.38d.2.1.4 TFCS

TFCS size	30
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB + 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)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38d.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 7 codes x 1 time slot
	Max. Number of data bits/radio frame	1916 bits
	TFCI code word	16 bits
	Puncturing limit	0.68

6.10.3.4.1.38e Conversational / speech / UL:(12.2, 7.95, 5.9, 4.75) DL:(12.2, 7.95, 5.9, 4.75) kbps / CS RAB + Interactive or background / UL:0 DL:0 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.38e.1 Uplink

6.10.3.4.1.38e.1.1 Transport channel parameters

6.10.3.4.1.38e.1.1.1 Transport channel parameters for Conversational / speech / UL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB

See clause 6.10.3.4.1.4a.1.1.1.

6.10.3.4.1.38e.1.1.2 Transport channel parameters for Interactive or background / UL:0 kbps / PS RAB

See clause 6.10.3.4.1.38a.1.1.2.

6.10.3.4.1.38e.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.38e.1.1.4 TFCS

TFCS size	12
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 0 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38e.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	452 bits
	TFCI code word	16 bits
	TPC	2 bit
	Puncturing Limit	0.68

6.10.3.4.1.38e.2 Downlink

6.10.3.4.1.38e.2.1 Transport channel parameters

6.10.3.4.1.38e.2.1.1 Transport channel parameters for Conversational / speech / DL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB

See clause 6.10.3.4.1. 4a.2.1.1.

6.10.3.4.1.38e.2.1.2 Transport channel parameters for Interactive or background / DL:0 kbps / PS RAB

See clause 6.10.3.4.1.38a.2.1.2

6.10.3.4.1.38e.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1

6.10.3.4.1.38e.2.1.4 TFCS

TFCS size	12
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 0 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1),
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38e.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	0.68

6.10.3.4.1.38f Conversational / speech / (12.2, 7.95, 5.9, 4.75) kbps / CS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.38f.1 Uplink

6.10.3.4.1.38f.1.1 Transport channel parameters

6.10.3.4.1.38f.1.1.1 Transport channel parameters for Conversational / speech / UL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB

See clause 6.10.3.4.1.4a.1.1.1.

6.10.3.4.1.38f.1.1.2 Transport channel parameters for Interactive or background / UL:8 kbps / PS RAB

See clause 6.10.3.4.1.23a.1.1.1.

6.10.3.4.1.38f.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.38f.1.1.4 TFCS

TFCS size	24 (alt. 32)
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 8 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1) (alt. (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0), (TF2,TF1,TF0,TF2,TF0), (TF3,TF2,TF0,TF2,TF0), (TF4,TF3,TF0,TF2,TF0), (TF5,TF4,TF1,TF2,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1) (TF0,TF0,TF0,TF2,TF1), (TF1,TF0, TF0, TF2, TF1))
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38f.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	452 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.48 (alt.0.56)

6.10.3.4.1.38f.2 Downlink

6.10.3.4.1.38f.2.1 Transport channel parameters

6.10.3.4.1.38f.2.1.1 Transport channel parameters for Conversational / speech / DL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB

See clause 6.10.3.4.1.4a.2.1.1.

6.10.3.4.1.38f.2.1.2 Transport channel parameters for Interactive or background / DL:8 kbps / PS RAB

See clause 6.10.3.4.1.23.2.1.1

6.10.3.4.1.38f.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1

6.10.3.4.1.38f.2.1.4 TFCS

TFCS size	24
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 8 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38f.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	0.52

6.10.3.4.1.38g Conversational / speech / (12.2, 7.95, 5.9, 4.75) kbps / CS RAB + Interactive or background / UL:16 DL:16 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.38g.1 Uplink

6.10.3.4.1.38g.1.1 Transport channel parameters

6.10.3.4.1.38g.1.1.1 Transport channel parameters for Conversational / speech / UL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB

See clause 6.10.3.4.1. 4a.1.1.1.

6.10.3.4.1.38g.1.1.2 Transport channel parameters for Interactive or background / UL:16 kbps / PS RAB

See clause 6.10.3.4.1. 23b.1.1.1.

6.10.3.4.1.38g.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.38g.1.1.4 TFCS

TFCS size	32 (alt. 31)
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 16 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0), (TF3,TF2,TF0,TF2,TF0), (TF4,TF3,TF0,TF2,TF0), (TF5,TF4,TF1,TF2,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1), (TF0,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF2,TF1), (TF3,TF2,TF0,TF2,TF1), (TF4,TF3,TF0,TF2,TF1), (TF5,TF4,TF1,TF2,TF1) (alt. (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0), (TF3,TF2,TF0,TF2,TF0), (TF4,TF3,TF0,TF2,TF0), (TF5,TF4,TF1,TF2,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1), (TF0,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF2,TF1), (TF3,TF2,TF0,TF2,TF1), (TF4,TF3,TF0,TF2,TF1))
Note 1: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise. Note 2: The alt. TFCS is used when the 16Kbps RAB alt. is used.	

6.10.3.4.1.38g.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot + SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	664 bits (alt. 696 bits)
	TFCI code word	32 bits (alt. 16 bits)
	TPC	2 bits
	Puncturing Limit	0.56 (alt. 0.60)

6.10.3.4.1.38g.2 Downlink

6.10.3.4.1.38g.2.1 Transport channel parameters

6.10.3.4.1.38g.2.1.1 Transport channel parameters for Conversational / speech / DL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB

See clause 6.10.3.4.1.4a.2.1.1.

6.10.3.4.1.38g.2.1.2 Transport channel parameters for Interactive or background / DL:16 kbps / PS RAB

See clause 6.10.3.4.1.23b.2.1.1.

6.10.3.4.1.38g.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1

6.10.3.4.1.38g.2.1.4 TFCS

TFCS size	36
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 16 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0), (TF2,TF1,TF0,TF2,TF0), (TF3,TF2,TF0,TF2,TF0), (TF4,TF3,TF0,TF2,TF0), (TF5,TF4,TF1,TF2,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1), (TF0,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF2,TF1), (TF2,TF1,TF0,TF2,TF1), (TF3,TF2,TF0,TF2,TF1), (TF4,TF3,TF0,TF2,TF1), (TF5,TF4,TF1,TF2,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38g.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 3 codes x 1 time slot
	Max. Number of data bits/radio frame	700 bits
	TFCI code word	32 bits
	Puncturing limit	0.56

6.10.3.4.1.38h Conversational / speech / (12.2, 7.95, 5.9, 4.75) kbps / CS RAB + Interactive or background / UL:32 DL:32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.38h.1 Uplink

6.10.3.4.1.38h.1.1 Transport channel parameters

6.10.3.4.1.38h.1.1.1 Transport channel parameters for Conversational / speech / UL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB

See clause 6.10.3.4.1.4a.1.1.1.

6.10.3.4.1.38h.1.1.2 Transport channel parameters for Interactive or background / UL:32 kbps / PS RAB

See clause 6.10.3.4.1.23d.1.1.1.

6.10.3.4.1.38h.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.38h.1.1.4 TFCS

TFCS size	32
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 32 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1, TF1), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0), (TF2,TF1,TF0,TF2,TF0), (TF3,TF2,TF0,TF2,TF0), (TF4,TF3,TF0,TF2,TF0), (TF5,TF4,TF1,TF2,TF0), (TF0,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF2,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38h.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF4 x 1 code x 1 time slot + SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	1084 bits
	TFCI code word	32 bits
	TPC	2 bits
	Puncturing Limit	0.68 (alt.0.60)

6.10.3.4.1.38h.2 Downlink

6.10.3.4.1.38h.2.1 Transport channel parameters

6.10.3.4.1.38h.2.1.1 Transport channel parameters for Conversational / speech / DL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB

See clause 6.10.3.4.1.4a.2.1.1.

6.10.3.4.1.38h.2.1.2 Transport channel parameters for Interactive or background / DL:32 kbps / PS RAB

See clause 6.10.3.4.1.23d.2.1.1.

6.10.3.4.1.38h.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1

6.10.3.4.1.38h.2.1.4 TFCS

TFCS size	32
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 32 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF1,TF0,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1, TF1), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0), (TF2,TF1,TF0,TF2,TF0), (TF3,TF2,TF0,TF2,TF0), (TF4,TF3,TF0,TF2,TF0), (TF5,TF4,TF1,TF2,TF0), (TF0,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF2,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38h.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 4 codes x 1 time slot
	Max. Number of data bits/radio frame	944
	TFCI code word	32 bits
	Puncturing limit	~~0.52~~0.60

6.10.3.4.1.38i Conversational / speech / (12.2, 7.95, 5.9, 4.75) kbps / CS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.38i.1 Uplink

6.10.3.4.1.38i.1.1 Transport channel parameters

6.10.3.4.1.38i.1.1.1 Transport channel parameters for Conversational / speech / UL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB

See clause 6.10.3.4.1. 4a.1.1.1.

6.10.3.4.1.38i.1.1.2 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB

See clause 6.10.3.4.1.26.1.1.1.

6.10.3.4.1.38i.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.38i.1.1.4 TFCS

TFCS size	48
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,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0), (TF2,TF1,TF0,TF2,TF0), (TF3,TF2,TF0,TF2,TF0), (TF4,TF3,TF0,TF2,TF0), (TF5,TF4,TF1,TF2,TF0), (TF0,TF0,TF0,TF4,TF0), (TF1,TF0,TF0,TF4,TF0), (TF2,TF1,TF0,TF4,TF0), (TF3,TF2,TF0,TF4,TF0), (TF4,TF3,TF0,TF4,TF0), (TF5,TF4,TF1,TF4,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1), (TF0,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF2,TF1), (TF2,TF1,TF0,TF2,TF1), (TF3,TF2,TF0,TF2,TF1), (TF4,TF3,TF0,TF2,TF1), (TF5,TF4,TF1,TF2,TF1), (TF0,TF0,TF0,TF4,TF1), (TF1,TF0,TF0,TF4,TF1), (TF2,TF1,TF0,TF4,TF1), (TF3,TF2,TF0,TF4,TF1), (TF4,TF3,TF0,TF4,TF1), (TF5,TF4,TF1,TF4,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38i.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	1936 bits
	TFCI code word	32 bit
	TPC	2 bits
	Puncturing Limit	0.68 (alt.0.60)

6.10.3.4.1.38i.2 Downlink

6.10.3.4.1.38i.2.1 Transport channel parameters

6.10.3.4.1.38i.2.1.1 Transport channel parameters for Conversational / speech / DL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB

See clause 6.10.3.4.1.4a.2.1.1.

6.10.3.4.1.38i.2.1.2 Transport channel parameters for Interactive or background / DL:64 kbps / PS RAB

See clause 6.10.3.4.1.25.2.1.1.

6.10.3.4.1.38i.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1

6.10.3.4.1.38i.2.1.4 TFCS

TFCS size	60
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,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0), (TF2,TF1,TF0,TF2,TF0), (TF3,TF2,TF0,TF2,TF0), (TF4,TF3,TF0,TF2,TF0), (TF5,TF4,TF1,TF2,TF0), (TF0,TF0,TF0,TF3,TF0), (TF1,TF0,TF0,TF3,TF0), (TF2,TF1,TF0,TF3,TF0), (TF3,TF2,TF0,TF3,TF0), (TF4,TF3,TF0,TF3,TF0), (TF5,TF4,TF1,TF3,TF0), (TF0,TF0,TF0,TF4,TF0), (TF1,TF0,TF0,TF4,TF0), (TF2,TF1,TF0,TF4,TF0), (TF3,TF2,TF0,TF4,TF0), (TF4,TF3,TF0,TF4,TF0), (TF5,TF4,TF1,TF4,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1), (TF0,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF2,TF1), (TF2,TF1,TF0,TF2,TF1), (TF3,TF2,TF0,TF2,TF1), (TF4,TF3,TF0,TF2,TF1), (TF5,TF4,TF1,TF2,TF1), (TF0,TF0,TF0,TF3,TF1), (TF1,TF0,TF0,TF3,TF1), (TF2,TF1,TF0,TF3,TF1), (TF3,TF2,TF0,TF3,TF1), (TF4,TF3,TF0,TF3,TF1), (TF5,TF4,TF1,TF3,TF1), (TF0,TF0,TF0,TF4,TF1), (TF1,TF0,TF0,TF4,TF1), (TF2,TF1,TF0,TF4,TF1), (TF3,TF2,TF0,TF4,TF1), (TF4,TF3,TF0,TF4,TF1), (TF5,TF4,TF1,TF4,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38i.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 7 codes x 1 time slot
	Max. Number of data bits/radio frame	1900 bits
	TFCI code word	32 bits
	Puncturing limit	0.68

6.10.3.4.1.38j Conversational / speech / (12.2, 7.95, 5.9, 4.75) kbps / CS RAB + Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.38j.1 Uplink

See clause 6.10.3.4.1.38i.1

6.10.3.4.1.38j.2 Downlink

6.10.3.4.1.38j.2.1 Transport channel parameters

6.10.3.4.1.38j.2.1.1 Transport channel parameters for Conversational / speech / DL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB

See clause 6.10.3.4.1.4a.2.1.1.

6.10.3.4.1.38j.2.1.2 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB

See clause 6.10.3.4.1.27.2.1.1.

6.10.3.4.1.38j.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1

6.10.3.4.1.38j.2.1.4 TFCS

TFCS size	60
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,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0), (TF2,TF1,TF0,TF2,TF0), (TF3,TF2,TF0,TF2,TF0), (TF4,TF3,TF0,TF2,TF0), (TF5,TF4,TF1,TF2,TF0), (TF0,TF0,TF0,TF3,TF0), (TF1,TF0,TF0,TF3,TF0), (TF2,TF1,TF0,TF3,TF0), (TF3,TF2,TF0,TF3,TF0), (TF4,TF3,TF0,TF3,TF0), (TF5,TF4,TF1,TF3,TF0), (TF0,TF0,TF0,TF4,TF0), (TF1,TF0,TF0,TF4,TF0), (TF2,TF1,TF0,TF4,TF0), (TF3,TF2,TF0,TF4,TF0), (TF4,TF3,TF0,TF4,TF0), (TF5,TF4,TF1,TF4,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1), (TF0,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF2,TF1), (TF2,TF1,TF0,TF2,TF1), (TF3,TF2,TF0,TF2,TF1), (TF4,TF3,TF0,TF2,TF1), (TF5,TF4,TF1,TF2,TF1), (TF0,TF0,TF0,TF3,TF1), (TF1,TF0,TF0,TF3,TF1), (TF2,TF1,TF0,TF3,TF1), (TF3,TF2,TF0,TF3,TF1), (TF4,TF3,TF0,TF3,TF1), (TF5,TF4,TF1,TF3,TF1), (TF0,TF0,TF0,TF4,TF1), (TF1,TF0,TF0,TF4,TF1), (TF2,TF1,TF0,TF4,TF1), (TF3,TF2,TF0,TF4,TF1), (TF4,TF3,TF0,TF4,TF1), (TF5,TF4,TF1,TF4,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38j.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 6 codes x 2 time slots
	Max. Number of data bits/radio frame	3280 bits
	TFCI code word	32 bits
	Puncturing limit	0.64

6.10.3.4.1.39 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

6.10.3.4.1.39.1 Uplink

See clause 6.10.3.4.1.38.1.

6.10.3.4.1.39.2 Downlink

6.10.3.4.1.39.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

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

See clause 6.10.3.4.1.25.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.39.2.1.4 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.39.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 8 codes x 1 time slot
	Max. Number of data bits/radio frame	1936 bits
	TFCI code word	16 bits
	Puncturing limit	0.68

6.10.3.4.1.40 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

6.10.3.4.1.40.1 Uplink

6.10.3.4.1.40.1.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.1.1.1.

6.10.3.4.1.40.1.1.2 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB

See clause 6.10.3.4.1.~~24~~26.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.40.1.1.4 TFCS

6.10.3.4.1.40.1.1.4.1 TFCS (one CCTrCH case)

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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.40.1.1.4.2 TFCS (two CCTrCH case)

6.10.3.4.1.40.1.1.4.2.1 TFCS (conversational + SRB)

TFCS size	6
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, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.40.1.1.4.2.2 TFCS (Interactive or background)

TFCS size	5
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF0, TF0, TF0, TF4, TF0)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.40.1.2 Physical channel parameters

6.10.3.4.1.40.1.2.1 Physical channel (one CCTrCH case)

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	1808 bits
	TFCI code word	16 bit
	TPC	2 bits
	Puncturing Limit	0.64 (alt. 0.56)~~0.68~~

6.10.3.4.1.40.1.2.2 Physical channel (two CCTrCH case)

6.10.3.4.1.40.1.2.2.1 Physical channel (conversational + SRB)

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	452 bits
	TFCI code word	16 bits
	TPC	2 bit
	Puncturing Limit	0.68

6.10.3.4.1.40.1.2.2.2 Physical channel (Interactive or background)

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	1808 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.84 (alt. 0.72)

6.10.3.4.1.40.2 Downlink

~~See clause 6.10.3.4.1.39.2.~~

6.10.3.4.1.40.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

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

See clause 6.10.3.4.1.25.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.40.2.1.4 TFCS

6.10.3.4.1.40.2.1.4.1 TFCS (one CCTrCH case)

See Clause 6.10.3.4.1.39.2.1.4.

6.10.3.4.1.40.2.1.4.2 TFCS (two CCTrCH case)

6.10.3.4.1.40.2.1.4.2.1 TFCS (conversational + SRB)

TFCS size	6
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, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.40.2.1.4.2.2 TFCS (Interactive or background)

TFCS size	5
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF0, TF0, TF0, TF4, TF0)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.40.2.2 Physical channel parameters

6.10.3.4.1.40.2.2.1 Physical channel parameters (one CCTrCH)

See Clause 6.10.3.4.1.39.2.2

6.10.3.4.1.40.2.2.2 Physical channel parameters (two CCTrCHs)

6.10.3.4.1.40.2.2.2.1 Physical channel parameters (conversational + SRB)

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	0.68

6.10.3.4.1.40.2.2.2.2 Physical channel parameters (Interactive or background)

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 5 codes x 1 time slot
	Max. Number of data bits/radio frame	1204 bits
	TFCI code word	16 bits
	Puncturing limit	0.56

6.10.3.4.1.41 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

6.10.3.4.1.41.1 Uplink

See clause 6.10.3.4.1.40.1.

6.10.3.4.1.41.2 Downlink

6.10.3.4.1.41.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.41.2.1.2 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB

See clause 6.10.3.4.1.27.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.41.2.1.4 TFCS

6.10.3.4.1.41.2.1.4.1 TFCS (one CCTrCH case)

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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.41.2.1.4.2 TFCS (two CCTrCH case)

6.10.3.4.1.41.2.1.4.2.1 TFCS (conversational + SRB)

TFCS size	6
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, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.41.2.1.4.2.2 TFCS (Interactive or background)

TFCS size	5
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 128 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF0, TF0, TF0, TF4, TF0)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.41.2.2 Physical channel parameters

6.10.3.4.1.41.2.2.1 Physical channel parameters (one CCTrCH)

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x ~~10~~ 5codes x ~~1~~ 2time slots
	Max. Number of data bits/radio frame	2744 bits
	TFCI code word	16 bits
	Puncturing limit	~~0,~~56~~0~~.52

6.10.3.4.1.41.2.2.2 Physical channel parameters (two CCTrCHs)

6.10.3.4.1.41.2.2.2.1 Physical channel parameters (conversational + SRB)

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	0.64

6.10.3.4.1.41.2.2.2.2 Physical channel parameters (Interactive or background)

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 1 time slot
	Max. Number of data bits/radio frame	2192 bits
	TFCI code word	16 bits
	Puncturing limit	0.48

6.10.3.4.1.42 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

6.10.3.4.1.42.1 Uplink

~~See clause 6.10.3.4.1.40.1.~~

6.10.3.4.1.42.1.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.1.1.1.

6.10.3.4.1.42.1.1.2 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB

See clause 6.10.3.4.1.26.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.42.1.1.4 TFCS

See Clause 6.10.3.4.1.40.1.1.4.1.

6.10.3.4.1.42.1.2 Physical channel parameters

See Clause 6.10.3.4.1.40.1.2.1

6.10.3.4.1.42.2 Downlink

6.10.3.4.1.42.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1

6.10.3.4.1.42.2.1.2 Transport channel parameters for Interactive or background / DL:256 kbps / PS RAB

See clause 6.10.3.4.1.31.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.42.2.1.4 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))
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.42.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	~~SF16 x 10 codes x 2 time slots~~ SF16 x 8 codes x 2 time slots +SF16 x 4 codes x 1 time slot
	Max. Number of data bits/radio frame	5504 bits (alt. 5488)
	TFCI code word	16 bits (alt. 32)
	Puncturing limit	0~~,~~.60

6.10.3.4.1.43 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

6.10.3.4.1.43.1 Uplink

See clause 6.10.3.4.1.40.1.

6.10.3.4.1.43.2 Downlink

6.10.3.4.1.43.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.43.2.1.2 Transport channel parameters for Interactive or background / DL:384 kbps / PS RAB

See clause 6.10.3.4.1.32.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.43.2.1.4 TFCS

6.10.3.4.1.43.2.1.4.1 TFCS (one CCTrCH case)

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))
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.43.2.1.4.2 TFCS (two CCTrCH case)

6.10.3.4.1.43.2.1.4.2.1 TFCS (conversational + SRB)

TFCS size	6
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, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.43.2.1.4.2.2 TFCS (Interactive or background)

TFCS size	6 (alt. 9)
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 384 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF0, TF0, TF0, TF5, TF0) (alt. (TF0, TF0, TF0, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF0, TF0, TF0, TF5, TF0), (TF0, TF0, TF0, TF6, TF0), (TF0, TF0, TF0, TF7, TF0), (TF0, TF0, TF0, TF8, TF0))
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.43.2.2 Physical channel parameters

6.10.3.4.1.43.2.2.1 Physical channel parameters (one CCTrCH)

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 3 time slots
	Max. Number of data bits/radio frame	6592 bits
	TFCI code word	32 bits
	Puncturing limit	0.48

6.10.3.4.1.43.2.2.2 Physical channel parameters (two CCTrCHs)

6.10.3.4.1.43.2.2.2.1 Physical channel parameters (conversational + SRB)

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	0.60

6.10.3.4.1.43.2.2.2.2 Physical channel parameters (Interactive or background)

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 3 time slots
	Max. Number of data bits/radio frame	6608 bits
	TFCI code word	16 bits
	Puncturing limit	0,52

6.10.3.4.1.44 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

6.10.3.4.1.44.1 Uplink

6.10.3.4.1.44.1.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.1.1.1.

6.10.3.4.1.44.1.1.2 Transport channel parameters for Interactive or background / UL:128 kbps / PS RAB

See clause 6.10.3.4.1.28.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.44.1.1.4 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.44.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	{SF8 x 1 code + SF2 x 1 code} x 1 time slot
	Max. Number of data bits/radio frame	2616~~2724~~ bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	~~0.56~~0.52 (alt. 0.44)

6.10.3.4.1.44.2 Downlink

6.10.3.4.1.44.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.44.2.1.2 Transport channel parameters for Interactive or background / DL:2048 kbps / PS RAB

See clause 6.10.3.4.1.35.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.44.2.1.4 TFCS

TFCS size	66 (alt. 114)
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 2048 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))
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise	

6.10.3.4.1.44.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 12 codes x 11 time slots~~SF1 x 1 code x time slots~~
	Max. Number of data bits/radio frame	36400 bits
	TFCI code word	32 bits
	Puncturing limit	0~~,~~.52

6.10.3.4.1.45 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

6.10.3.4.1.45.1 Uplink

6.10.3.4.1.45.1.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.1.1.1.

6.10.3.4.1.45.1.1.2 Transport channel parameters for Streaming / unknown / UL:57.6 kbps / CS RAB

See clause 6.10.3.4.1.17.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.45.1.1.4 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise	

6.10.3.4.1.45.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	{SF8 x 1 code x 1 time slot + SF4 x 1 code} x 1 time slot
	Max. Number of data bits/radio frame	1428 1392bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.560.60

6.10.3.4.1.45.2 Downlink

6.10.3.4.1.45.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.45.2.1.2 Transport channel parameters for Streaming / unknown / DL:57.6 kbps / CS RAB

See clause 6.10.3.4.1.17.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.45.2.1.4 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise	

6.10.3.4.1.45.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 6 codes x 1 time slot
	Max. Number of data bits/radio frame	1448 bits
	TFCI code word	16 bits
	Puncturing limit	0.560,6

6.10.3.4.1.46 Void

6.10.3.4.1.47 Void

6.10.3.4.1.48 Void

6.10.3.4.1.46 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

6.10.3.4.1.46.1 Uplink

See clause 6.10.3.4.1.4.1.

6.10.3.4.1.46.2 Downlink

6.10.3.4.1.46.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.46.2.1.2 Transport channel parameters for Streaming / unknown / DL:64 kbps / CS or PS RAB

See clause 6.10.3.4.1.18.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.46.2.1.4 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)

6.10.3.4.1.46.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 1 time slot
	Max. Number of data bits/radio frame	2192 bits
	TFCI code word	16 bits
	Puncturing limit	0,8

6.10.3.4.1.47 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

6.10.3.4.1.47.1 Uplink

See clause 6.10.3.4.1.4.1.

6.10.3.4.1.47.2 Downlink

6.10.3.4.1.47.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.47.2.1.2 Transport channel parameters for Streaming / unknown / DL:128 kbps / CS or PS RAB

See clause 6.10.3.4.1.20.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.47.2.1.4 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)

6.10.3.4.1.47.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 10 codes x 1 time slot
	Max. Number of data bits/radio frame	2728 bits
	TFCI code word	32 bits
	Puncturing limit	0,56

6.10.3.4.1.48 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

6.10.3.4.1.48.1 Uplink

See clause 6.10.3.4.1.4.1.

6.10.3.4.1.48.2 Downlink

6.10.3.4.1.48.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

~~6.10.3.4.1.48.2.1.2 Transport channel parameters for Streaming / unknown / DL:384 kbps / CS or PS RAB~~

~~See clause 6.10.3.4.1.22.2.1.1.~~

~~6.10.3.4.1.48.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.2.1.1.~~

~~6.10.3.4.1.48.2.1.4 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)~~

~~6.10.3.4.1.48.2.2 Physical channel parameters~~

~~DPCH Downlink~~	~~Midamble~~	~~256 chips~~
	~~Codes and time slots~~	~~SF16 x 10 codes x 3 time slots~~
	~~Max. Number of data bits/radio frame~~	~~8248 bits~~
	~~TFCI code word~~	~~32 bits~~
	~~Puncturing limit~~	~~0,64~~

6.10.3.4.1.49 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

6.10.3.4.1.49.1 Uplink

6.10.3.4.1.49.1.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.1.1.1.

6.10.3.4.1.49.1.1.2 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.49.1.1.4 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise	

6.10.3.4.1.49.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	2064 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.72

6.10.3.4.1.49.2 Downlink

6.10.3.4.1.49.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.49.2.1.2 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.49.2.1.4 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise	

6.10.3.4.1.49.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 1 time slot
	Max. Number of data bits/radio frame	2192 bits
	TFCI code word	16 bits
	Puncturing limit	~~0,88~~0.76

6.10.3.4.1.49a Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB + Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.49a.1 Uplink

6.10.3.4.1.49a.1.1 Transport channel parameters

6.10.3.4.1.49a.1.1.1 Transport channel parameters for Conversational / speech / UL: (12.2 7.95 5.9 4.75) kbps / CS RAB

See clause 6.10.3.4.1.4a.1.1.1.

6.10.3.4.1.49a.1.1.2 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.1.1.1.

6.10.3.4.1.49a.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.49a.1.1.4 TFCS

TFCS size	24
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,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.49a.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	2064 bits
	TFCI code word	16 bit
	TPC	2 bits
	Puncturing Limit	0.72

6.10.3.4.1.49a.2 Downlink

6.10.3.4.1.49a.2.1 Transport channel parameters

6.10.3.4.1.49a.2.1.1 Transport channel parameters for Conversational / speech / DL: (12.2 7.95 5.9 4.75) kbps / CS RAB

See clause 6.10.3.4.1.4a.2.1.1.

6.10.3.4.1.49a.2.1.2 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.2.1.1.

6.10.3.4.1.49a.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1

6.10.3.4.1.49a.2.1.4 TFCS

TFCS size	24
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,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.49a.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 7 codes x 1 time slot
	Max. Number of data bits/radio frame	1916 bits
	TFCI code word	16 bits
	Puncturing limit	0.68

6.10.3.4.1.50 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

6.10.3.4.1.50.1 Uplink

6.10.3.4.1.50.1.1 Transport channel parameters

6.10.3.4.1.50.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.~~5.~~4.1.13.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.50.1.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise	

6.10.3.4.1.50.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF~~1~~2 x 1 code x 1time slot + SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	~~3616~~ 2784bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.60~~0.88~~

6.10.3.4.1.50.2 Downlink

6.10.3.4.1.50.2.1 Transport channel parameters

6.10.3.4.1.50.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.50.2.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise	

6.10.3.4.1.50.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x ~~11~~ 6codes x ~~1~~2 time slots
	Max. Number of data bits/radio frame	~~2668~~ 2912bits
	TFCI code word	16 bits
	Puncturing limit	0~~.~~.64

6.10.3.4.1.51 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

6.10.3.4.1.51.1 Uplink

6.10.3.4.1.51.1.1 Transport channel parameters

6.10.3.4.1.51.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.1.1.1.

6.10.3.4.1.51.1.1.2 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB

See clause 6.10.3.4.1.~~24~~26.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.51.1.1.4 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise	

6.10.3.4.1.51.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	2064 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.44 (alt.0.40)

6.10.3.4.1.51.2 Downlink

6.10.3.4.1.51.2.1 Transport channel parameters

6.10.3.4.1.51.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.2.1.1.

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

See clause 6.10.3.4.1.25.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.51.2.1.4 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise	

6.10.3.4.1.51.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 1 time slot
	Max. Number of data bits/radio frame	2192 bits
	TFCI code word	16 bits
	Puncturing limit	0.48

6.10.3.4.1.51a Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or Background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.51a.1 Uplink

6.10.3.4.1.51a.1.1 Transport channel parameters

6.10.3.4.1.51a.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.1.1.1.

6.10.3.4.1.51a.1.1.2 Transport channel parameters for Interactive or Background / UL:8 kbps / PS RAB

See clause 6.10.3.4.1.23a.1.1.1.

6.10.3.4.1.51a.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.51a.1.1.4 TFCS

TFCS size	8 (alt. 12)
TFCS	(64 kbps Conversational RAB, 8 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1) (alt. (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF2, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF0, TF2, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF2, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1), (TF1, TF2, TF1))
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.51a.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	2064 bits
	TFCI code word	16 bit
	TPC	2 bits
	Puncturing Limit	0.76

6.10.3.4.1.51a.2 Downlink

6.10.3.4.1.51a.2.1 Transport channel parameters

6.10.3.4.1.51a.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / PS RAB

See clause 6.10.3.4.1.13.2.1.1.

6.10.3.4.1.51a.2.1.2 Transport channel parameters for Interactive or Background / DL:8 kbps / PS RAB

See clause 6.10.3.4.1.23.2.1.1

6.10.3.4.1.51a.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.51a.2.1.4 TFCS

TFCS size	8
TFCS	(64 kbps Conversational RAB, 8 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.51a.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 6 codes x 1 time slot
	Max. Number of data bits/radio frame	1640 bits
	TFCI code word	16 bits
	Puncturing limit	0.60

6.10.3.4.1.51b Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or Background / UL:16 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.51b.1 Uplink

6.10.3.4.1.51b.1.1 Transport channel parameters

6.10.3.4.1.51b.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.1.1.1.

6.10.3.4.1.51b.1.1.2 Transport channel parameters for Interactive or Background / UL:16 kbps / PS RAB

See clause 6.10.3.4.1.23b.1.1.1

6.10.3.4.1.51b.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.51b.1.1.4 TFCS

TFCS size	12
TFCS	(64 kbps Conversational RAB, 16 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF2, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF0, TF2, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF2, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1), (TF1, TF2, TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.51b.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	2064 bits
	TFCI code word	16 bit
	TPC	2 bits
	Puncturing Limit	~~0.72~~0.68

6.10.3.4.1.51b.2 Downlink

See clause 6.10.3.4.1.51.2.

6.10.3.4.1.52 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

6.10.3.4.1.52.1 Uplink

See clause 6.10.3.4.1.51.1.

6.10.3.4.1.52.2 Downlink

6.10.3.4.1.52.2.1 Transport channel parameters

6.10.3.4.1.52.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.2.1.1.

6.10.3.4.1.52.2.1.2 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB

See clause 6.10.3.4.1.27.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.52.2.1.4 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise	

6.10.3.4.1.52.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	{SF16 x 8 codes x 1 time slot} + {SF16 x 5 codes x 1 time slot}
	Max. Number of data bits/radio frame	3156 bits
	TFCI code word	16 bits
	Puncturing limit	0.44

6.10.3.4.1.53 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

6.10.3.4.1.53.1 Uplink

6.10.3.4.1.53.1.1 Transport channel parameters

6.10.3.4.1.53.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.1.1.1.

6.10.3.4.1.53.1.1.2 Transport channel parameters for Interactive or background / UL:128 kbps / PS RAB

See clause 6.10.3.4.1.28.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.53.1.1.4 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise	

6.10.3.4.1.53.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	~~{~~SF2 x 1 code x ~~1~~ 2 time-slots~~}~~ ~~+~~ ~~{SF16 x 1 code + SF4 x 1 code} x 1 time slot~~
	Max. Number of data bits/radio frame	3760 ~~3154~~ bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.52 (alt. 0.48)

6.10.3.4.1.53.2 Downlink

See clause 6.10.3.4.1.52.2.

6.10.3.4.1.54 Void

6.10.3.4.1.55 Void

~~6.10.3.4.1.54 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~~

~~6.10.3.4.1.54.1 Uplink~~

~~See clause 6.10.3.4.1.24.1.~~

~~6.10.3.4.1.54.2 Downlink~~

~~6.10.3.4.1.54.2.1 Transport channel parameters~~

~~6.10.3.4.1.54.2.1.1 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB~~

~~See clause 6.10.3.4.1.27.2.1.1.~~

~~6.10.3.4.1.54.2.1.2 Transport channel parameters for Streaming / unknown / DL:64 kbps / CS or PS RAB~~

~~See clause 6.10.3.4.1.18.2.1.1.~~

~~6.10.3.4.1.54.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.2.1.1.~~

~~6.10.3.4.1.54.2.1.4 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)~~

~~6.10.3.4.1.54.2.4 Physical channel parameters~~

~~DPCH Downlink~~	~~Midamble~~	~~512 chips~~
	~~Codes and time slots~~	~~{SF16 x 8 codes x 1 time slot} + {SF16 x 5 codes x 1 time slot}~~
	~~Max. Number of data bits/radio frame~~	~~3140 bits~~
	~~TFCI code word~~	~~32 bits~~
	~~Puncturing limit~~	~~0,68~~

6.~~10.3.4.1.55 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~~

~~6.10.3.4.1.55.1 Uplink~~

~~See clause 6.10.3.4.1.24.1.~~

6.10.3.4.1.55.2 Downlink

6.10.3.4.1.55.2.1 Transport channel parameters

6.10.3.4.1.55.2.1.1 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB

See clause 6.10.3.4.1.27.2.1.1.

6.10.3.4.1.55.2.1.2 Transport channel parameters for Streaming / unknown / DL:128 kbps / CS or PS RAB

See clause 6.10.3.4.1.20.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.55.2.1.4 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)

6.10.3.4.1.55.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 1 time slot
	Max. Number of data bits/radio frame	2176 bits
	TFCI code word	32 bits
	Puncturing limit	0,48

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

6.10.3.4.1.56.1 Uplink

6.10.3.4.1.56.1.1 Transport channel parameters

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

Higher Layer	RAB/Signalling RB		**RAB**	**RAB**
RLC	Logical channel type		DTCH	DTCH
	RLC mode		AM	AM
	Payload sizes, bit		320 (alt. 128)	320 (alt.128)
	Max data rate, bps		8000	8000
	AMD PDU header, bit		16	16
MAC	MAC header, bit		4	4
	MAC multiplexing		2 logical channel multiplexing	
Layer 1	TrCH type		DCH	
	TB sizes, bit		340 (alt. 148)	
	TFS	TF0, bits	0x340 (alt. 0x148)	
		TF1, bits	1x340 (alt. 1x148)	
		TF2, bits	N/A (alt. 5x148)	
	TTI, ms		40 (alt. 80)	
	Coding type		TC	
	CRC, bit		16	
	Max number of bits/TTI after channel coding		1080 (alt. 2472)	
	Max number of bits/radio frame before rate matching		270 (alt.309)	
	RM attribute		135-175	

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.56.1.1.3 TFCS

TFCS size	4 (alt. 6)
TFCS	(8 kbps RAB + 8 kbps RAB, DCCH)= (TF0,TF0), (TF1,TF0), (TF0,TF1), (TF1,TF1) (alt. (TF0,TF0), (TF1,TF0), (TF2,TF0), (TF0,TF1), (TF1,TF1), (TF2,TF1))
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.56.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	226 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.52 (alt. 0.48)
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 8 bits (alt. 16 bits).		

6.10.3.4.1.56.2 Downlink

6.10.3.4.1.56.2.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB		**RAB**	**RAB**
RLC	Logical channel type		DTCH	DTCH
	RLC mode		AM	AM
	Payload sizes, bit		320	320
	Max data rate, bps		8000	8000
	AMD PDU header, bit		16	16
MAC	MAC header, bit		4	4
	MAC multiplexing		2 logical channel multiplexing	
Layer 1	TrCH type		DCH	
	TB sizes, bit		340	
	TFS	TF0, bits	0x340	
		TF1, bits	1x340	
	TTI, ms		40	
	Coding type		TC	
	CRC, bit		16	
	Max number of bits/TTI after channel coding		1080	
	Max number of bits/radio frame before rate matching		270	
	RM attribute		135-175	

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.56.2.1.3 TFCS

TFCS size	4
TFCS	(8 kbps RAB + 8 kbps RAB, DCCH)= (TF0,TF0), (TF1,TF0), (TF0,TF1), (TF1,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.56.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 1 codes x 1 time slot
	Max. Number of data bits/radio frame	228 bits
	TFCI code word	16 bits
	Puncturing limit	0.56
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 8 bits.		

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

6.10.3.4.1.57.1 Uplink

6.10.3.4.1.57.1.1 Transport channel parameters

6.10.3.4.1.57.1.1.1 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB + UL:64 kbps / PS RAB

See clause 6.10.3.4.1.38d.1.1.2.

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.57.1.1.3 TFCS

TFCS size	10
TFCS	(64 kbps RAB + 64 kbps RAB, DCCH)= (TF0,TF0), (TF1,TF0), (TF2,TF0), (TF3,TF0), (TF4,TF0), (TF0,TF1), (TF1,TF1), (TF2,TF1), (TF3,TF1), (TF4,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.57.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	2064 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.88 (alt. 0.76)

6.10.3.4.1.57.2 Downlink

6.10.3.4.1.57.2.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB		**RAB**	**RAB**
RLC	Logical channel type		DTCH	DTCH
	RLC mode		AM	AM
	Payload sizes, bit		320	320
	Max data rate, bps		64000	64000
	AMD PDU header, bit		16	16
MAC	MAC header, bit		4	4
	MAC multiplexing		2 logical channel multiplexing	
Layer 1	TrCH type		DCH	
	TB sizes, bit		340	
	TFS	TF0, bits	0x340	
		TF1, bits	1x340	
		TF2, bits	2x340	
		TF3, bits	3x340	
		TF4, bits	4x340	
	TTI, ms		20	
	Coding type		TC	
	CRC, bit		16	
	Max number of bits/TTI after channel coding		4284	
	Max number of bits/radio frame before rate matching		2142	
	RM attribute		130-170	

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.57.2.1.3 TFCS

TFCS size	10
TFCS	(64 kbps RAB + 64 kbps RAB, DCCH)= (TF0,TF0), (TF1,TF0), (TF2,TF0), (TF3,TF0), (TF4,TF0), (TF0,TF1), (TF1,TF1), (TF2,TF1), (TF3,TF1), (TF4,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.57.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 5 codes x 1 time slot
	Max. Number of data bits/radio frame	1364 bits
	TFCI code word	16 bits
	Puncturing limit	0.56

6.10.3.4.1.58 Streaming / unknown / UL:16 DL:64 kbps / PS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.58.1 Uplink

6.10.3.4.1.58.1.1 Transport channel parameters

6.10.3.4.1.58.1.1.1 Transport channel parameters for Streaming / unknown / UL:16 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		16000
	AMD PDU 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		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		1068
	Max number of bits/radio frame before rate matching		534
	RM attribute		135-175

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

See clause 6.10.3.4.1.23a.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.58.1.1.4 TFCS

TFCS size	8 (alt. 12)
TFCS	(16 kbps RAB, 8 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) (alt. (TF0,TF0,TF0), (TF1,TF0,TF0), (TF0,TF1,TF0), (TF1,TF1,TF0), (TF0,TF2,TF0), (TF1,TF2,TF0), (TF0,TF0,TF1), (TF1,TF0,TF1), (TF0,TF1,TF1), (TF1,TF1,TF1), (TF0,TF2,TF1), (TF1,TF2,TF1))
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.58.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot + SF16 x 1code x 1 time slot
	Max. Number of data bits/radio frame	696 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.72 (alt. 0.68)

6.10.3.4.1.58.2 Downlink

6.10.3.4.1.58.2.1 Transport channel parameters

6.10.3.4.1.58.2.1.1 Transport channel parameters for Streaming / unknown / DL:64 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		64000
	AM PDU header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		656
	TFS	TF0, bits	0x656
		TF1, bits	1x656
		TF2, bits	2x656
		TF3, bits	4x656
	TTI, ms		40
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		8076
	Max number of bits/radio frame before rate matching		2019
	RM attribute		125-165

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

See clause 6.10.3.4.1.23.2.1.1

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.58.2.1.4 TFCS

TFCS size	16
TFCS	(64 kbps RAB, 8 kbps RAB, DCCH)= (TF0,TF0,TF0), (TF1,TF0,TF0), (TF2,TF0,TF0), (TF3,TF0,TF0), (TF0,TF1,TF0), (TF1,TF1,TF0), (TF2,TF1,TF0), (TF3,TF1,TF0), (TF0,TF0,TF1), (TF1,TF0,TF1), (TF2,TF0,TF1), (TF3,TF0,TF1), (TF0,TF1,TF1), (TF1,TF1,TF1), (TF2,TF1,TF1), (TF3,TF1,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.58.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 6 codes x 1 time slot
	Max. Number of data bits/radio frame	1640 bits
	TFCI code word	16 bits
	Puncturing limit	0.64

6.10.3.4.1.59 Reserved for future use

6.10.3.4.1.60 Reserved for future use

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

6.10.3.4.1.61.1 Uplink

6.10.3.4.1.61.1.1 Transport channel parameters

6.10.3.4.1.61.1.1.1 Transport channel parameters for Conversational / unknown / UL:8 kbps / PS RAB

Higher layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		UM
	Payload sizes, bit		320
	Max data rate, bps		8000
	UMD PDU header, bit		8
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		328 (alt 0, 328)
	TFS	TF0, bits	0x328 (alt 1x0) (note)
		TF1, bits	1x328
	TTI, ms		40
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		1044
	Max number of bits/radio frame before rate matching		261
	RM attribute		135-175
NOTE: In case of using this alternative, CRC parity bits are to be attached any time since number of TrBlks are 1 even if there is no data on the RAB (see clause 4.2.1.1 in TS 25.222).			

6.10.3.4.1.61.1.1.2 Transport channel parameters for Interactive or Background / UL:8 kbps / PS RAB

See clause 6.10.3.4.1.23a.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1

6.10.3.4.1.61.1.1.4 TFCS

TFCS size	8 (alt. 12)
TFCS	(8 kbps Conversational RAB, 8 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1) (alt. (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF2, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF0, TF2, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF2, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1), (TF1, TF2, TF1))
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.61.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	452 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.68 (alt. 0.64)

6.10.3.4.1.61.2 Downlink

6.10.3.4.1.61.2.1 Transport channel parameters

6.10.3.4.1.61.2.1.1 Transport channel parameters for Conversational / unknown / DL:8 kbps / PS RAB

Higher layer	RAB/Signalling RB		RAB
RLC	Logical channel type		DTCH
	RLC mode		UM
	Payload sizes, bit		320
	Max data rate, bps		8000
	AMD PDU header, bit		8
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		328 (alt 0, 328)
	TFS	TF0, bits	0x328 (alt 1x0) (note)
		TF1, bits	1x328
	TTI, ms		40
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		1044
	Max number of bits/radio frame before rate matching		261
	RM attribute		135-175
NOTE: In case of using this alternative, CRC parity bits are to be attached any time since number of TrBlks are 1 even if there is no data on the RAB (see clause 4.2.1.1 in TS 25.222).			

6.10.3.4.1.61.2.1.2 Transport channel parameters for Interactive or Background / DL:8 kbps / PS RAB

See clause 6.10.3.4.1.23.2.1.1

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

See clause 6.10.3.4.1.2.2.1.1

6.10.3.4.1.61.2.1.4 TFCS

TFCS size	8
TFCS	(8 kbps Conversational RAB, 8 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.61.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	0.68

6.10.3.4.2 Combinations on PDSCH, SCCPCH, PUSCH and PRACH

6.10.3.4.2.1 Interactive or background / UL: 64 DL: 256 kbps / PS RAB + UL: 3.4/16.8 DL: 3.4/33.6 kbps SRBs for DCCH, CCCH and BCCH + UL: 16.8 DL: 16 kbps SRBs for SHCCH

6.10.3.4.2.1.1 Uplink

6.10.3.4.2.1.1.1 Transport channel parameters

6.10.3.4.2.1.1.1.1 Transport channel parameters for Interactive or background / UL: 64 kbps / PS RAB and UL SRB for SHCCH mapped on USCH

Higher Layer	RAB/Signalling RB		**RAB**	**SRB#5**
RLC	Logical channel type		DTCH	SHCCH
	RLC mode		AM	TM
	Payload sizes, bit		320	168
	Max data rate, bps		64000	16800
	AMD/TrD PDU header, bit		16	0
MAC	MAC header, bit		~~0~~1	~~0~~1
	MAC multiplexing		N/A	N/A
Layer 1	TrCH type		USCH	USCH
	TB sizes, bit		~~336~~337 (alt. 145)	~~168~~169
	TFS	TF0, bits	~~0x336~~0x337 (alt. 0x145)	~~0x168~~0x169
		TF1, bits	~~1x336~~1x337 (alt. 1x145)	~~1x168~~1x169
		TF2, bits	~~2x336~~2x337 (alt. 3x145)	N/A
		TF3, bits	~~3x336~~3x337 (alt. 7x145)	N/A
		TF4, bits	~~4x336~~4x337 (alt. 10x145)	N/A
	TTI, ms		20	10
	Coding type		TC	CC 1/2
	CRC, bit		16	16
	Max number of bits/TTI after channel coding		~~4236~~4248 (alt. 4842)	~~384~~386
	Max number of bits/radio frame before rate matching		~~2118~~2124 (alt. 2421)	~~384~~386
	RM attribute		135-175	~~180-220~~230-250

6.10.3.4.2.1.1.1.2 Transport channel parameters for UL: 3.4 Kbps SRBs for DCCH mapped on USCH

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		3400	3200	3200	3200
	AMD/UMD PDU header, bit		8	16	16	16
MAC	MAC header, bit		5	5	5	5
	MAC multiplexing		4 logical channel multiplexing			
Layer 1	TrCH type		USCH			
	TB sizes, bit		149			
	TFS	TF0, bits	0x149			
		TF1, bits	1x149			
	TTI, ms		40			
	Coding type		CC 1/3			
	CRC, bit		16			
	Max number of bits/TTI before rate matching		519			
	Max number of bits/radio frame before rate matching		130			
	RM attribute		190-210			

6.10.3.4.2.1.1.1.~~2~~3 TFCS for USCH

TFCS size	~~10~~20
TFCS	(64 kbps RAB, SHCCH, SRBs for 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, 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)

6.10.3.4.2.1.1.1.~~3~~4 Transport channel parameters for SRB for CCCH and UL SRBs for DCCH and UL SRB for SHCCH mapped on RACH

6.10.3.4.2.1.1.1.4.1 RACH transport channel configuration without DTCH

Higher layer	RAB/signalling RB	**SRB#0**	**SRB#1**	**SRB#2**	**SRB#3**	**SRB#4**	**SRB#5**
	User of Radio Bearer	RRC	RRC	RRC	NAS_DT High prio	NAS_DT Low prio	RRC
RLC	Logical channel type	CCCH	DCCH	DCCH	DCCH	DCCH	SHCCH
	RLC mode	TM	UM	AM	AM	AM	TM
	Payload sizes, bit	168	136	128	128	128	168
	Max data rate, bps	16800	13600	12800	12800	12800	16800
	AMD/UMD/TrD PDU header, bit	0	8	16	16	16	0

Higher layer	RAB/signalling RB	SRB#0	SRB#1	SRB#2	SRB#3	SRB#4	SRB#5
	User of Radio Bearer	RRC	RRC	RRC	NAS_DT High prio	NAS_DT Low prio	RRC
MAC	MAC header, bit	2	26	26	26	26	2
	MAC multiplexing	6 logical channel multiplexing					
Layer 1	TrCH type	RACH					
	TB sizes, bit	170 ~~170~~ ~~170~~ ~~170~~ ~~170~~ ~~170~~					
	TFS TF0, bits	1x170					
	TTI, ms	10					
	Coding type	CC ½					
	CRC, bit	16					
	Max number of bits/TTI after channel coding	388 ~~388~~ ~~388~~ ~~388~~ ~~388~~ ~~388~~					
	Max number of bits/radio frame before rate matching	388					

6.10.3.4.2.1.1.1.4.2 RACH transport channel configuration with DTCH

Higher layer	RAB/signalling RB	**RAB**	**SRB#0**	**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	RRC
RLC	Logical channel type	DTCH	CCCH	DCCH	DCCH	DCCH	DCCH	SHCCH
	RLC mode	AM	TM	UM	AM	AM	AM	TM
	Payload sizes, bit	128	168	136	128	128	128	168
	Max data rate, bps	12800	16800	13600	12800	12800	12800	16800
	AMD/UMD/TrD PDU header, bit	16	0	8	16	16	16	0
MAC	MAC header, bit	26	2	26	26	26	26	2
	MAC multiplexing	7 logical channel multiplexing						
Layer 1	TrCH type	RACH						
	TB sizes, bit	170						
	TFS TF0, bits	1x170						
	TTI, ms	10						
	Coding type	CC ½						
	CRC, bit	16						
	Max number of bits/TTI after channel coding	388						
	Max number of bits/radio frame before rate matching	388						

6.10.3.4.2.1.1.2 Physical channel parameters

6.10.3.4.2.1.1.2.1 Physical channel parameters for PUSCH

PUSCH	Midamble	512 chips
	Codes and time slots	~~{SF16 x 1 code + SF4 x 1 code}~~ SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	1808~~1202~~ bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	~~0.48~~0.60 (alt. 0.56)

6.10.3.4.2.1.1.2.2 Physical channel parameters for PRACH

PRACH	Midamble	512 chips
	Codes and time slots	SF8 (alt. SF16) x 1 code x 1 time slot
	Max. Number of data bits/radio frame	464 (alt. 232)
	Puncturing Limit	1~~.0~~ (alt. 0.56)

6.10.3.4.2.1.2 Downlink

6.10.3.4.2.1.2.1 Transport channel parameters

6.10.3.4.2.1.2.1.1 Transport channel parameters for Interactive or background / DL: 256 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

Higher Layer	RAB/Signalling RB		**RAB**	**SRB#5**
RLC	Logical channel type		DTCH	SHCCH
	RLC mode		AM	UM
	Payload sizes, bit		320	160
	Max data rate, bps		256000	16000
	AMD/UMD PDU header, bit		16	8
MAC	MAC header, bit		~~0~~1	~~0~~1
	MAC multiplexing		N/A	N/A
Layer 1	TrCH type		DSCH	DSCH
	TB sizes, bit		~~336~~337	~~168~~169
	TFS	TF0, bits	~~0x336~~0x337	~~0x168~~0x169
		TF1, bits	~~1x336~~1x337	~~1x168~~1x169
		TF2, bits	~~2x336~~2x337	N/A
		TF3, bits	~~4x336~~4x337	N/A
		TF4, bits	~~8x336~~8x337	N/A
		TF5, bits	N/A (alt. ~~12x336~~12x337)	N/A
		TF6, bits	N/A (alt. ~~16x336~~16x337)	N/A
	TTI, ms		10 (alt. 20)	10
	Coding type		TC	CC 1/2
	CRC, bit		16	16
	Max number of bits/TTI after channel coding		~~8460~~ 8484 (alt. ~~16908~~16968)	~~384~~386
	Downlink: Max number of bits/radio frame before rate matching		~~8460~~ 8484 (alt. ~~8454~~8484)	~~384~~386
	RM attribute		135-175	~~180-220~~230-250

6.10.3.4.2.1.2.1.2 Transport channel parameters for DL: 3.4 Kbps SRBs for DCCH mapped on DSCH

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		3400	3200	3200	3200
	AMD/UMD PDU header, bit		8	16	16	16
MAC	MAC header, bit		5	5	5	5
	MAC multiplexing		4 logical channel multiplexing			
Layer 1	TrCH type		DSCH			
	TB sizes, bit		149			
	TFS	TF0, bits	0x149			
		TF1, bits	1x149			
	TTI, ms		40			
	Coding type		CC 1/3			
	CRC, bit		16			
	Max number of bits/TTI before rate matching		519			
	Max number of bits/radio frame before rate matching		130			
	RM attribute		155-165			

6.10.3.4.2.1.2.1.~~2~~3 TFCS for DSCH

TFCS size	~~10~~ 20 (alt. ~~14~~28)
TFCS	(256 kbps RAB, SHCCH, SRB for 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, 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) (alt. (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF0, TF0), (TF3, TF0, TF0), (TF4, TF0, TF0), (TF5, TF0, TF0), (TF6, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0), (TF2, TF1, TF0), (TF3, TF1, TF0), (TF4, TF1, TF0), (TF5, TF1, TF0), (TF6, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF0, TF1), (TF3, TF0, TF1), (TF4, TF0, TF1), (TF5, TF0, TF1), (TF6, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1), (TF2, TF1, TF1), (TF3, TF1, TF1), (TF4, TF1, TF1), (TF5, TF1, TF1), (TF6, TF1, TF1))

6.10.3.4.2.1.2.1.~~3~~4 Transport channel parameters for DL SRBs for DCCH and SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

6.10.3.4.2.1.2.1.4.1 FACH transport channel configuration without DTCH

Higher layer	RAB/signalling RB		**SRB#0**	**SRB#1**	**SRB#2**	**SRB#3**	**SRB#4**	**SRB#5**	**SRB#6**
	User of Radio Bearer		RRC	RRC	RRC	NAS_DT High prio	NAS_DT Low prio	RRC	RRC
RLC	Logical channel type		CCCH	DCCH	DCCH	DCCH	DCCH	SHCCH	BCCH
	RLC mode		UM	UM	AM	AM	AM	UM	TM
	Payload sizes, bit		160	136 or 120 (note)	128	128	128	160	168
	Max data rate, bps		32000 (alt. 16000~~4800 0~~)	27200 or 24000 (alt. 13600~~4080 0~~ or ~~36000~~1200 0)	25600 (alt. 12800~~3840 0~~)	25600 (alt. 12800~~3840 0~~)	25600 (alt. ~~38400~~1280 0)	32000 (alt. 16000~~4800 0~~)	33600 (alt. 16800~~5040 0~~)
	AMD/UMD/TrD PDU header, bit		8	8	16	16	16	8	0
MAC	MAC header, bit		3	27 or 43	27	27	27	3	3
	MAC multiplexing		7 logical channel multiplexing						
Layer 1	TrCH type		FACH						
	TB sizes, bit		171 ~~171~~ ~~171~~ ~~171~~ ~~171~~ ~~171~~ ~~171~~						
	TFS	TF0, bits	0x171						
		TF1, bits	1x171						
		TF2, bits	2x171						
		TF3, bits	3x171(alt. N/A)						
		TF4, bits	4x171(alt. N/A)						
		~~TF5, bits~~	~~N/A (alt. 5x171)~~						
		~~TF6, bits~~	~~N/A (alt. 6x171)~~						

	TTI, ms	20
	Coding type	~~CC 1/2~~TC
	CRC, bit	16
	Max number of bits/TTI after channel coding	2256 (alt. 1134) ~~1528 (alt. 2292)~~ ~~1528 (alt. 2292)~~ ~~1528 (alt. 2292)~~ ~~1528 (alt. 2292)~~ ~~1528 (alt. 2292)~~ ~~1528 (alt. 2292)~~ ~~1528 (alt. 2292)~~
	Max number of bits/radio frame before rate matching	1128 (alt. 567) ~~764 (alt. 1146)~~ ~~764 (alt. 1146)~~ ~~764 (alt. 1146)~~ ~~764 (alt. 1146)~~ ~~764 (alt. 1146)~~ ~~764 (alt. 1146)~~ ~~764 (alt. 1146)~~
NOTE: MAC header size and RLC payload size depend on use of U-RNTI or C-RNTI.		

6.10.3.4.2.1.2.1.4.2 FACH transport channel configuration with DTCH

Higher layer	RAB/signalling RB	**RAB**	**SRB#0**	**SRB#1**	**SRB#2**	**SRB#3**	**SRB#4**	**SRB#5**	**SRB#6**
	User of Radio Bearer	Interactive/ Background RAB	RRC	RRC	RRC	NAS DT High prio	NAS DT Low prio	RRC	RRC
RLC	Logical channel type	DTCH	CCCH	DCCH	DCCH	DCCH	DCCH	SHCCH	BCCH
	RLC mode	AM	UM	UM	AM	AM	AM	UM	TM
	Payload sizes, bit	320	160	136 or 120 (note)	128	128	128	160	168
	Max data rate, bps	32000 (alt. 16000)	32000 (alt. 16000)	27200 or 24000 (alt. 13600 or 12000)	25600 (alt. 12800)	25600 (alt. 12800)	25600 (alt. 12800)	32000 (alt. 16000)	33600 (alt. 16800)
	AMD/UMD/TrD PDU header, bit	16	8	8	16	16	16	8	0
MAC	MAC header, bit	27	3	27 or 43	27	27	27	3	3

	MAC multiplexing		8 logical channel multiplexing
Layer 1	TrCH type		FACH
	TB sizes, bit		171, 363
	TFS	TF0, bits	0x171
		TF1, bits	1x171
		TF2, bits	2x171
		TF3, bits	1x363
		TF4, bits	3x171 (alt N/A)
		TF5, bits	4x171 (alt. N/A)
		TF6, bits	2x363 (alt. N/A)
	TTI, ms		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		2286 (alt. 1149)
	Max number of bits/radio frame before rate matching		1143 (alt. 575)
NOTE: MAC header size and RLC payload size depend on use of U-RNTI or C-RNTI.			

6.10.3.4.2.1.2.1.~~4~~5 TFCS for FACH

6.10.3.4.2.1.2.1.5.1 TFCS for FACH transport channel configuration without DTCH

TFCS size	5 (alt. ~~7~~3)
TFCS	FACH = (TF0), (TF1), (TF2), (TF3), (TF4) (alt. FACH = (TF0), (TF1), (TF2)~~, TF3, TF4, TF5, T F6~~)

6.10.3.4.2.1.2.1.5.2 TFCS for FACH transport channel configuration with DTCH

TFCS size	7 (alt. 4)
TFCS	FACH = (TF0), (TF1), (TF2), (TF3), (TF4), (TF5), (TF6) (alt. FACH = (TF0), (TF1), (TF2), (TF3))

6.10.3.4.2.1.2.2 Physical channel parameters

6.10.3.4.2.1.2.2.1 Physical channel parameters for PDSCH

PDSCH	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 2 time slots
	Max. Number of data bits/radio frame	4400 bits
	TFCI code word	16 bits
	Puncturing Limit	~~0.48~~0.44

6.10.3.4.2.1.2.2.2 Physical channel parameters for SCCPCH

6.10.3.4.2.1.2.2.2.1 Physical channel parameters for SCCPCH without DTCH

SCCPCH	Midamble	512 chips
	Codes and time slots	SF16 x 5 codes x 1 time slot (alt. SF16 x 2 codes x 1 time slot)
	Max. Number of data bits/radio frame	1204 bits (alt. 480 bits)
	TFCI code word	16 bits (alt. 8 bits)
	Puncturing Limit	1 (alt. 0.84)

6.10.3.4.2.1.2.2.2.2 Physical channel parameters for SCCPCH with DTCH

SCCPCH ~~(burst type 1)~~	Midamble	512 chips
	Codes and time slots	SF16 x 5 codes x 1 time slot (alt. SF16 x 2 codes x 1 time slot)
	Max. Number of data bits/radio frame	1204 bits (alt. 472 bits)
	TFCI code word	16 bits
	Puncturing Limit	1 (alt. 0.80)

~~SCCPCH (burst type 2)~~	~~Midamble~~	~~256 chips~~
	~~Codes and time slots~~	~~SF16 x 5 codes x 1 time slot~~
	~~Max. Number of data bits/radio frame~~	~~1364 bits~~
	~~TFCI code word~~	~~16 bits~~
	~~Puncturing Limit~~	~~1~~

6.10.3.4.2.2 Interactive or background / UL: 64 DL: 384 kbps / PS RAB
+ UL: 3.4/16.8 DL: 3.4/33.6 kbps SRBs for DCCH, CCCH and BCCH
+ UL: 16.8 DL: 16 kbps SRBs for SHCCH

6.10.3.4.2.2.1 Uplink

See clause 6.10.3.4.2.1.1.

6.10.3.4.2.2.2 Downlink

6.10.3.4.2.2.2.1 Transport channel parameters

6.10.3.4.2.2.2.1.1 Transport channel parameters for Interactive or background / DL: 384 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

Higher Layer	RAB/Signalling RB		**RAB**	**SRB#5**
RLC	Logical channel type		DTCH	SHCCH
	RLC mode		AM	UM
	Payload sizes, bit		320	160
	Max data rate, bps		384000	16000
	AMD/UMD PDU header, bit		16	8
MAC	MAC header, bit		~~0~~1	~~0~~1
	MAC multiplexing		N/A	N/A
Layer 1	TrCH type		DSCH	DSCH
	TB sizes, bit		~~336~~337	~~168~~169
	TFS	TF0, bits	~~0x336~~0x337	~~0x168~~0x169
		TF1, bits	~~1x336~~1x337	~~1x168~~1x169
		TF2, bits	~~2x336~~2x337	N/A
		TF3, bits	~~4x336~~4x337	N/A
		TF4, bits	~~8x336~~8x337	N/A
		TF5, bits	~~12x336~~12x337	N/A
		TF6, bits	N/A (alt. ~~16x336~~16x337)	N/A
		TF7, bits	N/A (alt. ~~20x336~~20x337)	N/A
		TF8, bits	N/A (alt. ~~24x336~~24x337)	N/A
	TTI, ms		10 (alt. 20)	10
	Coding type		TC	CC 1/2
	CRC, bit		16	16
	Max number of bits/TTI after channel coding		~~12684~~12720 (alt. ~~25356~~25440)	~~384~~386
	Downlink: Max number of bits/radio frame before rate matching		~~12684~~12720 (alt. ~~12678~~12720)	~~384~~386
	RM attribute		135-175	230-250~~180-220~~

6.10.3.4.2.2.2.1.2 Transport channel parameters for DL: 3.4 Kbps SRBs for DCCH mapped on DSCH

See clause 6.10.3.4.2.1.2.1.2

6.10.3.4.2.2.2.1.~~2~~3 TFCS for DSCH

TFCS size	~~12~~ 24 (alt. ~~18~~36)
TFCS	(384 kbps RAB, SHCCH, SRBs for DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF0, TF0), (TF3, TF0, TF0), (TF4, TF0, TF0), (TF5, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0), (TF2, TF1, TF0), (TF3, TF1, TF0), (TF4, TF1, TF0), (TF5, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF0, TF1), (TF3, TF0, TF1), (TF4, TF0, TF1), (TF5, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1), (TF2, TF1, TF1), (TF3, TF1, TF1), (TF4, TF1, TF1), (TF5, TF1, TF1) (alt. (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF0, TF0), (TF3, TF0, TF0), (TF4, TF0, TF0), (TF5, TF0, TF0), (TF6, TF0, TF0), (TF7, TF0, TF0), (TF8, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0), (TF2, TF1, TF0), (TF3, TF1, TF0), (TF4, TF1, TF0), (TF5, TF1, TF0), (TF6, TF1, TF0), (TF7, ~~TF0~~TF1, TF0), (TF8, ~~TF0~~TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF0, TF1), (TF3, TF0, TF1), (TF4, TF0, TF1), (TF5, TF0, TF1), (TF6, TF0, TF1), (TF7, TF0, TF1), (TF8, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1), (TF2, TF1, TF1), (TF3, TF1, TF1), (TF4, TF1, TF1), (TF5, TF1, TF1), (TF6, TF1, TF1), (TF7, TF1, TF1), (TF8, TF1, TF1))

6.10.3.4.2.2.2.1.~~3~~4 Transport channel parameters for DL SRBs for DCCH and SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH (with & without DTCH)

See clause 6.10.3.4.2.1.2.1.~~3~~4.

6.10.3.4.2.2.2.1.~~4~~5 TFCS for FACH

See clause 6.10.3.4.2.1.2.1.~~4~~5.

6.10.3.4.2.2.2.2 Physical channel parameters

6.10.3.4.2.2.2.2.1 Physical channel parameters for PDSCH

PDSCH	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 3 time slots
	Max. Number of data bits/radio frame	6608 bits (alt. 6592 bits)
	TFCI code word	16 bits (alt. 32 bits)
	Puncturing Limit	0.48

6.10.3.4.2.2.2.2.2 Physical channel parameters for SCCPCH

See clause 6.10.3.4.2.1.2.2.2.

~~SCCPCH (burst type 1)~~	~~Midamble~~	~~512 chips~~
	~~Codes and time slots~~	~~SF16 x 5 codes x 1 time slot~~
	~~Max. Number of data bits/radio frame~~	~~1204 bits~~
	~~TFCI code word~~	~~16 bits~~
	~~Puncturing Limit~~	~~1~~

~~SCCPCH (burst type 2)~~	~~Midamble~~	~~256 chips~~
	~~Codes and time slots~~	~~SF16 x 5 codes x 1 time slot~~
	~~Max. Number of data bits/radio frame~~	~~1364 bits~~
	~~TFCI code word~~	~~16 bits~~
	~~Puncturing Limit~~	~~1~~

6.10.3.4.2.3 Interactive or background / UL: 64 DL: 2048 kbps / PS RAB
+ UL: 3.4/16.8 DL: 3.4/33.6 kbps SRBs for DCCH, CCCH and BCCH
+ UL: 16.8 DL: 16 kbps SRBs for SHCCH

6.10.3.4.2.3.1 Uplink

See clause 6.10.3.4.2.1.1.

6.10.3.4.2.3.2 Downlink

6.10.3.4.2.3.2.1 Transport channel parameters

6.10.3.4.2.3.2.1.1 Transport channel parameters for Interactive or background / DL: 2048 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

Higher Layer	RAB/Signalling RB		**RAB**	**SRB#5**
RLC	Logical channel type		DTCH	SHCCH
	RLC mode		AM	UM
	Payload sizes, bit		640	160
	Max data rate, bps		2048000	16000
	AMD/UMD PDU header, bit		16	8
MAC	MAC header, bit		~~0~~1	~~0~~1
	MAC multiplexing		N/A	N/A
Layer 1	TrCH type		DSCH	DSCH
	TB sizes, bit		~~656~~657	~~168~~169
	TFS	TF0, bits	~~0x656~~0x657	~~0x168~~0x169
		TF1, bits	~~1x656~~1x657	~~1x168~~1x169
		TF2, bits	~~2x656~~2x657	N/A
		TF3, bits	~~4x656~~4x657	N/A
		TF4, bits	~~8x656~~8x657	N/A
		TF5, bits	~~12x656~~12x657	N/A
		TF6, bits	~~16x656~~16x657	N/A
		TF7, bits	~~20x656~~20x657	N/A
		TF8, bits	~~24x656~~24x657	N/A
		TF9, bits	~~28x656~~28x657	N/A
		TF10, bits	~~32x656~~30x657 (alt. 32x657)	N/A
		TF11, bits	N/A (alt. ~~36x656~~36x657)	N/A
		TF12, bits	N/A (alt. ~~40x656~~40x657)	N/A
		TF13, bits	N/A (alt. ~~44x656~~44x657)	N/A
		TF14, bits	N/A (alt. ~~48x656~~48x657)	N/A
		TF15, bits	N/A (alt. ~~52x656~~52x657)	N/A
		TF16, bits	N/A (alt. ~~56x656~~56x657)	N/A
		TF17, bits	N/A (alt. ~~60x656~~60x657)	N/A
		TF18, bits	N/A (alt. ~~64x656~~64x657)	N/A
	TTI, ms		10 (alt. 20)	10
	Coding type		TC	CC ½
	CRC, bit		16	16
	Max number of bits/TTI after channel coding		~~64524~~ 60624 (alt. ~~129036~~129330)	~~384~~386
	Downlink: Max number of bits/radio frame before rate matching		~~64524~~ 60624 (alt. ~~64518~~64665)	~~384~~386
	RM attribute		135-175	~~180-220~~230-250

6.10.3.4.2.3.2.1.2 Transport channel parameters for DL: 3.4 Kbps SRBs for DCCH mapped on DSCH

See clause 6.10.3.4.2.1.2.1.2

6.10.3.4.2.3.2.1.~~2~~3 TFCS for DSCH

TFCS size	~~22 (alt. 38)~~41 (alt.76)
TFCS	(2048 kbps RAB, SHCCH, SRBs for DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF0, TF0), (TF3, TF0, TF0), (TF4, TF0, TF0), (TF5, TF0, TF0), (TF6, TF0, TF0), (TF7, TF0, TF0), (TF8, TF0, TF0), (TF9, TF0, TF0), (TF10, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0), (TF2, TF1, TF0), (TF3, TF1, TF0), (TF4, TF1, TF0), (TF5, TF1, TF0), (TF6, TF1, TF0), (TF7, TF1, TF0), (TF8, TF1, TF0), (TF9, TF1, TF0)~~, (TF10, TF1)~~, (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF0, TF1), (TF3, TF0, TF1), (TF4, TF0, TF1), (TF5, TF0, TF1), (TF6, TF0, TF1), (TF7, TF0, TF1), (TF8, TF0, TF1), (TF9, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1), (TF2, TF1, TF1), (TF3, TF1, TF1), (TF4, TF1, TF1), (TF5, TF1, TF1), (TF6, TF1, TF1), (TF7, TF1, TF1), (TF8, TF1, TF1), (TF9, TF1, TF1) (alt. (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF0, TF0), (TF3, TF0, TF0), (TF4, TF0, TF0), (TF5, TF0, TF0), (TF6, TF0, TF0), (TF7, TF0, TF0), (TF8, TF0, TF0), (TF9, TF0, TF0), (TF10, TF0, TF0),(TF11, TF0, TF0), (TF12, TF0, TF0), (TF13, TF0, TF0), (TF14, TF0, TF0), (TF15, TF0, TF0), (TF16, TF0, TF0), (TF17, TF0, TF0), (TF18, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0), (TF2, TF1, TF0), (TF3, TF1, TF0), (TF4, TF1, TF0), (TF5, TF1, TF0), (TF6, TF1, TF0), (TF7, TF1, TF0), (TF8, TF1, TF0), (TF9, TF1, TF0), (TF10, TF1, TF0),(TF11, TF1, TF0), (TF12, TF1, TF0), (TF13, TF1, TF0), (TF14, TF1, TF0), (TF15, TF1, TF0), (TF16, TF1, TF0), (TF17, TF1, TF0), (TF18, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF0, TF1), (TF3, TF0, TF1), (TF4, TF0, TF1), (TF5, TF0, TF1), (TF6, TF0, TF1), (TF7, TF0, TF1), (TF8, TF0, TF1), (TF9, TF0, TF1), (TF10, TF0, TF1), (TF11, TF0, TF1), (TF12, TF0, TF1), (TF13, TF0, TF1), (TF14, TF0, TF1), (TF15, TF0, TF1), (TF16, TF0, TF1), (TF17, TF0, TF1), (TF18, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1), (TF2, TF1, TF1), (TF3, TF1, TF1), (TF4, TF1, TF1), (TF5, TF1, TF1), (TF6, TF1, TF1), (TF7, TF1, TF1), (TF8, TF1, TF1), (TF9, TF1, TF1), (TF10, TF1, TF1),(TF11, TF1, TF1), (TF12, TF1, TF1), (TF13, TF1, TF1), (TF14, TF1, TF1), (TF15, TF1, TF1), (TF16, TF1, TF1), (TF17, TF1, TF1), (TF18, TF1, TF1))

6.10.3.4.2.3.2.1.~~3~~4 Transport channel parameters for DL SRBs for DCCH and SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

See clause 6.10.3.4.2.1.2.1.~~3~~4.1.

6.10.3.4.2.3.2.1.~~4~~5 TFCS for FACH

See clause 6.10.3.4.2.1.2.1.4~~5~~.1.

6.10.3.4.2.3.2.2 Physical channel parameters

6.10.3.4.2.3.2.2.1 Physical channel parameters for PDSCH

PDSCH	Midamble	256 chips
	Codes and time slots	SF16 x 12 codes x 11 time slots
	Max. Number of data bits/radio frame	~~36416 bits (alt.~~36400 bits~~)~~
	TFCI code word	~~16 bits (alt.~~32 bits~~)~~
	Puncturing Limit	~~0.56~~0.60~~0~~0.56 (alt. 0.52)

6.10.3.4.2.3.2.2.2 Physical channel parameters for SCCPCH

See clause 6.10.3.4.2.1.2.2.2.1

~~SCCPCH (burst type 1)~~	~~Midamble~~	~~512 chips~~
	~~Codes and time slots~~	~~SF16 x 5 codes x 1 time slot~~
	~~Max. Number of data bits/radio frame~~	~~1204 bits~~
	~~TFCI code word~~	~~16 bits~~
	~~Puncturing Limit~~	~~1~~

~~SCCPCH (burst type 2)~~	~~Midamble~~	~~256 chips~~
	~~Codes and time slots~~	~~SF16 x 5 codes x 1 time slot~~
	~~Max. Number of data bits/radio frame~~	~~1364 bits~~
	~~TFCI code word~~	~~16 bits~~
	~~Puncturing Limit~~	~~1~~

6.10.3.4.2.4 Interactive or background / UL: 384 DL: 2048 kbps / PS RAB
+ UL: 3.4/16.8 DL: 3.4/33.6 kbps SRBs for DCCH, CCCH and BCCH
+ UL: 16.8 DL: 16 kbps SRBs for SHCCH

6.10.3.4.2.4.1 Uplink

6.10.3.4.2.4.1.1 Transport channel parameters

6.10.3.4.2.4.1.1.1 Transport channel parameters for Interactive or background / UL:384 kbps / PS RAB

Higher Layer	RAB/Signalling RB		**RAB**	**SRB#5**
RLC	Logical channel type		DTCH	SHCCH
	RLC mode		AM	TM
	Payload sizes, bit		320 (alt. 128)	168
	Max data rate, bps		384000	16800
	AMD/TrD PDU header, bit		16	0
MAC	MAC header, bit		1	1
	MAC multiplexing		N/A	N/A
Layer 1	TrCH type		USCH	USCH
	TB sizes, bit		337 (alt. 145)	169
	TFS	TF0, bits	0x337 (alt. 0x145)	0x169
		TF1, bits	1x337 (alt. 1x145)	1x169
		TF2, bits	2x337 (alt. 5x145)	N/A
		TF3, bits	4x337 (alt. 10x145)	N/A
		TF4, bits	8x337 (alt. 20x145)	N/A
		TF5, bits	12x337 (alt. 30x145)	N/A
		TF6, bits	16x337 (alt. 40x145)	N/A
		TF7, bits	20x337 (alt. 50x145)	N/A
		TF8, bits	24x337 (alt. 60x145)	N/A
	TTI, ms		20	10
	Coding type		TC	CC 1/2
	CRC, bit		16	16
	Max number of bits/TTI after channel coding		25440 (alt. 29004)	386
	Max number of bits/radio frame before rate matching		12720 (alt. 14502)	386
	RM attribute		135-175	230-250

6.10.3.4.2.4.1.1.2 Transport channel parameters for UL: 3.4 Kbps SRBs for DCCH mapped on USCH

See clause 6.10.3.4.2.1.1.1.2

6.10.3.4.2.4.1.1.3 TFCS for USCH

TFCS size	36
TFCS	(384 kbps RAB, SHCCH, SRBs for DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF0, TF0), (TF3, TF0, TF0), (TF4, TF0, TF0), (TF5, TF0, TF0), (TF6, TF0, TF0), (TF7, TF0, TF0), (TF8, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0), (TF2, TF1, TF0), (TF3, TF1, TF0), (TF4, TF1, TF0), (TF5, TF1, TF0), (TF6, TF1, TF0), (TF7, TF1, TF0), (TF8, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF0, TF1), (TF3, TF0, TF1), (TF4, TF0, TF1), (TF5, TF0, TF1), (TF6, TF0, TF1), (TF7, TF0, TF1), (TF8, TF0, TF1) (TF0, TF1, TF1), (TF1, TF1, TF1), (TF2, TF1, TF1), (TF3, TF1, TF1), (TF4, TF1, TF1), (TF5, TF1, TF1), (TF6, TF1, TF1), (TF7, TF1, TF1), (TF8, TF1, TF1)

6.10.3.4.2.4.1.1.4 Transport channel parameters for SRB for CCCH and UL SRBs for DCCH and UL SRB for SHCCH mapped on RACH

See clause 6.10.3.4.2.1.1.1.4

6.10.3.4.2.4.1.2 Physical channel parameters

6.10.3.4.2.4.1.2.1 Physical channel parameters for PUSCH

PUSCH	Midamble	512 chips
	Codes and time slots	SF1 x 1 code x 2 time slots
	Max. Number of data bits/radio frame	7264 bits
	TFCI code word	32 bits
	TPC	2 bits
	Puncturing Limit	0.52 (alt. 0.44)

6.10.3.4.2.4.1.2.2 Physical channel parameters for PRACH

See clause 6.10.3.4.2.1.1.2.2

6.10.3.4.2.4.2 Downlink

6.10.3.4.2.4.2.1 Transport channel parameters

See clause 6.10.3.4.2.3.2.1

6.10.3.4.2.4.2.2 Physical channel parameters

6.10.3.4.2.4.2.2.1 Physical channel parameters for PDSCH

PDSCH	Midamble	256 chips
	Codes and time slots	SF1 x 1 codes x 9 time slots
	Max. Number of data bits/radio frame	39712 bits
	TFCI code word	32 bits
	Puncturing Limit	~~0.60~~0.64 (alt. 0.60)

6.10.3.4.2.4.2.2.2 Physical channel parameters for SCCPCH

See clause 6.10.3.4.2.1.2.2.2.1

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

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

6.10.3.4.3.1.1 Uplink

6.10.3.4.3.1.1.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.1.1.1.

6.10.3.4.3.1.1.1.2 Transport channel parameters for UL SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.3.1.1.1.3 TFCS for DCH

See clause 6.10.3.4.1.4.1.1.3.

6.10.3.4.3.1.1.1.4 Transport channel parameters for Interactive or background / UL: 64 kbps / PS RAB and UL SRB for SHCCH mapped on USCH

See clause 6.10.3.4.2.1.1.1.1.

6.10.3.4.3.1.1.1.5 TFCS for USCH

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

~~See clause 6.10.3.4.2.1.1.1.2.~~

6.10.3.4.3.1.1.1.6 Transport channel parameters for SRB for CCCH and UL SRB for SHCCH mapped on RACH

Higher layer	RAB/signalling RB	**SRB#0**	**SRB#5**
	User of Radio Bearer	RRC	RRC
RLC	Logical channel type	CCCH	SHCCH
	RLC mode	TM	TM
	Payload sizes, bit	168	168
	Max data rate, bps	16800	16800
	TrD PDU header, bit	0	0
MAC	MAC header, bit	2	2
	MAC multiplexing	2 logical channel multiplexing	
Layer 1	TrCH type	RACH	
	TB sizes, bit	170	
	TFS TF0, bits	1x170	
	TTI, ms	10	
	Coding type	CC 1/2	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	388	
	Max number of bits/radio frame before rate matching	388	

6.10.3.4.3.1.1.2 Physical channel parameters

6.10.3.4.3.1.1.2.1 Physical channel parameters for DPCH

~~Physical channel parameters for uplink DPCH s~~See clause 6.10.3.4.1.4.1.2.

~~Physical channel parameters for PUSCH see clause 6.10.3.4.2.1.1.2.~~

~~Physical channel parameters for PRACH see clause 6.10.3.4.2.1.1.2.~~

6.10.3.4.3.1.1.2.2 Physical channel parameters for PUSCH

PUSCH	Midamble	512 chips
	Codes and time slots	SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	1808 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	~~0.64~~0.76 (alt. 0.68)

6.10.3.4.3.1.1.2.3 Physical channel parameters for PRACH

See clause 6.10.3.4.2.1.1.2.2.

6.10.3.4.3.1.2 Downlink

6.10.3.4.3.1.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.3.1.2.1.2 Transport channel parameters for DL SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.3.1.2.1.3 TFCS for DCH

See clause 6.10.3.4.1.4.2.1.3.

6.10.3.4.3.1.2.1.4 Transport channel parameters for Interactive or background / DL: 256 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

See clause 6.10.3.4.2.1.2.1.1.

6.10.3.4.3.1.2.1.5 TFCS for DSCH

TFCS size	10 (alt. 14)
TFCS	(256 kbps RAB, SHCCH)= (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))

~~See clause 6.10.3.4.2.1.2.1.2.~~

6.10.3.4.3.1.2.1.6 Transport channel parameters for SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

Higher layer	RAB/Signalling RB	SRB#0	SRB#5	SRB#6
	User of Radio Bearer	RRC	RRC	RRC
RLC	Logical channel type	CCCH	SHCCH	BCCH
	RLC mode	UM	UM	TM
	Payload sizes, bit	160	160	168
	Max data rate, bps	32000 (alt. ~~-~~16000)	32000 (alt. 16000)	33600 (alt. 16800)
	UMD/TrD PDU header, bit	8	8	0
MAC	MAC header, bit	3		
	MAC multiplexing	3 logical channel multiplexing		
Layer 1	TrCH type	FACH		
	TB sizes, bit	171		
	TFS TF0, bits	0x171		
	TFS TF1, bits	1x171		
	TFS TF2, bits	2x171		
	TFS TF3, bits	3x171 (alt. N/A)		
	TFS TF4, bits	4x171 (alt. N/A)		
	TTI, ms	~~10~~20		
	Coding type	~~CC 1/2~~TC		
	CRC, bit	16		
	Max number of bits/TTI after channel coding	~~1528~~2256 (alt. 1134)		
	Max number of bits/radio frame before rate matching	1128 (alt ~~764~~567)		

6.10.3.4.3.1.2.1.7 TFCS for FACH

TFCS size	5 (alt. 3)
TFCS	FACH = (TF0), (TF1), (TF2), (TF3), (TF4) (alt. FACH = (TF0), (TF1), (TF2))

6.10.3.4.3.1.2.2 Physical channel parameters

6.10.3.4.3.1.2.2.1 Physical channel parameters for DPCH

~~Physical channel parameters for downlink DPCH see~~ See clause 6.10.3.4.1.4.2.2.

6.10.3.4.3.1.2.2.2 Physical channel parameters for PDSCH

PDSCH	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 2 time slots
	Max. Number of data bits/radio frame	4400 bits
	TFCI code word	16 bits
	Puncturing Limit	0.48

~~Physical channel parameters for downlink PDSCH see clause 6.10.3.4.2.1.2.2.~~

6.10.3.4.3.1.2.2.3 Physical channel parameters for SCCPCH

See clause 6.10.3.4.2.1.2.2.2.1.

~~Physical channel parameters for SCCPCH see clause 6.10.3.4.2.1.2.2.~~

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

6.10.3.4.3.2.1 Uplink

See clause 6.10.3.4.3.1.1.

6.10.3.4.3.2.2 Downlink

6.10.3.4.3.2.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.3.2.2.1.2 Transport channel parameters for DL SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.3.2.2.1.3 TFCS for DCH

See clause 6.10.3.4.1.4.2.1.3.

6.10.3.4.3.2.2.1.4 Transport channel parameters for Interactive or background / DL: 384 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

See clause 6.10.3.4.2.2.2.1.1.

6.10.3.4.3.2.2.1.5 TFCS for DSCH

TFCS size	12 (alt. 18)
TFCS	(384 kbps RAB, SHCCH)= (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))

~~See clause 6.10.3.4.2.2.2.1.2.~~

6.10.3.4.3.2.2.1.6 Transport channel parameters for SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

See clause 6.10.3.4.3.1.2.1.6.

6.10.3.4.3.2.2.1.7 TFCS for FACH

See clause 6.10.3.4.3.1.2.1.7.

6.10.3.4.3.2.2.2 Physical channel parameters

6.10.3.4.3.2.2.2.1 Physical channel parameters for downlink DPCH

~~Physical channel parameters for downlink DPCH see~~ See clause 6.10.3.4.1.4.2.2.

6.10.3.4.3.2.2.2.2 Physical channel parameters for PDSCH

PDSCH	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 3 time slots
	Max. Number of data bits/radio frame	6608 bits
	TFCI code word	16 bits
	Puncturing Limit	0.48

6.10.3.4.3.2.2.2.3 Physical channel parameters for SCCPCH

See clause 6.10.3.4.2.1.2.2.2.1.

~~Physical channel parameters for PDSCH see clause 6.10.3.4.2.2.2.2.~~

~~Physical channel parameters for SCCPCH see clause 6.10.3.4.2.1.2.2.~~

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

6.10.3.4.3.3.1 Uplink

See clause 6.10.3.4.3.1.1.

6.10.3.4.3.3.2 Downlink

6.10.3.4.3.3.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.3.3.2.1.2 Transport channel parameters for DL SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.3.3.2.1.3 TFCS for DCH

See clause 6.10.3.4.1.4.2.1.3.

6.10.3.4.3.3.2.1.4 Transport channel parameters for Interactive or background / DL: 2048 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

See clause 6.10.3.4.2.3.2.1.1.

6.10.3.4.3.3.2.1.5 TFCS for DSCH

TFCS size	22 (alt. 38)
TFCS	(2048 kbps RAB, SHCCH)= (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) (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, TF1), (TF12, TF1), (TF13, TF1), (TF14, TF1), (TF15, TF1), (TF16, TF1), (TF17, TF1), (TF18, TF1))

~~See clause 6.10.3.4.2.3.2.1.2.~~

6.10.3.4.3.3.2.1.6 Transport channel parameters for SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

See clause 6.10.3.4.3.1.2.1.6.

6.10.3.4.3.3.2.1.7 TFCS for FACH

See clause 6.10.3.4.3.1.2.1.7.

6.10.3.4.3.3.2.2 Physical channel parameters

6.10.3.4.3.3.2.2.1 Physical channel parameters for downlink DPCH

See clause 6.10.3.4.1.4.2.2.

6.10.3.4.3.3.2.2.2 Physical channel parameters for PDSCH

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF1 x 1 code x 7 time slot
	Max. Number of data bits/radio frame	30896 bits (alt. 30880)
	TFCI code word	16 bits (alt. 32 bits)
	Puncturing limit	0.48 (alt. 0.44)

6.10.3.4.3.3.2.2.3 Physical channel parameters for SCCPCH

See clause 6.10.3.4.2.1.2.2.2.1.

~~Physical channel parameters for downlink DPCH see clause 6.10.3.4.1.4.2.2.~~

~~Physical channel parameters for PDSCH see clause 6.10.3.4.2.3.2.2.~~

~~Physical channel parameters for SCCPCH see clause 6.10.3.4.2.1.2.2.~~

6.10.3.4.4 Combinations on SCCPCH

6.10.3.4.4.1 Stand-alone signalling RB for PCCH

6.10.3.4.4.1.1 Transport channel parameters

6.10.3.4.4.1.1.1 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~~ 12000 (alt. 8000)
	TrD PDU 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, bts	0x240 (alt. 0x80)
		TF1, bits	1x240 (alt. 1x80)
		TF2, bits	~~2x240~~ N/A (alt.2x80)
	TTI, ms		20
	Coding type		CC 1/2
	CRC, bit		16
	Max number of bits/TTI before rate matching		~~1056~~ 528 (alt. 400)
	Max number of bits/radio frame before rate matching		~~528~~ 264 (alt. 200)
	RM attribute		210-250

6.10.3.4.4.1.1.2 TFCS

TFCS size	2 (alt. 3)
TFCS	SRBs for PCCH = (TF0), (TF1)~~,~~ (alt. (TF0), (TF1), (TF2))

6.10.3.4.~~2~~4.1.2 Physical channel parameters

S-CCPCH	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot (alt. SF16 x 1 code x 1 time slot)
	Max. Number of data bits/radio frame	~~472~~ 480 bits (alt. 236 bits)
	TFCI code word	~~16~~ 8 bits
	Puncturing limit	~~0,.88~~1

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

6.10.3.4.4.2.1 Transport channel parameters

6.10.3.4.4.2.1.1 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 (alt. 16000)
	AMD PDU header, bit		16
MAC	MAC header, bit		27
	MAC multiplexing		N/A
Layer 1	TrCH type		FACH
	TB sizes, bit		363
	TFS	TF0, bits	0 x363
		TF1, bits	1x363
		TF2, bits	2x~~-~~363 (alt. N/A)
	TTI, ms		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI before rate matching		2286 (alt. 1149)
	Max number of bits/radio frame before rate matching		1143 (alt. 575)
	RM attribute		110-150

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

Higher layer	RAB/signalling RB		SRB#0	SRB#1	SRB#2	SRB#3	SRB#4	SRB#5
	User of Radio Bearer		RRC	RRC	RRC	NAS_DT High prio	NAS_DT Low prio	RRC
RLC	Logical channel type		CCCH	DCCH	DCCH	DCCH	DCCH	BCCH
	RLC mode		UM	UM	AM	AM	AM	TM
	Payload sizes, bit		160	136 or 120 (note)	128	128	128	168
	Max data rate, bps		32000 (alt. ~~48000~~160 00)	27200 or 2400~~0~~ (alt. ~~40800~~ 24000 or 12000~~360 00~~)	25600 (alt. 12800~~384 00~~)	25600 (alt. 12800~~384 00~~)	25600 (alt. 12800~~384 00~~)	33600 (alt. ~~12800~~168 00~~50400~~)
	AMD/UMD/TrD PDU header, bit		8	8	16	16	16	0
MAC	MAC header, bit		3	27 or 43	27	27	27	3
	MAC multiplexing		6 logical channel multiplexing					
Layer 1	TrCH type		FACH					
	TB sizes, bit		171					
	TFS	TF0, bits	0x171					
		TF1, bits	1x171					
		TF2, bits	2x171					
		TF3, bits	3x171 (alt. N/A)					
		TF4, bits	4x171 (alt. N/A)					

	~~TF5, bits~~	~~N/A (alt. 5x171)~~
	~~TF6, bits~~	~~N/A (alt. 6x171)~~
TTI, ms		20
Coding type		~~CC ½~~TC
CRC, bit		16
Max number of bits/TTI before rate matching		~~1528~~ 2256 (alt. ~~2292~~1134)
Max number of bits/radio frame before rate matching		~~764~~ 1128 (alt.~~1146~~567)
RM attribute		200-240
NOTE: MAC header size and RLC payload size depend on use of U-RNTI or C-RNTI.		

6.10.3.4.4.2.1.3 TFCS

TFCS size	~~15~~ 9 (alt. ~~21~~4)
TFCS	(32kbps RAB, SRBs for CCCH/DCCH/BCCH) = (TF0, TF0), (TF0, TF1), (TF0, TF2), (TF0, TF3), (TF0, TF4),(TF1, TF0), (TF1, TF1), (TF1, TF2), ~~(TF1, TF3), (TF1, TF4),~~(TF2, TF0)~~, (TF2, TF1), (TF2, TF2), (TF2, TF3), (TF2, TF4)~~ (alt. (TF0, TF0), (TF0, TF1), (TF0, TF2), ~~(TF0, TF3), (TF0, TF4), (TF0, TF5), (TF0, TF6),~~ (TF1, TF0)~~, (TF1, TF1), (TF1, TF2), (TF1, TF3), (TF1, TF4), (TF1, TF5), (TF1, TF6),~~ ~~(TF2, TF0), (TF2, TF1), (TF2, TF2), (TF2, TF3), (TF2, TF4), (TF2, TF5), (TF2, TF6)~~)
Note: First TFCS applies when the alternative for the 32kbps RAB and the alternative for the SRBs for CCCH/DCCH/BCCH are both not configured. The alt. TFCS applies when both the alt. for the 32kbps RAB and the alt. for the SRBs for CCCH/DCCH/BCCH are configured. All other combinations of these alternatives are not valid.	

6.10.3.4.4.2.2 Physical channel parameters

~~(burst type 1):~~

S-CCPCH	Midamble	512 chips
	Codes and time slots	SF16 x ~~6~~ 5 codes x 1 time slot (alt. SF16 x 2 codes x 1 time slot)
	Max. Number of data bits/radio frame	~~1448~~ 1204 bits (alt. 472)
	TFCI code word	16 bits
	Puncturing limit	~~0,6~~0.60 (alt. 0.48)

~~(burst type 2):~~

~~S-CCPCH~~	~~Midamble~~	~~256 chips~~
	~~Codes and time slots~~	~~SF16 x 6 codes x 1 time slot~~
	~~Max. Number of data bits/radio frame~~	~~1640 bits~~
	~~TFCI code word~~	~~16 bits~~
	~~Puncturing limit~~	~~0,68~~

6.10.3.4.4.2a Interactive/Background 32 kbps PS RAB + Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH

6.10.3.4.4.2a.1 Transport channel parameters

6.10.3.4.4.2a.1.1 Transport channel parameters for Interactive/Background 32 kbps PS RAB + Interactive/Background 32 kbps PS RAB

Higher Layer	RAB/Signalling RB User of Radio Bearer		RAB Interactive/Background RAB	RAB Interactive/Background RAB
RLC	Logical channel type		DTCH	DTCH
	RLC mode		AM	AM
	Payload sizes, bit		320	320
	Max data rate, bps		32000 (alt. 16000)	32000 (alt. 16000)
	AMD PDU header, bit		16	16
MAC	MAC header, bit		27	27
	MAC multiplexing		2 logical channel multiplexing	
Layer 1	TrCH type		FACH	
	TB sizes, bit		363	
	TFS	TF0, bits	0x363	
		TF1, bits	1x363	
		TF2, bits	2x363 (alt. N/A)	
	TTI, ms		20	
	Coding type		TC	
	CRC, bit		16	
	Max number of bits/TTI before rate matching		2286 (alt. 1149)	
	Max number of bits/radio frame before rate matching		1143 (alt. 575)	
	RM attribute		110 - 150	

6.10.3.4.4.2a.1.2 Transport channel parameters of SRBs for CCCH, SRB for DCCH, and SRB for BCCH

See clause 6.10.3.4.4.2.1.2

6.10.3.4.4.2a.1.3 TFCS

TFCS size	9 (alt. 4)
TFCS	(32kbps RAB + 32kbps RAB, SRBs for CCCH/DCCH/BCCH) = (TF0, TF0), (TF0, TF1), (TF0, TF2), (TF0, TF3), (TF0, TF4), (TF1, TF0), (TF1, TF1), (TF1, TF2), (TF2, TF0) (alt. (TF0, TF0), (TF0, TF1), (TF0, TF2), (TF1, TF0))
Note: First TFCS applies when the alternative for the 32kbps RABs and the alternative for the SRBs for CCCH/DCCH/BCCH are both not configured. The alt. TFCS applies when both the alt. for the 32kbps RABs and the alt. for the SRBs for CCCH/DCCH/BCCH are configured. All other combinations of these alternatives are not valid.	

6.10.3.4.4.2a.2 Physical channel parameters

S-CCPCH	Midamble	512 chips
	Codes and time slots	SF16 x 5 codes x 1 time slot (alt. SF16 x 2 codes x 1 time slot)
	Max. Number of data bits/radio frame	1204 bits (alt. 472)
	TFCI code word	16 bits
	Puncturing limit	0.60 (alt. 0.48)

6.10.3.4.4.2~~a~~b SRBs for CCCH + SRB for DCCH + SRB for BCCH

6.10.3.4.4.2~~a~~b.1 Transport channel parameters

6.10.3.4.4.2~~a~~b.1.1 Transport channel parameters of SRBs for CCCH, SRB for DCCH, and SRB for BCCH

See clause 6.10.3.4.4.2.1.2

6.10.3.4.4.2~~a~~b.1.2 TFCS

TFCS size	5 (alt. 3)
TFCS	(SRBs for CCCH/DCCH/BCCH) = (TF0), (TF1), (TF2), (TF3), (TF4) (alt. (TF0), (TF1), (TF2))

6.10.3.4.4.2~~a~~b.2 Physical channel parameters

S-CCPCH	Midamble	512 chips
	Codes and time slots	SF16 x 5 codes x 1 time slot (alt. SF16 x 2 codes x 1 time slot)
	Max. Number of data bits/radio frame	1204 bits (alt. 480 bits)
	TFCI code word	16 bits (alt. 8 bits)
	Puncturing limit	1 (alt. 0.84)

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

6.10.3.4.4.3.1 Transport channel parameters

6.10.3.4.4.3.1.1 Transport channel parameters ~~of SRB~~ for Interactive/Background 32 kbps RAB

See clause 6.10.3.4.4.2.1.1.

6.10.3.4.4.3.1.2 Transport channel parameters of SRB for PCCH

See clause 6.10.3.4.4.1.1.1.

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

See clause 6.10.3.4.4.2.1.2.

6.10.3.4.4.3.1.4 TFCS

TFCS size	~~45 (alt.63)~~ 30 (alt. 8~~-~~)
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, TF0, TF4), (TF0, TF1, TF0), (TF0, TF1, TF1), (TF0, TF1, TF2), (TF0, TF1, TF3), (TF0, TF1, TF4),~~(TF0, TF2, TF0), (TF0, TF2, TF1), (TF0, TF2, TF2), (TF0, TF2, TF3), (TF0, TF2, TF4),~~(TF1, 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, TF2, TF0), (TF1, TF2, TF1), (TF1, TF2, TF2), (TF1, TF2, TF3), (TF1, TF2, TF4),~~(TF2, TF0, TF0), (TF2, TF0, TF1), (TF2, TF0, TF2), (TF2, TF0, TF3), (TF2, TF0, TF4),(TF2, TF1, TF0), (TF2, TF1, TF1), (TF2, TF1, TF2), (TF2, TF1, TF3), (TF2, TF1, TF4) ,~~(TF2, TF2, TF0), (TF2, TF2, TF1), (TF2, TF2, TF2), (TF2, TF2, TF3), (TF2, TF2, TF4)~~ (alt. (TF0, TF0, TF0), (TF0, TF0, TF1), (TF0, TF0, TF2), (TF0, TF1, TF0), (TF0, TF1, TF1), (TF0, TF2, TF0), (TF0, TF2, TF1), (TF1, TF0, TF0)) ~~(alt. (TF0, TF0, TF0), (TF0, TF0, TF1), (TF0, TF0, TF2), (TF0, TF0, TF3), (TF0, TF0, TF4), (TF0, TF0, TF5), (TF0, TF0, TF6),(TF0, TF1, TF0), (TF0, TF1, TF1), (TF0, TF1, TF2), (TF0, TF1, TF3), (TF0, TF1, TF4), (TF0, TF1, TF5), (TF0, TF1, TF6),(TF0, TF2, TF0), (TF0, TF2, TF1), (TF0, TF2, TF2), (TF0, TF2, TF3), (TF0, TF2, TF4), (TF0, TF2, TF5), (TF0, TF2, TF6), (TF1, TF0, TF0), (TF1, TF0, TF1), (TF1, TF0, TF2), (TF1, TF0, TF3), (TF1, TF0, TF4), (TF1, TF0, TF5), (TF1, TF0, TF6),(TF1, TF1, TF0), (TF1, TF1, TF1), (TF1, TF1, TF2), (TF1, TF1, TF3), (TF1, TF1, TF4), (TF1, TF1, TF5), (TF1, TF1, TF6),(TF1, TF2, TF0), (TF1, TF2, TF1), (TF1, TF2, TF2), (TF1, TF2, TF3), (TF1, TF2, TF4), (TF1, TF2, TF5), (TF1, TF2, TF6), (TF2, TF0, TF0), (TF2, TF0, TF1), (TF2, TF0, TF2), (TF2, TF0, TF3), (TF2, TF0, TF4), (TF2, TF0, TF5), (TF2, TF0, TF6),(TF2, TF1, TF0), (TF2, TF1, TF1), (TF2, TF1, TF2), (TF2, TF1, TF3), (TF2, TF1, TF4), (TF2, TF1, TF5), (TF2, TF1, TF6),(TF2, TF2, TF0), (TF2, TF2, TF1), (TF2, TF2, TF2), (TF2, TF2, TF3), (TF2, TF2, TF4), (TF2, TF2, TF5) (TF2, TF2, TF6))~~
Note~~-~~: alt. TFCS applies when alts for 32 kbps RAB, SRB for PCCH, and SRBs for CCCH/ DCCH/ BCCH are all configured.	

6.10.3.4.4.3.2 Physical channel parameters

~~(burst type 1):~~

S-CCPCH	Midamble	512 chips
	Codes and time slots	SF16 x 8 codes x 1 time slot (alt. SF16 x 2 codes x 1 time slot)
	Max. Number of data bits/radio frame	~~1920~~ 1936 bits (alt. 472 bits)
	TFCI code word	~~32~~ 16 bits
	Puncturing limit	~~0,68~~ 0.52 (alt. ~~0.60~~0.56)
Note: Alt. applies when alts for 32 kbps RAB and SRBs for CCCH/ DCCH/ BCCH are both configured.		

~~(burst type 2):~~

~~S-CCPCH~~	~~Midamble~~	~~256 chips~~
	~~Codes and time slots~~	~~SF16 x 7 codes x 1 time slot~~
	~~Max. Number of data bits/radio frame~~	~~1900 bits~~
	~~TFCI code word~~	~~32 bits~~
	~~Puncturing limit~~	~~0,64~~

6.10.3.4.4.3a SRB for PCCH + SRB for CCCH + SRB for DCCH + SRB for BCCH

6.10.3.4.4.3a.1 Transport channel parameters

6.10.3.4.4.3a.1.1 Transport channel parameters of SRB for PCCH

See clause 6.10.3.4.4.1.1.1.

6.10.3.4.4.3a.1.2 Transport channel parameters of SRBs for CCCH, SRB for DCCH, and SRB for BCCH

See clause 6.10.3.4.4.2.1.2.

6.10.3.4.4.3a.1.3 TFCS

TFCS size	10 (alt.~~4~~7)
TFCS	(SRB for PCCH, SRBs for CCCH/ DCCH/ BCCH) = (TF0, TF0), (TF0, TF1), (TF0, TF2), (TF0, TF3), (TF0, TF4), (TF1, TF0), (TF1, TF1), (TF1, TF2), (TF1, TF3), (TF1, TF4) (alt. (TF0, TF0), (TF0, TF1), (TF0, TF2), (TF1, TF0), (TF1, TF1), (TF2, TF0), (TF2, TF1))
Note: alt. TFCS applies when alts for SRB for PCCH and SRBs for CCCH/ DCCH/ BCCH are both configured.	

6.10.3.4.4.3a.2 Physical channel parameters

S-CCPCH	Midamble	512 chips
	Codes and time slots	SF16 x 5 codes x 1 time slot (alt. SF16 x 2 codes x 1 time slot)
	Max. Number of data bits/radio frame	1204 bits (alt. 480 bits)
	TFCI code word	16 bits (alt. 8 bits)
	Puncturing limit	0.84 (~~0.80~~alt. 0.84)
Note: Alt. applies when alt for SRBs for CCCH/ DCCH/ BCCH is configured.		

6.10.3.4.4.4 RB for CTCH + SRB for CCCH + SRB for BCCH

6.10.3.4.4.4.1 Transport channel parameters

6.10.3.4.4.4.1.1 Transport channel parameters of RB for CTCH

Higher layer	RAB/signalling RB		N/A
	User of Radio Bearer		BMC
RLC	Logical channel type		CTCH
	RLC mode		UM
	Payload sizes, bit		152
	Max data rate, bps		15200
	UMD PDU header, bit		8
MAC	MAC header, bit		3
	MAC multiplexing		N/A
Layer 1	TrCH type		FACH
	TB sizes, bit		163
	TFS	TF0, bits	0x163
		TF1, bits	1x163
		TF2, bits	2x163
	TTI, ms		20
	Coding type		CC 1/3
	CRC, bit		16
	Max number of bits/TTI before rate matching		1098
	Max number of bits/radio frame before rate matching		549
	RM attribute		200-240

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

Higher layer	RAB/signalling RB		SRB#0	SRB#5
	User of Radio Bearer		RRC	RRC
RLC	Logical channel type		CCCH	BCCH
	RLC mode		UM	TM
	Payload sizes, bit		160	168
	Max data rate, bps		16000	16800
	AMD/UMD/TrD PDU header, bit		8	0
MAC	MAC header, bit		3	3
	MAC multiplexing		2 logical channel multiplexing	
Layer 1	TrCH type		FACH	
	TB sizes, bit		171	
	TFS	TF0, bits	0x171	
		TF1, bits	1x171	
		TF2, bits	2x171	
	TTI, ms		20	
	Coding type		TC	
	CRC, bit		16	
	Max number of bits/TTI before rate matching		1134	
	Max number of bits/radio frame before rate matching		567	
	RM attribute		200-240	

6.10.3.4.4.4.1.3 TFCS

TFCS size	4
TFCS	(RB for CTCH, SRBs for CCCH/BCCH) = (TF0, TF0), (TF0, TF1), (TF0, TF2), (TF1, TF0)

6.10.3.4.4.4.2 Physical channel parameters

S-CCPCH	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	0.80

6.10.3.4.5 Combinations on PRACH

6.10.3.4.5.1 SRB for CCCH + SRB for DCCH

6.10.3.4.5.1.1 Transport channel parameters

6.10.3.4.5.1.1.1 Transport channel parameter for SRB for CCCH, SRB for DCCH

Higher layer	RAB/signalling RB		**SRB#0**	**SRB#1**	**SRB#2**	**SRB#3**	**SRB#4**
	User of Radio Bearer		RRC	RRC	RRC	NAS_DT High priority	NAS_DT Low priority
RLC	Logical channel type		CCCH	DCCH	DCCH	DCCH	DCCH
	RLC mode		TM	UM	AM	AM	AM
	Payload sizes, bit		168	136	128	128	128
	Max data rate, bps		16800	13600	12800	12800	12800
	AMD/UMD/TrD PDU header, bit		0	8	16	16	16
MAC	MAC header, bit		2	26	26	26	26
	MAC multiplexing		5 logical channel multiplexing				
Layer 1	TrCH type		RACH				
	TB sizes, bit		170 ~~170~~ ~~170~~ ~~170~~ ~~170~~				
	TFS	TF0, bits	1x170				

TTI, ms	10
Coding type	CC ½
CRC, bit	16
Max number of bits/TTI after channel coding	388 ~~388~~ ~~388~~ ~~388~~ ~~388~~
Max number of bits/Radio frame before rate matching	388 ~~388~~ ~~388~~ ~~388~~ ~~388~~

6.10.3.4.5.1.1.2 TFCS

TFCS size	1
TFCS	SRBs for CCCH/ DCCH = (TF0)

6.10.3.4.5.1.2 Physical channel parameters

PRACH	Midamble	512 chips
	Codes and time slots	SF8 (alt. SF16) x 1 code x 1 time slot
	Max. Number of data bits/radio frame	488 bits (alt. 244 bits)
	Puncturing Limit	1.0 (alt. 0.~~75~~60)

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

6.10.3.4.5.2.1 Transport channel parameters

Higher layer	RAB/signalling RB User of Radio Bearer	**RAB** Interactive/ Background RAB	**SRB#0** RRC	**SRB#1** RRC	**SRB#2** RRC	**SRB#3** NAS_DT High priority	**SRB#4** NAS_DT Low priority
RLC	Logical channel type	DTCH	CCCH	DCCH	DCCH	DCCH	DCCH
	RLC mode	AM	TM	UM	AM	AM	AM
	Payload sizes, bit	128	168	136	128	128	128
	Max data rate, bps	12800	16800	13600	12800	12800	12800
	AMD/UMD/TrD PDU header, bit	16	0	8	16	16	16

Higher layer	RAB/signalling RB	**RAB**	**SRB#0**	**SRB#1**	**SRB#2**	**SRB#3**	**SRB#4**
	User of Radio Bearer	Interactive/ Background RAB	RRC	RRC	RRC	NAS_DT High priority	NAS_DT Low priority
MAC	MAC header, bit	26	2	26	26	26	26
	MAC multiplexing	6 logical channel multiplexing					
Layer 1	TrCH type	RACH					
	TB sizes, bit	170					
	TFS TF0, bits	1x170					
	TTI, ms	10					
	Coding type	CC 1/2					
	CRC, bit	16					
	Max number of bits/TTI after channel coding	388					
	Max number of bits/ Radio frame before rate matching	388					

6.10.3.4.5.2.2 Physical channel parameters

See clause 6.10.3.4.5.1.2.

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

6.10.3.4.5.3.1 Transport channel parameters

Higher layer	RAB/signalling RB	**RAB**	**RAB**	**SRB#0**	**SRB#1**	**SRB#2**	**SRB#3**	**SRB#4**
	User of Radio Bearer	Interactive/ Background RAB	Interactive/ Background RAB	RRC	RRC	RRC	NAS_DT High prio	NAS_DT Low prio
RLC	Logical channel type	DTCH	DTCH	CCCH	DCCH	DCCH	DCCH	DCCH
	RLC mode	AM	AM	TM	UM	AM	AM	AM
	Payload sizes, bit	128	128	168	136	128	128	128
	Max data rate, bps	12800	12800	16800	13600	12800	12800	12800
	AMD/UMD/TrD PDU header, bit	16	16	0	8	16	16	16

Higher layer	RAB/signalling RB	**RAB**	**RAB**	**SRB#0**	**SRB#1**	**SRB#2**	**SRB#3**	**SRB#4**
	User of Radio Bearer	Interactive/ Background RAB	Interactive/ Background RAB	RRC	RRC	RRC	NAS_DT High prio	NAS_DT Low prio
MAC	MAC header, bit	26	26	2	26	26	26	26
	MAC multiplexing	7 logical channel multiplexing						
Layer 1	TrCH type	RACH						
	TB sizes, bit	170						
	TFS TF0, bits	1x170						
	TTI, ms	10						
	Coding type	CC ½						
	CRC, bit	16						
	Max number of bits/TTI after channel coding	388						
	Max number of bits/ Radio frame before rate matching	388						

6.10.3.4.5.3.2 Physical channel parameters

See clause 6.10.3.4.5.1.2.

3GPP TSG-T1 Meeting #22
Hyderabad, India, 2nd – 6th February 2004

T1 ⌘040102

CR-Form-v7

CHANGE REQUEST

⌘ **34.108** **CR** **290** ⌘ **rev** **-** ⌘ Current version: **3.14.0** ⌘

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

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	Corrections to TDD HCR RABs
Source:	⌘	InterDigital, Siemens AG
Work item code:	⌘	TEI
Date:	⌘	02/02/04
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change: ⌘

1. Test coverage for TDD UE capability classifications is incomplete. RAB configurations need to be adjusted to verify TDD capabilities.
2. TDD interactive / background RABs need to be modified to allow for TrCH switching between RACH/FACH and DCH or USCH/DSCH.
3. Multicode requirement should be removed from UL RABs, for which the corresponding UE capability class does not support. Exceptions to the supporting UE class for these RABs should be minimized.
4. Physical channel puncturing limit definitions do not correctly take into account TrCH rate matching parameters.
5. To maintain proper channel quality CRC's needed when no data is present on TrCH's for which BLER quality targets are specified. Transport configurations are aligned with FDD.
6. Test coverage is necessary for TDD physical channel frame repetition functionality.
7. Test coverage is necessary for the TDD multiple dedicated CCTrCH's capability. Operation is identical to TDD shared channels when simultaneous RT and NRT services are supported.
8. Alignment between TDD RAB definitions and TDD UE capability classifications needs to be improved to reduce the number of exceptions listed for each supporting UE class in 25.993.
9. S-CCPCH RAB configurations alternate configurations need to be defined for

	deployment scenarios where maximum transmission rate is limited. 10. Shared channel RABs need to be modified to avoid inefficient signaling and signaling blocking conditions 11. An additional RAB is needed to demonstrate high rate TDD capabilities 12. TDD RABs are aligned with recent changes approved for FDD RAB's. Services supported by FDD should be common with TDD mode 13. Other minor corrections
Summary of change: ⌘	1. Maximum codes/slot, codes/frame, slots/frame, min SF… levels within TDD UE capability classifications are modified in TDD RABs to provide test coverage. 2. DTCH added to RACH and FACH TrCH definitions. Reduced UL 128bit PDU size added to interactive / background UL DCH and USCH RABs to align with payload offered by the TDD PRACH. 3. Physical channel configurations adjusted across more slots or SF reduced to eliminate the UL multicode requirement in low rate RAB's. 4. Puncturing limits are correctly calculated according to the specified TrcH rate matching mid-values. 5. Alternate TB size 0 TFCs are added to SRB and speech RAB's. 6. An alternate low rate SRB only RAB with physical channel frame repetition is introduced. 7. Alternate dedicated 2 CCTrCH configurations are added to existing dedicated combination service RABs specifying separate CCTrCH's for the RT and NRT services. Updated are aligned already specified TDD shared channel RABs. 8. Reduction/modification of 2Mb TFCS to avoid greatly increased UE capability requirement, allow for test coverage and reduce class exceptions. Reduction of other RAB TFCS's and removal of alternate 40ms TTI configurations when no benefit is realized to eliminate bits/tti and TB/tti UE class exceptions. Reconfiguration of physical channels across more DL slots to eliminate maximum codes per slot exceptions. 9. S-CCPCH RABs are defined with alternate reduced TFS/TFCS and corresponding reduced code configurations. 10. DCCHs are added to DSCH and USCH transport channels to minimize the requirement for simultaneous RACH and FACH transmission and reception. 11. A TDD shared channel 384kbps UL & 2Mb DL interactive / background RAB is introduced. 12. TDD RABs are added or removed to match RABs currently specified for FDD. 13. Corrections for MAC header bit calculations, TFCI code word sizes... are introduced.
Consequences if not approved: ⌘	1. TDD UE class test coverage will be incomplete 2. TrCH switching functionallity will not be possible 3. UL Multicode UE class exceptions will be required 4. Specified PL's will not allow for complete TFCS 5. TrCH BLER will not be tracked on SRBs and speech RABs 6. No test coverage for TDD frame repetition functionality

	7. No test coverage for multiple CCTrCH functionallity 8. Inconsistency between RAB definitions and UE classifications 9. Inefficient S-CCPCH configuration 10. Signaling blocking conditions will occur on shared channel RABs 11. High rate TDD services will not have test case 12. TDD services will not match FDD services 13. RABs will have inconsistent configurations

Clauses affected:	⌘	6.10.3			
		Y	**N**		
Other specs affected:	⌘			Other core specifications	⌘
				Test specifications	
				O&M Specifications	
Other comments:	⌘				

How to create CRs using this form:

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

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

6.10.3 RAB and signalling RB for TDD

6.10.3.1 RABs and signalling RBs

In the following clauses, 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 6.10.3.1.1: Prioritised RABs.

#	Traffic class[3]	SSD[3]	Max. rate, kbps	CS/PS
1	Conversational	Speech	UL:12.2 DL:12.2	CS
1a	Conversational	Speech	UL: (12.2 7.95 5.9 4.75) DL(12.2 7.95 5.9 4.75)	CS
2	Conversational	Speech	UL:10.2 DL:10.2	CS
2a	Conversational	Speech	UL:(10.2 , 6.7, 5.9, 4.75) DL:10.2, 6.7, 5.9, 4.75)	CS
3	Conversational	Speech	UL:7.95 DL:7.95	CS
4	Conversational	Speech	UL:7.4 DL:7.4	CS
4a	Conversational	Speech	UL:(12.2 7.95 5.9 4.75, DL:(12.2 7.95 5.9 4.75)	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
11a	Conversational	Unknown	UL:8 DL:8	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	Void ~~Streaming~~	~~Unknown~~	~~UL:0 DL:64~~	~~CS~~
15a	Streaming	Unknown	UL:16 DL:64	PS
16	Void ~~Streaming~~	~~Unknown~~	~~UL:64 DL:0~~	~~CS~~
17	Void ~~Streaming~~	~~Unknown~~	~~UL:0 DL:128~~	~~CS~~
18	Void ~~Streaming~~	~~Unknown~~	~~UL:128 DL:0~~	~~CS~~
19	Void ~~Streaming~~	~~Unknown~~	~~UL:0 DL:384~~	~~CS~~
20	Interactive or Background	N/A	UL:32 DL:8	PS
20a	Interactive or Background	N/A	UL:8 DL:8	PS
20b	Interactive or Background	N/A	UL:16 DL:16	PS
20c	Interactive or Background	N/A	UL:32 DL:32	PS
21	Void ~~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	Void ~~Interactive or Background~~	~~N/A~~	~~UL:384 DL:2048~~	~~PS~~
32	Interactive or Background	N/A	UL:64 DL:256	PS
33	Interactive or Background	N/A	UL:0 DL:32	PS
34	Interactive or Background	N/A	UL:32 DL:0	PS
35	Interactive or Background	N/A	UL:64 DL:144	PS
36	Interactive or Background	N/A	UL:144 DL:144	PS

Table 6.10.3.1.2: 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~~13.6)	DCCH	SCCPCH
5	UL:16.8~~16.6~~	CCCH	PRACH
6	DL:32~~30.4~~ (alt. ~~45.6~~16)	CCCH	SCCPCH
7	DL:33.6~~33.2~~ (alt. ~~49.8~~16.8)	BCCH:	SCCPCH
8	DL:~~24~~12 (alt. ~~6.4~~8)	PCCH	SCCPCH
9	UL:16.8	SHCCH	PRACH
10	UL:16.8	SHCCH	PRACH or PUSCH
11	DL:32 (alt. 16)	SHCCH	SCCPCH
12	DL:16	SHCCH	SCCPCH or PDSCH

6.10.3.2 Combinations of RABs and Signalling RBs

In the present 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.

1a) Stand-alone UL:1.7 DL:1.7 kbps SRBs for DCCH (multiframe)

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.

4a) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

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

5a) Conversational / speech / UL:(10.2, 6.7, 5.9, 4.75) DL:(10.2, 6.7, 5.9, 4.75) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

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.

7a) Conversational / speech / UL:(7.4, 6.7, 5.9, 4.75) DL:(7.4, 6.7, 5.9, 4.75) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

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 RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~ Void.

19) ~~Streaming / unknown / UL:64 DL:0 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~. Void.

20) ~~Streaming / unknown / UL:0 DL:128 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~. Void.

21) ~~Streaming / unknown / UL:128 DL:0 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~. Void.

22) ~~Streaming / unknown / UL:0 DL:384 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~ Void..

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

23a) Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

23b) Interactive or background / UL:16 DL:16 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

23c) Interactive or background / UL:32 DL:32 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

23d) Interactive or background / UL:32 DL:32 kbps / PS RAB (20 ms TTI)
+ 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~~ Void..

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.

38a) Conversational / speech / 12.2 kbps / CS RAB
+ Interactive or background / UL:0 DL:0 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

38b) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background/ UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

38c) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background/ UL:32 DL:32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

38d) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background/ UL:64 DL:64 kbps / PS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

38e) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:0 DL:0 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

38f) Conversational / speech / (12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

38g) Conversational / speech / (12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:16 DL:16 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

38h) Conversational / speech / (12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:32 DL:32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

38i) Conversational / speech / (12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

38j) Conversational / speech / (12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

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.~~ Void

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.~~ Void

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.~~ Void

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.

49a) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

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.

51a) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or Background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

51b) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or Background / UL:16 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

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~~ Void.

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.~~ Void

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

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

58) Streaming / unknown / UL:16 DL:64 kbps / PS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

59) Reserved for future use

60) Reserved for future use

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

Combinations on PDSCH, SCCPCH, PUSCH and PRACH

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

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

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

4) Interactive or background / UL:384 DL:2048 kbps / PS RAB
+ UL:3.4/16.8 DL: 3.4/33.6 kbps SRBs for DCCH, CCCH and BCCH
+ UL: 16.8 DL: 16 kbps SRBs for SHCCH.

Combinations on PDSCH, SCCPCH, DPCH, PUSCH and PRACH

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

+ UL:16.8 kbps SRBs for CCCH and SHCCH
+ DL: 33.6 kbps SRBs for CCCH, SHCCH and BCCH.

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

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

Combinations on SCCPCH

1) Stand-alone ~~24~~ 12 kbps SRB for PCCH.

2) Interactive or background / DL:32 kbps / PS RAB
+ SRB for CCCH
+ SRBs for DCCH
+ SRB for BCCH.

2a) Interactive/Background 32 kbps PS RAB + Interactive/Background 32 kbps PS RAB
+ SRBs for CCCH
+ SRB for DCCH
+ SRB for BCCH

2b) SRBs for CCCH
+ SRB 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.

3a) SRB for PCCH
+ SRB for CCCH
+ SRB for DCCH
+ SRB for BCCH

4) RB for CTCH
+ SRB for CCCH
+ SRB for BCCH

Combinations on PRACH

1) Interactive or background / UL:~~32~~ 12.8 kbps / PS RAB
+ SRB for CCCH
+ SRBs for DCCH.

6.10.3.3 Example of linkage between RABs and services

RABs, which are included in the present document, can provide the services as shown in table 6.10.1.1: Traffic classes. Furthermore, the required BER for each RAB, which is assumed in the present document, is shown in table 6.10.3.3.1.

Table 6.10.3.3.1: 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	$1x10^{-3}$ 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 1: SMS can be provided via the signalling RB (DCCH) on DPCH or SCCPCH.

NOTE 2: CBS can be provided via the signalling RB (CTCH) on SCCPCH

NOTE 3: UDI *n*B can be provided via *n* RABs of conversational 64 kbps.

6.10.3.4 Typical radio parameter sets

6.10.3.4.1 Combinations on DPCH

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

6.10.3.4.1.1.1 Uplink

####### 6.10.3.4.1.1.1.1 Transport channel parameters

######## 6.10.3.4.1.1.1.1.1 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 priority	NAS_DT Low priority
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
	AMD/UMD PDU 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 (alt. 0,148) (note)			
	TFS	TF0, bits	0x148 (alt 1x0) (note)			
		TF1, bits	1x148			
	TTI, ms		80			
	Coding type		CC 1/3			
	CRC, bit		16			
	Max number of bits/TTI before rate matching		516			
	Max number of bits/radio frame before rate matching		65			
	RM attribute		155-185			
NOTE: alternative parameters enable the measurement "transport channel BLER" in the UTRAN.						

######## 6.10.3.4.1.1.1.1.2 TFCS

TFCS size	2
TFCS	SRBs for DCCH = (TF0), (TF1)
Note: The first TFC is required for the alt. case, optional otherwise.	

####### 6.10.3.4.1.1.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	~~238~~ 234
	TFCI code word	~~4~~ 8 bits
	TPC	2 bits
	Puncturing Limit	1
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 4 bits		

6.10.3.4.1.1.2 Downlink

6.10.3.4.1.1.2.1 Transport channel parameters

6.10.3.4.1.1.2.1.1 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 priority	NAS_DT Low priority
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
	AMD/UMD PDU 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 (alt. 0,148) (note)			
	TFS	TF0, bits	0 x148 (alt. 1x0) (note)			
		TF1, bits	1x148			
	TTI, ms		80			
	Coding type		CC 1/3			
	CRC, bit		16			
	Max number of bits/TTI before rate matching		516			
	Max number of bits/radio frame before rate matching		65			
	RM attribute		155-185			
NOTE: alternative parameters enable the measurement "transport channel BLER" in the UE.						

6.10.3.4.1.1.2.1.2 TFCS

TFCS size	2
TFCS	SRBs for DCCH = (TF0), (TF1)
Note: The first TFC is required for the alt. case, optional otherwise.	

6.10.3.4.1.1.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	~~240~~ 236bits
	TFCI code word	~~4~~ 8bits
	Puncturing limit	1
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 4 bits		

6.10.3.4.1.1a Stand-alone UL:1.7 DL:1.7 kbps SRBs for DCCH (multiframe)

6.10.3.4.1.1a.1 Uplink

6.10.3.4.1.1a.1.1 Transport channel parameters

6.10.3.4.1.1a.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 priority	NAS_DT Low priority
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
	AMD/UMD PDU 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		20			
	Coding type		CC 1/3			
	CRC, bit		16			
	Max number of bits/TTI before rate matching		516			
	Max number of bits/radio frame before rate matching		258			

6.10.3.4.1.1a.1.1.2 TFCS

TFCS size	2
TFCS	SRBs for DCCH = (TF0), (TF1)

6.10.3.4.1.1a.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	266
	TFCI code word	8 bits
	TPC	2 bits
	Puncturing Limit	1
	Repetition period	8
	Repetition length	2
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 4 bits		

6.10.3.4.1.1a.2 Downlink

6.10.3.4.1.1a.2.1 Transport channel parameters

6.10.3.4.1.1a.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 priority	NAS_DT Low priority
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
	AMD/UMD PDU 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	0 x148			
		TF1, bits	1x148			
	TTI, ms		20			
	Coding type		CC 1/3			
	CRC, bit		16			
	Max number of bits/TTI before rate matching		516			
	Max number of bits/radio frame before rate matching		258			

6.10.3.4.1.1a.2.1.2 TFCS

TFCS size	2
TFCS	SRBs for DCCH = (TF0), (TF1)
Note: The first TFC is optional	

6.10.3.4.1.1a.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	268 bits
	TFCI code word	8 bits
	Puncturing limit	1
	Repetition period	8
	Repetition length	2
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 4 bits		

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

6.10.3.4.1.2.1 Uplink

6.10.3.4.1.2.1.1 Transport channel parameters

6.10.3.4.1.2.1.1.1 Transport channel parameters for UL:3.4 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 priority	NAS_DT Low priority
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
	AMD/UMD PDU 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 (alt. 0,148) (note)			
	TFS	TF0, bits	0x148 (alt. 1x0) (note)			
		TF1, bits	1x148			
	TTI, ms		40			
	Coding type		CC 1/3			
	CRC, bit		16			
	Max number of bits/TTI before rate matching		516			
	Max number of bits/radio frame before rate matching		129			
	RM attribute		155-165			
NOTE: alternative parameters enable the measurement "transport channel BLER" in the UTRAN.						

6.10.3.4.1.2.1.1.2 TFCS

TFCS size	2
TFCS	SRBs for DCCH = (TF0), (TF1)
Note: The first TFC is required for the alt. case, optional otherwise.	

6.10.3.4.1.2.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	~~238~~ 234 bits
	TFCI code word	~~4~~ 8bits
	TPC	2 bit
	Puncturing Limit	1
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 4 bits		

6.10.3.4.1.2.2 Downlink

6.10.3.4.1.2.2.1 Transport channel parameters

6.10.3.4.1.2.2.1.1 Transport channel parameters for DL:3.4 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 priority	NAS_DT Low priority
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
	AMD/UMD PDU 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 (alt. 0, 148) (note)			
	TFS	TF0, bits	0x148 (alt. 1x0) (note)			
		TF1, bits	1x148			
	TTI, ms		40			
	Coding type		CC 1/3			
	CRC, bit		16			
	Max number of bits/TTI before rate matching		516			
	Max number of bits/radio frame before rate matching		129			
	RM attribute		155-165			
NOTE: alternative parameters enable the measurement "transport channel BLER" in the UE.						

6.10.3.4.1.2.2.1.2 TFCS

TFCS size	2
TFCS	SRBs for DCCH = (TF0), (TF1)
Note: The first TFC is required for the alt. case, optional otherwise.	

6.10.3.4.1.2.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	~~240~~ 236
	TFCI code word	~~4~~ 8bits
	Puncturing limit	1
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 4 bits		

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

6.10.3.4.1.3.1 Uplink

6.10.3.4.1.3.1.1 Transport channel parameters

6.10.3.4.1.3.1.1.1 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 priority	NAS_DT Low priority
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
	AMD/UMD PDU 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 (alt. 0,148) (note)			
	TFS	TF0, bits	0x148 (alt. 1x0) (note)			
		TF1, bits	1x148			
	TTI, ms		10			
	Coding type		CC 1/3			
	CRC, bit		16			
	Max number of bits/TTI before rate matching		516			
	Max number of bits/radio frame before rate matching		516			
NOTE: alternative parameters enable the measurement "transport channel BLER" in the UTRAN.						

6.10.3.4.1.3.1.1.2 TFCS

TFCS size	2
TFCS	SRBs for DCCH = (TF0), (TF1)
Note: The first TFC is required for the alt. case, optional otherwise.	

6.10.3.4.1.3.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	~~476~~ 468 bits
	TFCI code word	~~4~~ 8bits
	TPC	2 bits
	Puncturing Limit	~~0.92~~ 0.88
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 4 bits		

6.10.3.4.1.3.2 Downlink

6.10.3.4.1.3.2.1 Transport channel parameters

6.10.3.4.1.3.2.1.1 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 priority	NAS_DT Low priority
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
	AMD/UMD PDU 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 (alt. 0,148) (note)			
	TFS	TF0, bits	0x148 (alt. 1x0) (note)			
		TF1, bits	1x148			
	TTI, ms		10			
	Coding type		CC 1/3			
	CRC, bit		16			
	Max number of bits/TTI before rate matching		516			
	Max number of bits/radio frame before rate matching		516			
NOTE: alternative parameters enable the measurement "transport channel BLER" in the UE						

6.10.3.4.1.3.2.1.2 TFCS

TFCS size	2
TFCS	SRBs for DCCH = (TF0), (TF1)
Note: The first TFC is required for the alt. case, optional otherwise.	

6.10.3.4.1.3.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	~~484~~ 480bits
	TFCI code word	~~4~~ 8 bits
	Puncturing limit	0.92
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 4 bits		

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

6.10.3.4.1.4.1 Uplink

6.10.3.4.1.4.1.1 Transport channel parameters

6.10.3.4.1.4.1.1.1 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		
	TrD PDU 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)	103	60
	TFS	TF0, bits	0x81(alt. 1x0) (note)	0x103	0x60
		TF1, bits	1x39	1x103	1x60
		TF2, bits	1x81	N/A	N/A
	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
	Max number of bits/radio frame before rate matching		152	167	68
	RM attribute		180-220	170-210	215-256
NOTE: In case of using this alternative, 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 clause 4.2.1.1 in TS ~~25.212~~ 25.222).					

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

See clause ~~6.10.3.4.1.2.1.1.~~ 6.10.3.4.1.2.1.1.1

6.10.3.4.1.4.1.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.4.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	452 bits
	TFCI code word	16 bits
	TPC	2 bit
	Puncturing Limit	0.72~~0.84~~

6.10.3.4.1.4.2 Downlink

6.10.3.4.1.4.2.1 Transport channel parameters

6.10.3.4.1.4.2.1.1 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		39,81 (alt. 0, 39, 81)	103	60
	Max data rate, bps		12200		
	TrD PDU 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~~ 39,81 (alt. 0,39,81)	103	60
	TFS (note 1)	TF0, bits	0x81 (alt. 1x0) (note ~~2~~)	0x103	0x60
		TF1, bits	1x39	1x103	1x60
		TF2, bits	1x81	N/A	N/A
	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
	Max number of bits/radio frame before rate matching		152	167	68
	RM attribute		180-220	170-210	215-256

~~NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212).~~

NOTE ~~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 clause 4.2.1.1 in TS ~~25.212~~ 25.222).

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.4.2.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.4.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	0.76~~0.88~~

6.10.3.4.1.4a Conversational / speech / UL:(12.2, 7.95, 5.9, 4.75) DL:(12.2, 7.95, 5.9, 4.75) kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.4a.1 Uplink

6.10.3.4.1.4a.1.1 Transport channel parameters

6.10.3.4.1.4a.1.1.1 Transport channel parameters for Conversational / speech / UL: (12.2, 7.95, 5.9, 4.75) 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, 42, 55, 75, 81 (alt. 0, 39, 42, 55, 75, 81)	53, 63, 84, 103	60
	Max data rate, bps		12200		
	TrD PDU header, bit		0		
MAC	MAC header, bit		0		
	MAC multiplexing		N/A		
Layer 1	TrCH type		DCH	DCH	DCH
	TB sizes, bit		39, 42, 55, 75, 81 (alt. 0, 39, 42, 55, 75, 81)	53, 63, 84, 103	60
	TFS	TF0, bits	0x81(alt. 1x0) (note)	0x103	0x60
		TF1, bits	1x39	1x53	1x60
		TF2 bits	1x42	1x63	N/A
		TF3, bits	1x55	1x84	N/A
		TF4, bits	1x75	1x103	N/A
		TF5, bits	1x81	N/A	N/A
	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
	Max number of bits/radio frame before rate matching		152	167	68
	RM attribute		180-220	170-210	215-256
NOTE: In case of using this alternative, 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 clause 4.2.1.1 in TS 25.222).					

6.10.3.4.1.4a.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.4a.1.1.3 TFCS

TFCS size	12
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, DCCH)= (TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0), (TF2,TF1,TF0,TF0), (TF3,TF2,TF0,TF0), (TF4,TF3,TF0,TF0), (TF5,TF4,TF1,TF0), (TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF1), (TF2,TF1,TF0,TF1), (TF3,TF2,TF0,TF1), (TF4,TF3,TF0,TF1), (TF5,TF4,TF1,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.4a.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	452 bits
	TFCI code word	16 bits
	TPC	2 bit
	Puncturing Limit	0.72

6.10.3.4.1.4a.2 Downlink

6.10.3.4.1.4a.2.1 Transport channel parameters

6.10.3.4.1.4a.2.1.1 Transport channel parameters for Conversational / speech / DL: (12.2, 7.95, 5.9, 4.75) 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, 42, 55, 75, 81 (alt. 0, 39, 42, 55, 75, 81)	53, 63, 84, 103	60
	Max data rate, bps		12 200		
	TrD PDU header, bit		0		
MAC	MAC header, bit		0		
	MAC multiplexing		N/A		
Layer 1	TrCH type		DCH	DCH	DCH
	TB sizes, bit		39, 42, 55, 75, 81 (alt. 0, 39, 42, 55, 75, 81)	53, 63, 84, 103	60
	TFS	TF0, bits	0x81(alt. 1x0) (note)	0x103	0x60
		TF1, bits	1x39	1x53	1x60
		TF2, bits	1x42	1x63	N/A
		TF3, bits	1x55	1x84	N/A
		TF4, bits	1x75	1x103	N/A
		TF5, bits	1x81	N/A	N/A
	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
	Max number of bits/radio frame before rate matching		152	167	68
	RM attribute		180-220	170-210	215-256
NOTE: In case of using this alternative, 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 clause 4.2.1.1 in TS 25.222).					

6.10.3.4.1.4a.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1

6.10.3.4.1.4a.2.1.3 TFCS

TFCS size	12
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, DCCH)= (TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0), (TF2,TF1,TF0,TF0), (TF3,TF2,TF0,TF0), (TF4,TF3,TF0,TF0), (TF5,TF4,TF1,TF0), (TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF1), (TF2,TF1,TF0,TF1), (TF3,TF2,TF0,TF1), (TF4,TF3,TF0,TF1), (TF5,TF4,TF1,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.4a.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	0.76

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

6.10.3.4.1.5.1 Uplink

6.10.3.4.1.5.1.1 Transport channel parameters

6.10.3.4.1.5.1.1.1 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)	99	40
	Max data rate, bps		10200		
	TrD PDU 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)	99	40
	TFS	TF0, bits	0x65 (alt. 1x0) (note)	0x99	0x40
		TF1, bits	1x39	1x99	1x40
		TF2, bits	1x65	N/A	N/A
	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
	Max number of bits/radio frame before rate matching		128	161	48
	RM attribute		180-220	170-210	215-256
NOTE: In case of using this alternative, 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 clause 4.2.1.1 in ~~TS 25.212~~ 25.222).					

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.5.1.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.5.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	226 bits
	TFCI code word	16 bits
	TPC	2 bit
	Puncturing Limit	0.40~~0.48~~

6.10.3.4.1.5.2 Downlink

6.10.3.4.1.5.2.1 Transport channel parameters

6.10.3.4.1.5.2.1.1 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		39,65 (alt. 0, 39, 65)	99	40
	Max data rate, bps		10200		
	TrD PDU 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~~ 39, 65 (alt.0,39,65)	99	40
	TFS (note 1)	TF0, bits	0x65 (alt,1x0) (note ~~2~~)	0x99	0x40
		TF1, bits	1x39	1x99	1x40
		TF2, bits	1x65	N/A	N/A
	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
	Max number of bits/radio frame before rate matching		128	161	48
	RM attribute		180-220	170-210	215-256

~~NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212~~).

NOTE ~~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 clause 4.2.1.1 in TS ~~25.212~~ 25.222).

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.5.2.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.5.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	228 bits
	TFCI code word	16 bits
	Puncturing limit	~~0,48~~0.40

6.10.3.4.1.5a Conversational / speech / UL:(10.2, 6.7, 5.9, 4.75) DL:(10.2, 6.7, 5.9, 4.75) kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.5a.1 Uplink

6.10.3.4.1.5a.1.1 Transport channel parameters

6.10.3.4.1.5a.1.1.1 Transport channel parameters for Conversational / speech / UL:(10.2, 6.7, 5.9, 4.75) 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, 42, 55, 58, 65 (alt. 0, 39, 42, 55, 58, 65)	53, 63, 76, 99	40
	Max data rate, bps		10200		
	TrD PDU header, bit		0		
MAC	MAC header, bit		0		
	MAC multiplexing		N/A		
Layer 1	TrCH type		DCH	DCH	DCH
	TB sizes, bit		39, 42, 55, 58, 65 (alt. 0, 39, 42, 55, 58, 65)	53, 63, 76, 99	40
	TFS	TF0, bits	0x65 (alt. 1x0) (note)	0x99	0x40
		TF1, bits	1x39	1x53	1x40
		TF2, bits	1x42	1x63	N/A
		TF3, bits	1x55	1x76	N/A
		TF4, bits	1x58	1x99	N/A
		TF5, bits	1x65	N/A	N/A
	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
	Max number of bits/radio frame before rate matching		128	161	48
	RM attribute		180-220	170-210	215-256
NOTE: In case of using this alternative, 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 clause 4.2.1.1 in TS 25.222).					

6.10.3.4.1.5a.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1

6.10.3.4.1.5a.1.1.3 TFCS

TFCS size	12
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3,DCCH)= (TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0), (TF2,TF1,TF0,TF0), (TF3,TF2,TF0,TF0), (TF4,TF3,TF0,TF0), (TF5,TF4,TF1,TF0), (TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF1), (TF2,TF1,TF0,TF1), (TF3,TF2,TF0,TF1), (TF4,TF3,TF0,TF1), (TF5,TF4,TF1,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.5a.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	226 bits
	TFCI code word	16 bits
	TPC	2 bit
	Puncturing Limit	0.40

6.10.3.4.1.5a.2 Downlink

6.10.3.4.1.5a.2.1 Transport channel parameters

6.10.3.4.1.5a.2.1.1 Transport channel parameters for Conversational / speech / DL: DL:(10.2, 6.7, 5.9, 4.75) 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, 42, 55, 58, 65 (alt. 0, 39, 42, 55, 58, 65)	0, 53, 63, 76, 99	40
	Max data rate, bps		10 200		
	TrD PDU header, bit		0		
MAC	MAC header, bit		0		
	MAC multiplexing		N/A		
Layer 1	TrCH type		DCH	DCH	DCH
	TB sizes, bit		39, 42, 55, 58, 65 (alt. 0, 39, 42, 55, 58, 65)	0, 53, 63, 76, 99	40
	TFS	TF0, bits	0x65 (alt. 1x0) (note)	0x99	0x40
		TF1, bits	1x39	1x53	1x40
		TF2, bits	1x42	1x63	N/A
		TF3, bits	1x55	1x76	N/A
		TF4, bits	1x58	1x99	N/A
		TF5, bits	1x65	N/A	N/A
	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
	Max number of bits/radio frame before rate matching	128	161	48
	RM attribute	180-220	170-210	215-256
NOTE: In case of using this alternative, 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 clause 4.2.1.1 in TS 25.222).				

6.10.3.4.1.5a.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1

6.10.3.4.1.5a.2.1.3 TFCS

TFCS size	12
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3,DCCH)= (TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0), (TF2,TF1,TF0,TF0), (TF3,TF2,TF0,TF0), (TF4,TF3,TF0,TF0), (TF5,TF4,TF1,TF0), (TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF1), (TF2,TF1,TF0,TF1), (TF3,TF2,TF0,TF1), (TF4,TF3,TF0,TF1), (TF5,TF4,TF1,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.5a.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 1 codes x 1 time slot
	Max. Number of data bits/radio frame	228 bits
	TFCI code word	16 bits
	Puncturing limit	0.40

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

6.10.3.4.1.6.1 Uplink

6.10.3.4.1.6.1.1 Transport channel parameters

6.10.3.4.1.6.1.1.1 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)	84
	Max data rate, bps		7950	
	TrD PDU 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)	84
	TFS	TF0, bits	0x75 (alt. 1x0) (note)	0x84
		TF1, bits	1x39	1x84

		TF2, bits	1x75	N/A
	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
	Max number of bits/radio frame before rate matching		143	138
	RM attribute		180-220	170-210
NOTE:	In case of using this alternative, 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 clauses 4.2.1.1 in TS ~~25.212~~25.222).			

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.6.1.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.6.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	226 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	~~0.52~~0.44

6.10.3.4.1.6.2 Downlink

6.10.3.4.1.6.2.1 Transport channel parameters

6.10.3.4.1.6.2.1.1 Transport channel parameters for Conversational / speech / DL:7.95 kbps / CS RAB

			RAB subflow #1	**RAB subflow #2**
Higher Layer	RAB/Signalling RB			
RLC	Logical channel type		DTCH	
	RLC mode		TM	TM
	Payload sizes, bit		39, 75 (alt. 0, 39, 75)	84
	Max data rate, bps		7950	
	TrD PDU 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)	84
	TFS (note 1)	TF0, bits	0x75 (alt. 1x0) (note ~~2~~)	0x84
		TF1, bits	1x39	1x84

		TF2, bits	1x75	N/A
	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
	Max number of bits/radio frame before rate matching		143	138
	RM attribute		180-220	170-210

~~NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212).~~

NOTE ~~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 clause 4.2.1.1 in TS ~~25.212~~ 25.222).

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.6.2.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.6.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	228 bits
	TFCI code word	16 bits
	Puncturing limit	~~0,52~~0.48

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

6.10.3.4.1.7.1 Uplink

6.10.3.4.1.7.1.1 Transport channel parameters

6.10.3.4.1.7.1.1.1 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)	87
	Max data rate, bps		7400	
	TrD PDU 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)	87
	TFS	TF0, bits	0x61 (alt. 1x0) (note)	0x87
		TF1, bits	1x39	1x87

		TF2, bits	1x61	N/A
	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
	Max number of bits/radio frame before rate matching		122	143
	RM attribute		180-220	170-210
NOTE:	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 clause 4.2.1.1 in TS ~~25.212~~25.222).			

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.7.1.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.7.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	226 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	~~0.56~~0.48

6.10.3.4.1.7.2 Downlink

6.10.3.4.1.7.2.1 Transport channel parameters

6.10.3.4.1.7.2.1.1 Transport channel parameters for Conversational / speech / DL:7.4 kbps / CS RAB

			RAB subflow #1	**RAB subflow #2**
Higher Layer	RAB/Signalling RB			
RLC	Logical channel type		DTCH	
	RLC mode		TM	TM
	Payload sizes, bit		39, 61 (alt. 0, 39, 61)	87
	Max data rate, bps		7400	
	TrD PDU 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)	87
	TFS (note 1)	TF0, bits	0x61(alt. 1x0) (note ~~2~~)	0x87
		TF1, bits	1x39	1x87
		TF2, bits	1x61	N/A
	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
	Max number of bits/radio frame before rate matching	122	143
	RM attribute	180-220	170-210
~~NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212~~).			
NOTE ~~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 #1 (see clause 4.2.1.1 in TS ~~25.212~~25.222).			

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.7.2.1.3 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)
Note: in case TB size zero is configured for any transport channel, the first TFC is required; optional otherwise	

6.10.3.4.1.7.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	228 bits
	TFCI code word	16 bits
	Puncturing limit	~~0,56~~0.48

6.10.3.4.1.7a Conversational / speech / UL:(7.4, 6.7, 5.9, 4.75) DL:(7.4, 6.7, 5.9, 4.75) kbps / CS RAB+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.7a.1 Uplink

6.10.3.4.1.7a.1.1 Transport channel parameters

6.10.3.4.1.7a.1.1.1 Transport channel parameters for Conversational / speech / UL:(7.4, 6.7, 5.9, 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, 55, 58, 61 (alt. 0, 39, 42, 55, 58, 61)	53, 63, 76, 87
	Max data rate, bps		7400	
	TrD PDU header, bit		0	
MAC	MAC header, bit		0	
	MAC multiplexing		N/A	
Layer 1	TrCH type		DCH	DCH
	TB sizes, bit		39, 42, 55, 58, 61 (alt. 0, 39, 42, 55, 58, 61)	53, 63, 76, 87
	TFS	TF0, bits	0x61 (alt. 1x0) (note)	0x87
		TF1, bits	1x39	1x53

		TF2, bits	1x42	1x63
		TF3, bits	1x55	1x76
		TF4, bits	1x58	1x87
		TF5, bits	1x61	N/A
	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
	Max number of bits/radio frame before rate matching		122	143
	RM attribute		180-220	170-210
NOTE: In case of using this alternative, 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 clause 4.2.1.1 in TS 25.222).				

6.10.3.4.1.7a.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1

6.10.3.4.1.7a.1.1.3 TFCS

TFCS size	12
TFCS	(RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF3, TF2, TF0), (TF4, TF3, TF0), (TF5, TF4, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1), (TF3, TF2, TF1), (TF4, TF3, TF1), (TF5, TF4, TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.7a.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	226 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.48

6.10.3.4.1.7a.2 Downlink

6.10.3.4.1.7a.2.1 Transport channel parameters

6.10.3.4.1.7a.2.1.1 Transport channel parameters for Conversational / speech / DL:(7.4, 6.7, 5.9, 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, 55, 58, 61 (alt. 0, 39, 42, 55, 58, 61)	53, 63, 76, 87
	Max data rate, bps		7400	
	TrD PDU header, bit		0	
MAC	MAC header, bit		0	
	MAC multiplexing		N/A	
Layer 1	TrCH type		DCH	DCH
	TB sizes, bit		39, 42, 55, 58, 61 (alt. 0, 39, 42, 55, 58, 61)	53, 63, 76, 87
	TFS	TF0, bits	0x61 (alt. 1x0) (note)	0x87

		TF1, bits	1x39	1x53
		TF2, bits	1x42	1x63
		TF3, bits	1x55	1x76
		TF4, bits	1x58	1x87
		TF5, bits	1x61	N/A
	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
	Max number of bits/radio frame before rate matching		122	143
	RM attribute		180-220	170-210
NOTE: In case of using this alternative, 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 clause 4.2.1.1 in TS 25.222).				

6.10.3.4.1.7a.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1

6.10.3.4.1.7a.2.1.3 TFCS

TFCS size	12
TFCS	(RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF3, TF2, TF0), (TF4, TF3, TF0), (TF5, TF4, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1), (TF3, TF2, TF1), (TF4, TF3, TF1), (TF5, TF4, TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.7a.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	228 bits
	TFCI code word	16 bits
	Puncturing limit	0.48

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

6.10.3.4.1.8.1 Uplink

6.10.3.4.1.8.1.1 Transport channel parameters

6.10.3.4.1.8.1.1.1 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)	76
	Max data rate, bps		6700	
	TrD PDU 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)	76
	TFS	TF0, bits	0x58 (alt. 1x0) (note)	0x76
		TF1, bits	1x39	1x76

		TF2, bits	1x58	N/A
	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
	Max number of bits/radio frame before rate matching		117	126
	RM attribute		180-220	170-210
NOTE:	In case of using this alternative, 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 clause 4.2.1.1 in TS ~~25.212~~25.222).			

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.8.1.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.8.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	226 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	~~0.60~~0.52

6.10.3.4.1.8.2 Downlink

6.10.3.4.1.8.2.1 Transport channel parameters

6.10.3.4.1.8.2.1.1 Transport channel parameters for Conversational / speech / DL:6.7 kbps / CS RAB

			RAB subflow #1	**RAB subflow #2**
Higher Layer	RAB/Signalling RB			
RLC	Logical channel type		DTCH	
	RLC mode		TM	TM
	Payload sizes, bit		39, 58 (alt. 0, 39, 58)	76
	Max data rate, bps		6700	
	TrD PDU 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~~ ~~39~~ ~~58~~	76
	TFS (note 1)	TF0, bits	0x58 (alt.1x0) (note ~~2~~)	0x76
		TF1, bits	1x39	1x76

	TF2, bits	1x58	N/A
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
Max number of bits/radio frame before rate matching		117	126
RM attribute		180-220	170-210

~~NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212~~).

NOTE ~~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 clause 4.2.1.1 in TS ~~25.212~~ 25.222).

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.8.2.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.8.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	228 bits
	TFCI code word	16 bits
	Puncturing limit	0.52~~0,6~~

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

6.10.3.4.1.9.1 Uplink

6.10.3.4.1.9.1.1 Transport channel parameters

6.10.3.4.1.9.1.1.1 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)	63
	Max data rate, bps		5900	
	TrD PDU 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)	63
	TFS	TF0, bits	0x55 (alt. 1x0) (note)	0x63
		TF1, bits	1x39	1x63

		TF2, bits	1x55	N/A
	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
	Max number of bits/radio frame before rate matching		113	107
	RM attribute		180-220	170-210
NOTE: In case of using this alternative, 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 clause 4.2.1.1 in TS ~~25.212~~ 25.222).				

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.9.1.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.9.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	226 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.56~~0.64~~

6.10.3.4.1.9.2 Downlink

6.10.3.4.1.9.2.1 Transport channel parameters

6.10.3.4.1.9.2.1.1 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		39, 55 (alt. 0, 39, 55)	63
	Max data rate, bps		5900	
	TrD PDU 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)	63
	TFS (note 1)	TF0, bits	0x55 (alt. 1x0) (note ~~2~~)	0x63
		TF1, bits	1x39	1x63
		TF2, bits	1x55	N/A
	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
Max number of bits/radio frame before rate matching	113	107
RM attribute	180-220	170-210

~~NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212).~~

NOTE ~~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 clause 4.2.1.1 in TS ~~25.212~~25.222).

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.9.2.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.9.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	228 bits
	TFCI code word	16 bits
	Puncturing limit	~~0,64~~0.56

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

6.10.3.4.1.10.1 Uplink

6.10.3.4.1.10.1.1 Transport channel parameters

6.10.3.4.1.10.1.1.1 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)	54
	Max data rate, bps		5150	
	TrD PDU 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)	54
	TFS	TF0, bits	0x49 (alt. 1x0) (note)	0x54
		TF1, bits	1x39	1x54

		TF2, bits	1x49	N/A
	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
	Max number of bits/radio frame before rate matching		104	93
	RM attribute		180-220	170-210
NOTE: In case of using this alternative, 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 clause 4.2.1.1 in TS ~~25.212~~25.222).				

6.10.3.4.1.10.1.1.2 Transport channel parameters for UL:~~3.4~~1.7 kbps SRBs for DCCH

See clause 6.10.3.4.1.~~2~~1.1.1.1.

6.10.3.4.1.10.1.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.10.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	226 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.72~~0.68~~

6.10.3.4.1.10.2 Downlink

6.10.3.4.1.10.2.1 Transport channel parameters

6.10.3.4.1.10.2.1.1 Transport channel parameters for Conversational / speech / DL:5.15 kbps / CS RAB

			RAB subflow #1	**RAB subflow #2**
Higher Layer	RAB/Signalling RB			
RLC	Logical channel type		DTCH	
	RLC mode		TM	TM
	Payload sizes, bit		39, 49 (alt. 0, 39, 49)	54
	Max data rate, bps		5150	
	TrD PDU 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)	54
	TFS (note 1)	TF0, bits	0x49 (alt. 1x0) (note ~~2~~)	0x54
		TF1, bits	1x39	1x54
		TF2, bits	1x49	N/A
	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
	Max number of bits/radio frame before rate matching	104	93
	RM attribute	180-220	170-210

~~NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212).~~

NOTE ~~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 clause 4.2.1.1 in TS ~~25.212~~25.222).

6.10.3.4.1.10.2.1.2 Transport channel parameters for DL:~~3.4~~ 1.7 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1. 6.10.3.4.1.1.2.1.1.

6.10.3.4.1.10.2.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.10.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	228 bits
	TFCI code word	16 bits
	Puncturing limit	0.72~~0.68~~

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

6.10.3.4.1.11.1 Uplink

6.10.3.4.1.11.1.1 Transport channel parameters

6.10.3.4.1.11.1.1.1 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)	53
	Max data rate, bps		4750	
	TrD PDU 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)	53
	TFS	TF0, bits	0x42 (alt. 1x0) (note)	0x53
		TF1, bits	1x39	1x53
		TF2, bits	1x42	N/A
	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
	Max number of bits/radio frame before rate matching	93	92
	RM attribute	180-220	170-210
NOTE:	In case of using this alternative, 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 clause 4.2.1.1 in TS ~~25.212~~ 25.222).		

6.10.3.4.1.11.1.1.2 Transport channel parameters for UL:~~3.4~~1.7 kbps SRBs for DCCH

See clause ~~6.10.3.4.1.2.1.1.1.~~ 6.10.3.4.1.1.1.1.1.

6.10.3.4.1.11.1.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.11.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	226 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.76~~0.68~~

6.10.3.4.1.11.2 Downlink

6.10.3.4.1.11.2.1 Transport channel parameters

6.10.3.4.1.11.2.1.1 Transport channel parameters for Conversational / speech / DL:4.75 kbps / CS RAB

			RAB subflow #1	**RAB subflow #2**
Higher Layer	RAB/Signalling RB			
RLC	Logical channel type		DTCH	
	RLC mode		TM	TM
	Payload sizes, bit		~~0,~~ 39, 42 (alt. 0, 39, 42)	53
	Max data rate, bps		4750	
	TrD PDU 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)	53
	TFS (note 1)	TF0, bits	0X42 (alt.1x0)(note ~~2~~)	0x53
		TF1, bits	1x39	1x53
		TF2, bits	1x42	N/A
	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
	Max number of bits/radio frame before rate matching	93	92
	RM attribute	180-220	170-210

~~NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212).~~

NOTE ~~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 clause 4.2.1.1 in TS ~~25.212~~25.222).

6.10.3.4.1.11.2.1.2 Transport channel parameters for DL:~~3.4~~1.7 kbps SRBs for DCCH

See clause ~~6.10.3.4.1.2.2.1.1.~~ 6.10.3.4.1.1.2.1.1.

6.10.3.4.1.11.2.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.11.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	228 bits
	TFCI code word	16 bits
	Puncturing limit	0.760~~,72~~

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

6.10.3.4.1.12.1 Uplink

6.10.3.4.1.12.1.1 Transport channel parameters

6.10.3.4.1.12.1.1.1 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
	TrD PDU 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~~ 20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		3564
	Max number of bits/radio frame before rate matching		891
	RM attribute		160-200

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.12.1.1.3 TFCS

TFCS size	~~6~~4
TFCS	(28.8 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), ~~(TF2, TF0),~~ (TF0, TF1), (TF1, TF1)~~, (TF2, TF1)~~
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.12.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	~~SF8~~ SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	~~452~~ 904 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	~~0.44~~~~0.80~~0.76
Note: In case the first TFC in a TFCS is not configured, the TFCI code word will be 8 bits		

6.10.3.4.1.12.2 Downlink

6.10.3.4.1.12.2.1 Transport channel parameters

6.10.3.4.1.12.2.1.1 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
	TrD PDU 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~~20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		3564
	Max number of bits/radio frame before rate matching		891
	RM attribute		160-200

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.12.2.1.3 TFCS

TFCS size	~~6~~4
TFCS	(28.8 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), ~~(TF2, TF0),~~ (TF0, TF1), (TF1, TF1)~~, (TF2, TF1)~~
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.12.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	~~0,44~~0.40
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 8 bits		

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

6.10.3.4.1.13.1 Uplink

6.10.3.4.1.13.1.1 Transport channel parameters

6.10.3.4.1.13.1.1.1 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
	TrD PDU 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)~~
	Max number of bits/radio frame before rate matching		1974~~(alt. 1971)~~
	RM attribute		150-195

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.13.1.1.3 TFCS

TFCS size	4
TFCS	(64 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.13.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	~~{SF16 x 1 code + SF4 x 1 code} x 1 time slot~~ SF16 x 1 code x 1 time slot + SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	~~1210 bits~~1148 bits
	TFCI code word	~~8 bits~~16 bits
	TPC	2 bits
	Puncturing Limit	0.48~~0.56~~
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 8 bits.		

6.10.3.4.1.13.2 Downlink

6.10.3.4.1.13.2.1 Transport channel parameters

6.10.3.4.1.13.2.1.1 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
	TrD PDU 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)~~
	Max number of bits/radio frame before rate matching		1974~~(alt. 1971)~~
	RM attribute		150-195

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.13.2.1.3 TFCS

TFCS size	4
TFCS	(64 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.13.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 5 codes x 1 time slot
	Max. Number of data bits/radio frame	~~1212~~ 1204 bits
	TFCI code word	~~8~~ 16 bits
	Puncturing limit	~~0,56~~0.52
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 8 bits		

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

6.10.3.4.1.14.1 Uplink

6.10.3.4.1.14.1.1 Transport channel parameters

6.10.3.4.1.14.1.1.1 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
	TrD PDU 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)~~
	Max number of bits/radio frame before rate matching		990~~(alt. 987)~~
	RM attribute		165-210

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

See clause 6.10.3.4.1.2.1.1.1.

~~6.10.3.4.1.13.1.1.3~~ 6.10.3.4.1.14.1.1.3 TFCS

TFCS size	4
TFCS	(32 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.14.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	~~936~~ 904 bits
	TFCI code word	~~8~~ 16 bits
	TPC	2 bits
	Puncturing Limit	~~0.80~~0.68
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 8 bits		

6.10.3.4.1.14.2 Downlink

6.10.3.4.1.14.2.1 Transport channel parameters

6.10.3.4.1.14.2.1.1 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
	TrD PDU 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)~~
	Max number of bits/radio frame before rate matching		990~~(alt. 987)~~
	RM attribute		165-210

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.14.2.1.3 TFCS

TFCS size	4
TFCS	(32 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.14.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 3 codes x 1 time slot
	Max. Number of data bits/radio frame	~~724~~ 716 bits
	TFCI code word	~~8~~ 16 bits
	Puncturing limit	0.52~~0,64~~
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 8 bits		

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

6.10.3.4.1.15.1 Uplink

6.10.3.4.1.15.1.1 Transport channel parameters

6.10.3.4.1.15.1.1.1 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		14400
	TrD PDU 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
	Max number of bits/radio frame before rate matching		447
	RM attribute		145-185

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.15.1.1.3 TFCS

TFCS size	4
TFCS	(14.4 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.15.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	~~468~~ 452bits
	TFCI code word	~~8~~ 16 bits
	TPC	2 bits
	Puncturing Limit	~~0.80~~ 0.76
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 8 bits		

6.10.3.4.1.15.2 Downlink

6.10.3.4.1.15.2.1 Transport channel parameters

6.10.3.4.1.15.2.1.1 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		14400
	TrD PDU 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
	Max number of bits/radio frame before rate matching		447
	RM attribute		145-185

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.15.2.1.3 TFCS

TFCS size	4
TFCS	(14.4 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.15.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	~~480~~ 472 bits
	TFCI code word	~~8~~ 16 bits
	Puncturing limit	0~~.~~.80
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 8 bits		

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

6.10.3.4.1.16.1 Uplink

6.10.3.4.1.16.1.1 Transport channel parameters

6.10.3.4.1.16.1.1.1 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
	TrD PDU 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~~20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		3564
	Max number of bits/radio frame before rate matching		891
	RM attribute		135-175

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.16.1.1.3 TFCS

TFCS size	~~6~~4
TFCS	(28.8kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), ~~(TF2, TF0),~~ (TF0, TF1), (TF1, TF1)~~, (TF2, TF1)~~
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.16.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	452 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.44
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 8 bits		

6.10.3.4.1.16.2 Downlink

6.10.3.4.1.16.2.1 Transport channel parameters

6.10.3.4.1.16.2.1.1 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
	TrD PDU 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~~ 20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		3564
	Max number of bits/radio frame before rate matching		891
	RM attribute		135-175

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.16.2.1.3 TFCS

TFCS size	~~6~~ 4
TFCS	(28.8kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), ~~(TF2, TF0),~~ (TF0, TF1), (TF1, TF1)~~, (TF2, TF1)~~
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.16.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	0~~.~~.44
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 8 bits		

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

6.10.3.4.1.17.1 Uplink

6.10.3.4.1.17.1.1 Transport channel parameters

6.10.3.4.1.17.1.1.1 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
	TrD PDU 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
	Max number of bits/radio frame before rate matching		1779
	RM attribute		125-165

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.17.1.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.17.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	904 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.44

6.10.3.4.1.17.2 Downlink

6.10.3.4.1.17.2.1 Transport channel parameters

6.10.3.4.1.17.2.1.1 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
	TrD PDU 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
	Max number of bits/radio frame before rate matching		1779
	RM attribute		125-165

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.17.2.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.17.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 4 codes x 1 time slot
	Max. Number of data bits/radio frame	960 bits
	TFCI code word	16 bits
	Puncturing limit	0.48

6.10.3.4.1.18 Void

6.10.3.4.1.19 Void

6.10.3.4.1.20 Void

6.10.3.4.1.21 Void

6.10.3.4.1.22 Void

~~6.10.3.4.1.18 Streaming / unknown / UL:0 DL:64 kbps / CS or PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~

~~6.10.3.4.1.18.1 Uplink~~

~~6.10.3.4.1.18.1.1 Transport channel parameters~~

~~6.10.3.4.1.18.1.1.1 Transport channel parameters for Streaming / unknown / UL:0 kbps / CS or PS RAB~~

~~N/A~~

~~6.10.3.4.1.18.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.1.1.1.~~

~~6.10.3.4.1.18.1.1.3 TFCS~~

~~See clause 6.10.3.4.1.2.1.1.2.~~

~~6.10.3.4.1.18.1.2 Physical channel parameters~~

~~See clause 6.10.3.4.1.2.1.2.~~

~~6.10.3.4.1.18.2 Downlink~~

~~6.10.3.4.1.18.2.1 Transport channel parameters~~

~~6.10.3.4.1.18.2.1.1 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~~
	~~TrD PDU 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~~
	~~Max number of bits/radio frame before rate matching~~		~~2019~~
	~~RM attribute~~		~~125-165~~

~~6.10.3.4.1.18.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.2.1.1.~~

~~6.10.3.4.1.18.2.1.3 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)~~

~~6.10.3.4.1.18.2.2 Physical channel parameters~~

~~DPCH Downlink~~	~~Midamble~~	~~512 chips~~
	~~Codes and time slots~~	~~SF16 x 5 codes x 1 time slot~~
	~~Max. Number of data bits/radio frame~~	~~1204 bits~~
	~~TFCI code word~~	~~16 bits~~
	~~Puncturing limit~~	~~0,56~~

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

6.10.3.4.1.19.1 Uplink

6.10.3.4.1.19.1.1 Transport channel parameters

6.10.3.4.1.19.1.1.1 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
	TrD PDU 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
	Max number of bits/radio frame before rate matching		2019
	RM attribute		125-165

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.19.1.1.3 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)

6.10.3.4.1.19.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	{SF16 x 1 code + SF4 x 1 code} x 1 time slot
	Max. Number of data bits/radio frame	1202 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.52

~~6.10.3.4.1.19.2 Downlink~~

~~6.10.3.4.1.19.2.1 Transport channel parameters~~

~~6.10.3.4.1.19.2.1.1 Transport channel parameters for Streaming / unknown / DL:0 kbps / CS or PS RAB~~

~~N/A~~

~~6.10.3.4.1.19.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.2.1.1.~~

~~6.10.3.4.1.19.2.1.3 TFCS~~

~~See clause 6.10.3.4.1.2.2.1.2.~~

~~6.10.3.4.1.19.2.2 Physical channel parameters~~

~~See clause 6.10.3.4.1.2.2.2.~~

~~6.10.3.4.1.20 Streaming / unknown / UL:0 DL:128 kbps / CS or PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~

~~6.10.3.4.1.20.1 Uplink~~

~~6.10.3.4.1.20.1.1 Transport channel parameters~~

~~6.10.3.4.1.20.1.1.1 Transport channel parameters for Streaming / unknown / UL:0 kbps / CS or PS RAB~~

~~N/A~~

~~6.10.3.4.1.20.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.1.1.1.~~

~~6.10.3.4.1.20.1.1.3 TFCS~~

~~See clause 6.10.3.4.1.2.1.1.2.~~

~~6.10.3.4.1.20.1.2 Physical channel parameters~~

~~See clause 6.10.3.4.1.2.1.2.~~

6.10.3.4.1.20.2 Downlink

6.10.3.4.1.20.2.1 Transport channel parameters

6.10.3.4.1.20.2.1.1 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
	TrD PDU 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
	Max number of bits/radio frame before rate matching		4038
	RM attribute		125-165

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.20.2.1.3 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)

6.10.3.4.1.20.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 1 time slot
	Max. Number of data bits/radio frame	2192 bits
	TFCI code word	16 bits
	Puncturing limit	0,52

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

6.10.3.4.1.21.1 Uplink

6.10.3.4.1.21.1.1 Transport channel parameters

6.10.3.4.1.21.1.1.1 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
	TrD PDU 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

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.21.1.3 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)

6.10.3.4.1.21.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	2064 bits
	TFCI code word	16 bit
	TPC	2 bits
	Puncturing Limit	0.48

~~6.10.3.4.1.21.2 Downlink~~

~~6.10.3.4.1.21.2.1 Transport channel parameters~~

~~6.10.3.4.1.21.2.1.1 Transport channel parameters for Streaming / unknown / DL:0 kbps / CS or PS RAB~~

~~N/A~~

~~6.10.3.4.1.21.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.2.1.1.~~

~~6.10.3.4.1.21.2.1.3 TFCS~~

~~See clause 6.10.3.4.1.2.2.1.1.~~

~~6.10.3.4.1.21.2.2 Physical channel parameters~~

~~See clause 6.10.3.4.1.2.2.2.~~

~~6.10.3.4.1.22 Streaming / unknown / UL:0 DL:384 kbps / CS or PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~

~~6.10.3.4.1.22.1 Uplink~~

~~6.10.3.4.1.22.1.1 Transport channel parameters~~

~~6.10.3.4.1.22.1.1.1 Transport channel parameters for Streaming / unknown / UL:0 kbps / CS or PS RAB~~

~~N/A~~

~~6.10.3.4.1.22.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.1.1.1.~~

~~6.10.3.4.1.22.1.1.3 TFCS~~

~~See clause 6.10.3.4.1.2.1.1.2.~~

~~6.10.3.4.1.22.1.2 Physical channel parameters~~

~~See clause 6.10.3.4.1.2.1.2.~~

6.10.3.4.1.22.2 Downlink

6.10.3.4.1.22.2.1 Transport channel parameters

6.10.3.4.1.22.2.1.1 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
	TrD PDU 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
	Max number of bits/radio frame before rate matching		12108
	RM attribute		110-150

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.22.2.1.3 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)

6.10.3.4.1.22.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 3 time slots
	Max. Number of data bits/radio frame	6608 bits
	TFCI code word	16 bits
	Puncturing limit	0,52

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

6.10.3.4.1.23.1 Uplink

6.10.3.4.1.23.1.1 Transport channel parameters

6.10.3.4.1.23.1.1.1 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 (alt. 128)
	Max data rate, bps		32000
	AMD PDU header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336 (alt.144)
	TFS	TF0, bits	0x336 (alt. 0x144)
		TF1, bits	1x336 (alt. 1x144)
		TF2, bits	2x336 ~~(alt. N/A)~~ (alt. 5x144)
	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. 2412) ~~(alt. 1080)~~
	Max number of bits/radio frame before rate matching		1062 (alt. 1206) ~~(alt. 1080)~~
	RM attribute		135-175

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.23.1.1.3 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))~~
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.23.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	904 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.72 (alt. 0.64)~~0.76~~

6.10.3.4.1.23.2 Downlink

6.10.3.4.1.23.2.1 Transport channel parameters

6.10.3.4.1.23.2.1.1 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
	AMD PDU 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)~~
	Max number of bits/radio frame before rate matching		267 ~~(alt. 270)~~
	RM attribute		135-175

6.10.3.4.1.23.2.1.2 Transport channel parameters for ~~UL~~ DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.23.2.1.3 TFCS

TFCS size	4
TFCS	(8 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.23.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	~~236~~ 228 bits
	TFCI code word	~~8~~ 16 bits
	Puncturing limit	0~~.~~.56
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 8 bits.		

6.10.3.4.1.23a Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.23a.1 Uplink

6.10.3.4.1.23a.1.1 Transport channel parameters

6.10.3.4.1.23a.1.1.1 Transport channel parameters for Interactive or background / UL:8 kbps / PS RAB

Higher Layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		AM
	Payload sizes, bit		320 (alt. 128)
	Max data rate, bps		8000
	AMD PDU header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336 (alt. 144)
	TFS	TF0, bits	0x336 (alt. 0x144)
		TF1, bits	1x336 (alt. 1x144)
		TF2, bits	N/A (alt. 5x144)
	TTI, ms		40 (alt. 80)
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		1068 (alt. 2412)
	Max number of bits/radio frame before rate matching		267 (alt.302)
	RM attribute		135-175

6.10.3.4.1.23a.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.23a.1.1.3 TFCS

TFCS size	4 (alt. 6)
TFCS	(8 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1) (alt. (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1))
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.23a.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	226 bits
	TFCI code word	16 bits
	TPC	2 bit
	Puncturing Limit	0.56 (alt. 0.48)

6.10.3.4.1.23a.2 Downlink

See clause 6.10.3.4.1.23.2

6.10.3.4.1.23b Interactive or background / UL:16 DL:16 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.23b.1 Uplink

6.10.3.4.1.23b.1.1 Transport channel parameters

6.10.3.4.1.23b.1.1.1 Transport channel parameters for Interactive or background / UL:16 kbps / PS RAB

Higher layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		AM
	Payload sizes, bit		320 (alt. 128)
	Max data rate, bps		16000
	AMD PDU header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336 (alt. 144)
	TFS	TF0, bits	0x336 (alt. 0x144)
		TF1, bits	1x336 (alt. 1x144)
		TF2, bits	2x336 (alt. 5x144)
	TTI, ms		40
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		2124 (alt. 2412)
	Max number of bits/radio frame before rate matching		531 (alt. 603)
	RM attribute		135-175

6.10.3.4.1.23b.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.23b.1.1.3 TFCS

TFCS size	6
TFCS	(16 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.23b.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	452 bits
	TFCI code word	16 bits
	TPC	2 bit
	Puncturing Limit	0.68 (alt. 0.60)

6.10.3.4.1.23b.2 Downlink

6.10.3.4.1.23b.2.1 Transport channel parameters

6.10.3.4.1.23b.2.1.1 Transport channel parameters for Interactive or background / DL:16 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		16000
	AMD PDU 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
	TTI, ms		40
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		2124
	Max number of bits/radio frame before rate matching		531
	RM attribute		135-175

6.10.3.4.1.23b.2.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.23b.2.1.3 TFCS

TFCS size	6
TFCS	(16 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.2.4.1.23b.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	0.68

6.10.3.4.1.23c Interactive or background / UL:32 DL:32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.23c.1 Uplink

6.10.3.4.1.23c.1.1 Transport channel parameters

6.10.3.4.1.23c.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 (alt. 128)
	Max data rate, bps		32000
	AMD PDU header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336 (alt. 144)
	TFS	TF0, bits	0x336 (alt. 0x144)
		TF1, bits	1x336 (alt. 1x144)
		TF2, bits	2x336 (alt. 5x144)
		TF3, bits	3x336 (alt. 7x144)
		TF4, bits	4x336 (alt. 10x144)
	TTI, ms		40
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		4236 (alt. 4812)
	Max number of bits/radio frame before rate matching		1059 (alt. 1203)
	RM attribute		135-175

6.10.3.4.1.23c.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.23c.1.1.3 TFCS

TFCS size	10
TFCS	(32 kbps RAB, DCCH)= (TF0,TF0), (TF1,TF0), (TF2,TF0), (TF3,TF0), (TF4,TF0), (TF0,TF1), (TF1,TF1), (TF2,TF1), (TF3,TF1), (TF4,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.23c.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	904 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.72 (alt. 0.64)

6.10.3.4.1.23c.2 Downlink

6.10.3.4.1.23c.2.1 Transport channel parameters

6.10.3.4.1.23c.2.1.1 Transport channel parameters for Interactive or background / DL: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
	AMD PDU 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		40
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		4236
	Max number of bits/radio frame before rate matching		1059
	RM attribute		135-175

6.10.3.4.1.23c.2.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.23c.2.1.3 TFCS

TFCS size	10
TFCS	(32 kbps RAB, DCCH)= (TF0,TF0), (TF1,TF0), (TF2,TF0), (TF3,TF0), (TF4,TF0), (TF0,TF1), (TF1,TF1), (TF2,TF1), (TF3,TF1), (TF4,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.23c.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 3 codes x 1 time slot
	Max. Number of data bits/radio frame	716
	TFCI code word	16 bits
	Puncturing limit	0.60

6.10.3.4.1.23d Interactive or background / UL:32 DL:32 kbps / PS RAB (20 ms TTI)+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.23d.1 Uplink

6.10.3.4.1.23d.1.1 Transport channel parameters

6.10.3.4.1.23d.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 (alt. 128)
	Max data rate, bps		32000
	AMD PDU header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336 (alt. 144)
	TFS	TF0, bits	0x336 (alt. 0x144)
		TF1, bits	1x336 (alt 1x144)
		TF2, bits	2x336 (alt. 5x144)
	TTI, ms		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		2124 (alt. 2412)
	Max number of bits/radio frame before rate matching		1062 (alt. 1206)
	RM attribute		135-175

6.10.3.4.1.23d.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.23d.1.1.3 TFCS

TFCS size	6
TFCS	(32 kbps RAB, DCCH)= (TF0,TF0), (TF1,TF0), (TF2,TF0), (TF0,TF1), (TF1,TF1), (TF2,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.23d.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	904 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.72 (alt. 0.64)

6.10.3.4.1.23d.2 Downlink

6.10.3.4.1.23d.2.1 Transport channel parameters

6.10.3.4.1.23d.2.1.1 Transport channel parameters for Interactive or background / DL: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
	AMD PDU 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
	TTI, ms		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		2124
	Max number of bits/radio frame before rate matching		1062
	RM attribute		135-175

6.10.3.4.1.23d.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.23d.2.1.3 TFCS

TFCS size	6
TFCS	(32 kbps RAB, DCCH)= (TF0,TF0), (TF1,TF0), (TF2,TF0), (TF0,TF1), (TF1,TF1), (TF2,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.23d.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 3 codes x 1 time slot
	Max. Number of data bits/radio frame	716 bits
	TFCI code word	16 bits
	Puncturing limit	0.56

6.10.3.4.1.24 Void

~~6.10.3.4.1.24 Interactive or background / UL:64 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~

~~6.10.3.4.1.24.1 Uplink~~

~~6.10.3.4.1.24.1.1 Transport channel parameters~~

~~6.10.3.4.1.24.1.1.1 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~~
	~~AMD PDU 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~~
	~~Max number of bits/radio frame before rate matching~~		~~2118~~
	~~RM attribute~~		~~130-170~~

~~6.10.3.4.1.24.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.1.1.1.~~

~~6.10.3.4.1.24.1.1.3 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)~~

~~6.10.3.4.1.24.1.2 Physical channel parameters~~

~~DPCH Uplink~~	~~Midamble~~	~~512 chips~~
	~~Codes and time slots~~	~~{SF16 x 1 code + SF4 x 1 code} x 1 time slot~~
	~~Max. Number of data bits/radio frame~~	~~1202 bits~~
	~~TFCI code word~~	~~16 bits~~
	~~TPC~~	~~2 bits~~
	~~Puncturing Limit~~	~~0.52~~

~~6.10.3.4.1.24.2 Downlink~~

~~See clause 6.10.3.4.1.23.2.~~

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

6.10.3.4.1.25.1 Uplink

See clause 6.10.3.4.1.23.1.

6.10.3.4.1.25.2 Downlink

6.10.3.4.1.25.2.1 Transport channel parameters

6.10.3.4.1.25.2.1.1 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
	AMD PDU 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
	Max number of bits/radio frame before rate matching		2118
	RM attribute		130-170

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.25.2.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.25.2.2 Physical channel parameters

DPCH Downlink		Physical Configuration 1	Physical Configuration 2
	Midamble	512 chips	512 chips
	Codes and time slots	SF16 x 35 codes x 1 time slot + SF16 x 2 codes x 1 time slot	SF16 x 9 codes x 1 time slot
	Max. Number of data bits/radio frame	1204 bits	2180 bits
	TFCI code word	16 bits	16 bits
	Puncturing limit	0.52	0.96

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

6.10.3.4.1.26.1 Uplink

~~See clause 6.10.3.4.1.24.1.~~

6.10.3.4.1.26.1.1 Transport channel parameters

6.10.3.4.1.26.1.1.1 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 (alt.128)
	Max data rate, bps		64000
	AMD PDU header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336 (alt. 144)
	TFS	TF0, bits	0x336 (alt. 0x144)
		TF1, bits	1x336 (alt. 1x144)
		TF2, bits	2x336 (alt. 3x144)
		TF3, bits	3x336 (alt. 7x144)
		TF4, bits	4x336 (alt. 10x144)
	TTI, ms		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		4236 (alt. 4812)
	Max number of bits/radio frame before rate matching		2118 (alt. 2406)
	RM attribute		130-170

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.26.1.1.3 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)

6.10.3.4.1.26.1.2 Physical channel parameters

DPCH Uplink		Physical Configuration 1	Physical Configuration 2
	Midamble	512 chips	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot + SF4 x 1 code x 1 time slot	SF2 x 1 code x 1 time slot + SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	1148 bits	2784 bits
	TFCI code word	16 bits	16 bits
	TPC	2 bits	2 bits
	Puncturing Limit	0.48 (alt. 0.44)	1

6.10.3.4.1.26.2 Downlink

See clause 6.10.3.4.1.25.2.

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

6.10.3.4.1.27.1 Uplink

See clause ~~6.10.3.4.1.24.1.~~ 6.10.3.4.1.26.1

6.10.3.4.1.27.2 Downlink

6.10.3.4.1.27.2.1 Transport channel parameters

6.10.3.4.1.27.2.1.1 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
	AMD PDU 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
	Max number of bits/radio frame before rate matching		4230
	RM attribute		120-160

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.27.2.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.27.2.2 Physical channel parameters

DPCH Downlink		Physical Configuration 1	Physical Configuration 2
	Midamble	256 chips	256 chips
	Codes and time slots	SF16 x 8 codes x 1 time slot	SF16 x 4 codes x 2 time slots + SF16 x 3 codes x 2 time slots
	Max. Number of data bits/radio frame	2192 bits	3848 bits
	TFCI code word	16 bits	16 bits
	Puncturing limit	0.48	0.880.84

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

6.10.3.4.1.28.1 Uplink

6.10.3.4.1.28.1.1 Transport channel parameters

6.10.3.4.1.28.1.1.1 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 (alt. 128)
	Max data rate, bps		128000
	AMD PDU header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336 (alt. 144)
	TFS	TF0, bits	0x336 (alt. 0x144)
		TF1, bits	1x336 (alt. 1x144)
		TF2, bits	2x336 (alt. 7x144)
		TF3, bits	4 x336 (alt 14x144)
		TF4, bits	8 x336 (alt. 20x144)
	TTI, ms		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		8460 (alt. 9612)
	Max number of bits/radio frame before rate matching		4230 (alt. 4806)
	RM attribute		120-160

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.28.1.1.3 TFCS

TFCS size	9 (alt.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)~~ (alt, (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1))
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.28.1.2 Physical channel parameters

DPCH Uplink		Physical Configuration 1	Physical Configuration 2
	Midamble	256 chips	256 chips
	Codes and time slots	SF2 x 1 code x 1 time-slot	SF2 x 1 code x 2 timeslots + SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	2064 bits	5376 bits
	TFCI code word	16 bits	16 bits
	TPC	2 bits	2 bits
	Puncturing Limit	~~0.48~~0.44 (alt. 0.40)	1

6.10.3.4.1.28.2 Downlink

See clause 6.10.3.4.1.27.2.

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

6.10.3.4.1.29.1 Uplink

See clause ~~6.10.3.4.1.24.1.~~ 6.10.3.4.1.26.1

6.10.3.4.1.29.2 Downlink

6.10.3.4.1.29.2.1 Transport channel parameters

6.10.3.4.1.29.2.1.1 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
	AMD PDU 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
	Max number of bits/radio frame before rate matching		4758
	RM attribute		140-180

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.29.2.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.29.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 9 codes x 1 time slot
	Max. Number of data bits/radio frame	2468 bits
	TFCI code word	16 bits
	Puncturing limit	0.48

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

6.10.3.4.1.30.1 Uplink

6.10.3.4.1.30.1.1 Transport channel parameters

6.10.3.4.1.30.1.1.1 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 (alt. 128)
	Max data rate, bps		144000
	AMD PDU header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336 (alt. 144)
	TFS	TF0, bits	0x336 (alt. 0x144)
		TF1, bits	1x336 (alt. 1x144)
		TF2, bits	2x336 (alt. 10x144)
		TF3, bits	4 x336 (alt. 20x144)
		TF4, bits	8 x336 (alt. 30x144)
		TF5, bits	9 x336 (alt. 45x144)
	TTI, ms		20 (alt. 40)
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		9516 (alt. 21624)
	Max number of bits/radio frame before rate matching		4758 (alt. 5406)
	RM attribute		140-180

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.30.1.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.30.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	~~{~~SF16 x 1 code x 1 time slot + SF2 x 1 code~~}~~ x 1 time slot
	Max. Number of data bits/radio frame	~~2466~~ 2340 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.44(alt. 0.40)~~0.52~~

6.10.3.4.1.30.2 Downlink

See clause 6.10.3.4.1.29.2.

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

6.10.3.4.1.31.1 Uplink

See clause ~~6.10.3.4.1.24.1.~~ 6.10.3.4.1.26.1

6.10.3.4.1.31.2 Downlink

6.10.3.4.1.31.2.1 Transport channel parameters

6.10.3.4.1.31.2.1.1 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
	AMD PDU 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	N/A (alt. 12x336)
		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)
	Max number of bits/radio frame before rate matching		8460 (alt. 8460)
	RM attribute		135-175

6.10.3.4.1.31.2.1.2 Transport channel parameters for ~~UL~~ DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.31.2.1.3 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))
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.31.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 2 time slots
	Max. Number of data bits/radio frame	4400 bits
	TFCI code word	16 bits
	Puncturing limit	0~~.~~48

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

6.10.3.4.1.32.1 Uplink

See ~~clause 6.10.3.4.1.24.1.~~ 6.10.3.4.1.26.1

6.10.3.4.1.32.2 Downlink

6.10.3.4.1.32.2.1 Transport channel parameters

6.10.3.4.1.32.2.1.1 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
	AMD PDU 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	N/A (alt. 16 x336)
		TF7, bits	N/A (alt. 20 x336)
		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)
	Max number of bits/radio frame before rate matching		12684 (alt. 12684)
	RM attribute		110-150

6.10.3.4.1.32.2.1.2 Transport channel parameters for ~~UL~~ DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.32.2.1.3 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))
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.32.2.2 Physical channel parameters

DPCH Downlink		Physical Configuration 1	Physical Configuration 2
	Midamble	256 chips	256 chips
	Codes and time slots	SF16 x 8 codes x 3 time slots	SF16 x 6 codes x 4 time slots + SF16 x 4 codes x 1 time slot (alt. SF1 x 1 code x 3 time slots)
	Max. Number of data bits/radio frame	6608 bits	7712 bits (alt. 13232 bits)
	TFCI code word	16 bits	16 bits
	Puncturing Limit	~~0,52~~0.48	0.60 (alt. 1)

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

6.10.3.4.1.33.1 Uplink

See clause 6.10.3.4.1.28.1.

6.10.3.4.1.33.2 Downlink

See clause 6.10.3.4.1.32.2.

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

6.10.3.4.1.34.1 Uplink

6.10.3.4.1.34.1.1 Transport channel parameters

6.10.3.4.1.34.1.1.1 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
	AMD PDU 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	N/A (alt. 16x336) ~~(alt. N/A)~~
		TF7, bits	N/A (alt. 20x336) ~~(alt. N/A)~~
		TF8, bits	N/A (alt. 24 x336) ~~(alt. N/A)~~
	TTI, ms		10 ~~20~~ (alt. 20 ~~10~~)
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		12684 (alt. 25368)
	Max number of bits/radio frame before rate matching		12684
	RM attribute		110-150

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.34.1.1.3 TFCS

TFCS size	~~18~~ 12 (alt.~~12~~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)) ~~(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))~~
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.34.1.2 Physical channel parameters

DPCH Uplink		Physical Configuration 1	Physical Configuration 2
	Midamble	256 chips	256 chips
	Codes and time slots	SF2 x 1 code x 3 time slots	SF2 x 1 code x 5 timeslots + SF4 x 1 code x 2 timeslots (alt. {SF2 x 1 code + SF4 x 1 code} x 4 timeslots)
	Max. Number of data bits/radio frame	6480 bits	13104 bits
	TFCI code word	16 bits	16 bits
	TPC	2 bits	2 bits
	Puncturing Limit	0.48	1

6.10.3.4.1.34.2 Downlink

See clause 6.10.3.4.1.32.2.

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

6.10.3.4.1.35.1 Uplink

6.10.3.4.1.35.1.1 Transport channel parameters

See clause ~~6.10.3.4.1.24.1.~~ 6.10.3.4.1.26.1.1

6.10.3.4.1.35.1.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	2064 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	~~{~~0.88~~}~~ (alt. 0.80)

6.10.3.4.1.35.2 Downlink

6.10.3.4.1.35.2.1 Transport channel parameters

6.10.3.4.1.35.2.1.1 Transport channel parameters for Interactive or background / DL:2048 kbps / PS RAB

			RAB
Higher Layer	RAB/Signalling RB		
RLC	Logical channel type		DTCH
	RLC mode		AM
	Payload sizes, bit		640
	Max data rate, bps		2048000
	AMD PDU header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		656
	TFS	TF0, bits	0x656
		TF1, bits	1x656
		TF2, bits	2x656
		TF3, bits	4 x656

Higher Layer	RAB/Signalling RB		**RAB**
		TF4, bits	8 x656
		TF5, bits	12x656
		TF6, bits	16x656
		TF7, bits	20x656
		TF8, bits	24x656
		TF9, bits	28x656
		TF10, bits	~~32~~ 31x656 (alt. 32x656)
		TF11, bits	N/A (alt. 36x656)
		TF12, bits	N/A (alt. 40x656)
		TF13, bits	N/A (alt. 44x656)
		TF14, bits	N/A (alt. 48x656)
		TF15, bits	N/A (alt. 52x656)
		TF16, bits	N/A (alt. 56x656)
		TF17, bits	N/A (alt. 60x656)
		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		~~64575~~ 62565(alt. 129141)
	Max number of bits/radio frame before rate matching		~~64575~~ 62565(alt. 64571)
	RM attribute		130-170

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.35.2.1.3 TFCS

TFCS size	~~22~~ 21 (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, TF~~0~~1), (TF12, TF~~0~~1), (TF13, TF~~0~~1), (TF14, TF~~0~~1), (TF15, TF~~0~~1), (TF16, TF~~0~~1), (TF17, TF~~0~~1)~~,~~ (TF18, TF~~0~~1))
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.35.2.2 Physical channel parameters

DPCH Downlink		Physical Configuration 1	Physical Configuration 2
	Midamble	256 chips	256 chips
	Codes and time slots	SF1 x 1 code x ~~12~~11 time slots	SF16 x 13 codes x 4 time slots + SF16 x 12 codes x 7 time slot
	Max. Number of data bits/radio frame	~~52976~~ 48560 bits (alt. 48544)	37520 bits (alt. 37504)
	TFCI code word	16 bits (alt. 32 bits)	16 bits (alt. 32 bits)
	Puncturing limit	0.76 (alt.0.72)~~0,80~~	0.56

6.10.3.4.1.36 Void

6.10.3.4.1.37 Void

~~6.10.3.4.1.36 Interactive or background / UL:128 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~

~~6.10.3.4.1.36.1 Uplink~~

~~See clause 6.10.3.4.1.28.1.~~

~~6.10.3.4.1.36.2 Downlink~~

~~See clause 6.10.3.4.1.35.2.~~

~~6.10.3.4.1.37 Interactive or background / UL:384 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH~~

~~6.10.3.4.1.37.1 Uplink~~

~~See clause 6.10.3.4.1.34.1.~~

~~6.10.3.4.1.37.2 Downlink~~

~~See clause 6.10.3.4.1.35.2.~~

~~6.10.2.4.1.38~~ 6.10.3.4.1.38 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

6.10.3.4.1.38.1 Uplink

6.10.3.4.1.38.1.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.1.1.1

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

See clause 6.10.3.4.1.23.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.38.1.1.4 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))~~
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	904 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.52 (alt. 0.48)~~0.56~~

6.10.3.4.1.38.2 Downlink

6.10.3.4.1.38.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

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

See clause 6.10.3.4.1.23.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.

6.10.3.4.1.38.2.1.4 TFCS

TFCS size	12
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3,8kbps 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	~~0,60~~0.52

6.10.3.4.1.38a Conversational / speech / 12.2 kbps / CS RAB + Interactive or background / UL:0 DL:0 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.38a.1 Uplink

6.10.3.4.1.38a.1.1 Transport channel parameters

6.10.3.4.1.38a.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.1.1.1.

6.10.3.4.1.38a.1.1.2 Transport channel parameters for Interactive or background / UL:0 kbps / PS RAB

Higher Layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		AM
	Payload sizes, bit		320 (alt. 128)
	Max data rate, bps		0
	AMD PDU header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		336 (alt. 144)
	TFS	TF0, bits	0x336 (alt 0x144)
	TTI, ms		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		0
	Max number of bits/radio frame before rate matching		0
	RM attribute		130-170

6.10.3.4.1.38a.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.38a.1.1.4 TFCS

TFCS size	6
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 0kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF1,TF0,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF1,TF0,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38a.1.2 Physical channel parameters.

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	452 bits
	TFCI code word	16 bits
	TPC	2 bit
	Puncturing Limit	~~0.72~~0.68

6.10.3.4.1.38a.2 Downlink

6.10.3.4.1.38a.2.1 Transport channel parameters

6.10.3.4.1.38a.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.38a.2.1.2 Transport channel parameters for Interactive or background / DL:0 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	0
	AMD PDU 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
	TTI, ms	20
	Coding type	TC
	CRC, bit	16
	Max number of bits/TTI after channel coding	0
	Max number of bits/radio frame before rate matching	0
	RM attribute	130-170

6.10.3.4.1.38a.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1

6.10.3.4.1.38a.2.1.4 TFCS

TFCS size	6
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 0kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF1,TF0,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF1,TF0,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38a.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	~~0.76~~0.68

6.10.3.4.1.38b Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.38b.1 Uplink

6.10.3.4.1.38b.1.1 Transport channel parameters

6.10.3.4.1.38b.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.1.1.1.

6.10.3.4.1.38b.1.1.2 Transport channel parameters for Interactive or background / UL:8 kbps / PS RAB

See clause 6.10.3.4.1.23a.1.1.1.

6.10.3.4.1.38b.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.38b.1.1.4 TFCS

TFCS size	12 (alt. 17)
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 8 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) (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,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))
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38b.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	452 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.48 (alt. 0.56)

6.10.3.4.1.38b.2 Downlink

6.10.3.4.1.38b.2.1 Transport channel parameters

6.10.3.4.1.38b.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.38b.2.1.2 Transport channel parameters for Interactive or background / DL:8 kbps / PS RAB

See clause 6.10.3.4.1.23.2.1.1

6.10.3.4.1.38b.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.38b.2.1.4 TFCS

TFCS size	12
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 8 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)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38b.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	0.52

6.10.3.4.1.38c Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.38c.1 Uplink

6.10.3.4.1.38c.1.1 Transport channel parameters

6.10.3.4.1.38c.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.1.1.1.

6.10.3.4.1.38c.1.1.2 Transport channel parameters for Interactive or background / UL:32 kbps / PS RAB

See clause 6.10.3.4.1.23d.1.1.1.

6.10.3.4.1.38c.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.38c.1.1.4 TFCS

TFCS size	18 (alt. 17)
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 32 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,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,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))
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38c.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	904 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.52 (alt. 0.52)

6.10.3.4.1.38c.2 Downlink

6.10.3.4.1.38c.2.1 Transport channel parameters

6.10.3.4.1.38c.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.38c.2.1.2 Transport channel parameters for Interactive or background / DL:32 kbps / PS RAB

See clause 6.10.3.4.1.23d.2.1.1.

6.10.3.4.1.38c.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.38c.2.1.4 TFCS

TFCS size	18
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 32 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,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)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38c.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 4 codes x 1 time slot
	Max. Number of data bits/radio frame	960
	TFCI code word	16 bits
	Puncturing limit	0.56

6.10.3.4.1.38d Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.38d.1 Uplink

6.10.3.4.1.38d.1.1 Transport channel parameters

6.10.3.4.1.38d.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.1.1.1.

6.10.3.4.1.38d.1.1.2 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB + UL:64 kbps / PS RAB

Higher Layer	RAB/Signalling RB		**RAB**	**RAB**
RLC	Logical channel type		DTCH	DTCH
	RLC mode		AM	AM
	Payload sizes, bit		320 (alt. 128)	320 (alt. 128)
	Max data rate, bps		64000	64000
	AMD PDU header, bit		16	16
MAC	MAC header, bit		4	4
	MAC multiplexing		2 logical channel multiplexing	
Layer 1	TrCH type		DCH	
	TB sizes, bit		340 (alt. 148)	
	TFS	TF0, bits	0x340 (alt 0x148)	
		TF1, bits	1x340 (alt 1x148)	
		TF2, bits	2x340 (alt 3x148)	
		TF3, bits	3x340 (alt 7x148)	
		TF4, bits	4x340 (alt 10x148)	
	TTI, ms		20	
	Coding type		TC	
	CRC, bit		16	
	Max number of bits/TTI after channel coding		4284 (alt. 4932)	
	Max number of bits/radio frame before rate matching		2142 (alt. 2466)	
	RM attribute		130-170	

6.10.3.4.1.38d.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.38d.1.1.4 TFCS

TFCS size	30
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB + 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)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38d.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	2064 bits
	TFCI code word	16 bit
	TPC	2 bits
	Puncturing Limit	0.72 (alt. 0.64)

6.10.3.4.1.38d.2 Downlink

6.10.3.4.1.38d.2.1 Transport channel parameters

6.10.3.4.1.38d.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.38d.2.1.2 Transport channel parameters for Interactive or background / DL:64 kbps / PS RAB + DL:64 kbps / PS RAB

Higher Layer	RAB/Signalling RB		**RAB**	**RAB**
RLC	Logical channel type		DTCH	DTCH
	RLC mode		AM	AM
	Payload sizes, bit		320	320
	Max data rate, bps		64000	64000
	AMD PDU header, bit		16	16
MAC	MAC header, bit		4	4
	MAC multiplexing		2 logical channel multiplexing	
Layer 1	TrCH type		DCH	
	TB sizes, bit		340	
	TFS	TF0, bits	0x340	
		TF1, bits	1x340	
		TF2, bits	2x340	
		TF3, bits	3x340	
		TF4, bits	4x340	
	TTI, ms		20	
	Coding type		TC	
	CRC, bit		16	
	Max number of bits/TTI after channel coding		4284	
	Max number of bits/radio frame before rate matching		2142	
	RM attribute		130-170	

6.10.3.4.1.38d.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.38d.2.1.4 TFCS

TFCS size	30
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB + 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)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38d.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 7 codes x 1 time slot
	Max. Number of data bits/radio frame	1916 bits
	TFCI code word	16 bits
	Puncturing limit	0.68

6.10.3.4.1.38e Conversational / speech / UL:(12.2, 7.95, 5.9, 4.75) DL:(12.2, 7.95, 5.9, 4.75) kbps / CS RAB + Interactive or background / UL:0 DL:0 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.38e.1 Uplink

6.10.3.4.1.38e.1.1 Transport channel parameters

6.10.3.4.1.38e.1.1.1 Transport channel parameters for Conversational / speech / UL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB

See clause 6.10.3.4.1.4a.1.1.1.

6.10.3.4.1.38e.1.1.2 Transport channel parameters for Interactive or background / UL:0 kbps / PS RAB

See clause 6.10.3.4.1.38a.1.1.2.

6.10.3.4.1.38e.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.38e.1.1.4 TFCS

TFCS size	12
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 0 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38e.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	452 bits
	TFCI code word	16 bits
	TPC	2 bit
	Puncturing Limit	0.68

6.10.3.4.1.38e.2 Downlink

6.10.3.4.1.38e.2.1 Transport channel parameters

6.10.3.4.1.38e.2.1.1 Transport channel parameters for Conversational / speech / DL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB

See clause 6.10.3.4.1. 4a.2.1.1.

6.10.3.4.1.38e.2.1.2 Transport channel parameters for Interactive or background / DL:0 kbps / PS RAB

See clause 6.10.3.4.1.38a.2.1.2

6.10.3.4.1.38e.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1

6.10.3.4.1.38e.2.1.4 TFCS

TFCS size	12
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 0 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1),
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38e.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	0.68

6.10.3.4.1.38f Conversational / speech / (12.2, 7.95, 5.9, 4.75) kbps / CS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.38f.1 Uplink

6.10.3.4.1.38f.1.1 Transport channel parameters

6.10.3.4.1.38f.1.1.1 Transport channel parameters for Conversational / speech / UL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB

See clause 6.10.3.4.1.4a.1.1.1.

6.10.3.4.1.38f.1.1.2 Transport channel parameters for Interactive or background / UL:8 kbps / PS RAB

See clause 6.10.3.4.1.23a.1.1.1.

6.10.3.4.1.38f.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.38f.1.1.4 TFCS

TFCS size	24 (alt. 32)
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 8 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1) (alt. (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0), (TF2,TF1,TF0,TF2,TF0), (TF3,TF2,TF0,TF2,TF0), (TF4,TF3,TF0,TF2,TF0), (TF5,TF4,TF1,TF2,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1) (TF0,TF0,TF0,TF2,TF1), (TF1,TF0, TF0, TF2, TF1))
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38f.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	452 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.48 (alt.0.56)

6.10.3.4.1.38f.2 Downlink

6.10.3.4.1.38f.2.1 Transport channel parameters

6.10.3.4.1.38f.2.1.1 Transport channel parameters for Conversational / speech / DL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB

See clause 6.10.3.4.1.4a.2.1.1.

6.10.3.4.1.38f.2.1.2 Transport channel parameters for Interactive or background / DL:8 kbps / PS RAB

See clause 6.10.3.4.1.23.2.1.1

6.10.3.4.1.38f.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1

6.10.3.4.1.38f.2.1.4 TFCS

TFCS size	24
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 8 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38f.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	0.52

6.10.3.4.1.38g Conversational / speech / (12.2, 7.95, 5.9, 4.75) kbps / CS RAB + Interactive or background / UL:16 DL:16 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.38g.1 Uplink

6.10.3.4.1.38g.1.1 Transport channel parameters

6.10.3.4.1.38g.1.1.1 Transport channel parameters for Conversational / speech / UL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB

See clause 6.10.3.4.1. 4a.1.1.1.

6.10.3.4.1.38g.1.1.2 Transport channel parameters for Interactive or background / UL:16 kbps / PS RAB

See clause 6.10.3.4.1. 23b.1.1.1.

6.10.3.4.1.38g.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.38g.1.1.4 TFCS

TFCS size	32 (alt. 31)
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 16 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0), (TF3,TF2,TF0,TF2,TF0), (TF4,TF3,TF0,TF2,TF0), (TF5,TF4,TF1,TF2,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1), (TF0,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF2,TF1), (TF3,TF2,TF0,TF2,TF1), (TF4,TF3,TF0,TF2,TF1), (TF5,TF4,TF1,TF2,TF1) (alt. (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0), (TF3,TF2,TF0,TF2,TF0), (TF4,TF3,TF0,TF2,TF0), (TF5,TF4,TF1,TF2,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1), (TF0,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF2,TF1), (TF3,TF2,TF0,TF2,TF1), (TF4,TF3,TF0,TF2,TF1))
Note 1: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise. Note 2: The alt. TFCS is used when the 16Kbps RAB alt. is used.	

6.10.3.4.1.38g.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot + SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	664 bits (alt. 696 bits)
	TFCI code word	32 bits (alt. 16 bits)
	TPC	2 bits
	Puncturing Limit	0.56 (alt. 0.60)

6.10.3.4.1.38g.2 Downlink

6.10.3.4.1.38g.2.1 Transport channel parameters

6.10.3.4.1.38g.2.1.1 Transport channel parameters for Conversational / speech / DL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB

See clause 6.10.3.4.1.4a.2.1.1.

6.10.3.4.1.38g.2.1.2 Transport channel parameters for Interactive or background / DL:16 kbps / PS RAB

See clause 6.10.3.4.1.23b.2.1.1.

6.10.3.4.1.38g.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1

6.10.3.4.1.38g.2.1.4 TFCS

TFCS size	36
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 16 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0), (TF2,TF1,TF0,TF2,TF0), (TF3,TF2,TF0,TF2,TF0), (TF4,TF3,TF0,TF2,TF0), (TF5,TF4,TF1,TF2,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1), (TF0,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF2,TF1), (TF2,TF1,TF0,TF2,TF1), (TF3,TF2,TF0,TF2,TF1), (TF4,TF3,TF0,TF2,TF1), (TF5,TF4,TF1,TF2,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38g.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 3 codes x 1 time slot
	Max. Number of data bits/radio frame	700 bits
	TFCI code word	32 bits
	Puncturing limit	0.56

6.10.3.4.1.38h Conversational / speech / (12.2, 7.95, 5.9, 4.75) kbps / CS RAB + Interactive or background / UL:32 DL:32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.38h.1 Uplink

6.10.3.4.1.38h.1.1 Transport channel parameters

6.10.3.4.1.38h.1.1.1 Transport channel parameters for Conversational / speech / UL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB

See clause 6.10.3.4.1.4a.1.1.1.

6.10.3.4.1.38h.1.1.2 Transport channel parameters for Interactive or background / UL:32 kbps / PS RAB

See clause 6.10.3.4.1.23d.1.1.1.

6.10.3.4.1.38h.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.38h.1.1.4 TFCS

TFCS size	32
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 32 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1, TF1), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0), (TF2,TF1,TF0,TF2,TF0), (TF3,TF2,TF0,TF2,TF0), (TF4,TF3,TF0,TF2,TF0), (TF5,TF4,TF1,TF2,TF0), (TF0,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF2,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38h.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF4 x 1 code x 1 time slot + SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	1084 bits
	TFCI code word	32 bits
	TPC	2 bits
	Puncturing Limit	0.68 (alt.0.60)

6.10.3.4.1.38h.2 Downlink

6.10.3.4.1.38h.2.1 Transport channel parameters

6.10.3.4.1.38h.2.1.1 Transport channel parameters for Conversational / speech / DL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB

See clause 6.10.3.4.1.4a.2.1.1.

6.10.3.4.1.38h.2.1.2 Transport channel parameters for Interactive or background / DL:32 kbps / PS RAB

See clause 6.10.3.4.1.23d.2.1.1.

6.10.3.4.1.38h.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1

6.10.3.4.1.38h.2.1.4 TFCS

TFCS size	32
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 32 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF1,TF0,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1, TF1), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0), (TF2,TF1,TF0,TF2,TF0), (TF3,TF2,TF0,TF2,TF0), (TF4,TF3,TF0,TF2,TF0), (TF5,TF4,TF1,TF2,TF0), (TF0,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF2,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38h.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 4 codes x 1 time slot
	Max. Number of data bits/radio frame	944
	TFCI code word	32 bits
	Puncturing limit	~~0.52~~0.60

6.10.3.4.1.38i Conversational / speech / (12.2, 7.95, 5.9, 4.75) kbps / CS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.38i.1 Uplink

6.10.3.4.1.38i.1.1 Transport channel parameters

6.10.3.4.1.38i.1.1.1 Transport channel parameters for Conversational / speech / UL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB

See clause 6.10.3.4.1. 4a.1.1.1.

6.10.3.4.1.38i.1.1.2 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB

See clause 6.10.3.4.1.26.1.1.1.

6.10.3.4.1.38i.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.38i.1.1.4 TFCS

TFCS size	48
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,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0), (TF2,TF1,TF0,TF2,TF0), (TF3,TF2,TF0,TF2,TF0), (TF4,TF3,TF0,TF2,TF0), (TF5,TF4,TF1,TF2,TF0), (TF0,TF0,TF0,TF4,TF0), (TF1,TF0,TF0,TF4,TF0), (TF2,TF1,TF0,TF4,TF0), (TF3,TF2,TF0,TF4,TF0), (TF4,TF3,TF0,TF4,TF0), (TF5,TF4,TF1,TF4,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1), (TF0,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF2,TF1), (TF2,TF1,TF0,TF2,TF1), (TF3,TF2,TF0,TF2,TF1), (TF4,TF3,TF0,TF2,TF1), (TF5,TF4,TF1,TF2,TF1), (TF0,TF0,TF0,TF4,TF1), (TF1,TF0,TF0,TF4,TF1), (TF2,TF1,TF0,TF4,TF1), (TF3,TF2,TF0,TF4,TF1), (TF4,TF3,TF0,TF4,TF1), (TF5,TF4,TF1,TF4,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38i.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	1936 bits
	TFCI code word	32 bit
	TPC	2 bits
	Puncturing Limit	0.68 (alt.0.60)

6.10.3.4.1.38i.2 Downlink

6.10.3.4.1.38i.2.1 Transport channel parameters

6.10.3.4.1.38i.2.1.1 Transport channel parameters for Conversational / speech / DL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB

See clause 6.10.3.4.1.4a.2.1.1.

6.10.3.4.1.38i.2.1.2 Transport channel parameters for Interactive or background / DL:64 kbps / PS RAB

See clause 6.10.3.4.1.25.2.1.1.

6.10.3.4.1.38i.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1

6.10.3.4.1.38i.2.1.4 TFCS

TFCS size	60
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,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0), (TF2,TF1,TF0,TF2,TF0), (TF3,TF2,TF0,TF2,TF0), (TF4,TF3,TF0,TF2,TF0), (TF5,TF4,TF1,TF2,TF0), (TF0,TF0,TF0,TF3,TF0), (TF1,TF0,TF0,TF3,TF0), (TF2,TF1,TF0,TF3,TF0), (TF3,TF2,TF0,TF3,TF0), (TF4,TF3,TF0,TF3,TF0), (TF5,TF4,TF1,TF3,TF0), (TF0,TF0,TF0,TF4,TF0), (TF1,TF0,TF0,TF4,TF0), (TF2,TF1,TF0,TF4,TF0), (TF3,TF2,TF0,TF4,TF0), (TF4,TF3,TF0,TF4,TF0), (TF5,TF4,TF1,TF4,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1), (TF0,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF2,TF1), (TF2,TF1,TF0,TF2,TF1), (TF3,TF2,TF0,TF2,TF1), (TF4,TF3,TF0,TF2,TF1), (TF5,TF4,TF1,TF2,TF1), (TF0,TF0,TF0,TF3,TF1), (TF1,TF0,TF0,TF3,TF1), (TF2,TF1,TF0,TF3,TF1), (TF3,TF2,TF0,TF3,TF1), (TF4,TF3,TF0,TF3,TF1), (TF5,TF4,TF1,TF3,TF1), (TF0,TF0,TF0,TF4,TF1), (TF1,TF0,TF0,TF4,TF1), (TF2,TF1,TF0,TF4,TF1), (TF3,TF2,TF0,TF4,TF1), (TF4,TF3,TF0,TF4,TF1), (TF5,TF4,TF1,TF4,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38i.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 7 codes x 1 time slot
	Max. Number of data bits/radio frame	1900 bits
	TFCI code word	32 bits
	Puncturing limit	0.68

6.10.3.4.1.38j Conversational / speech / (12.2, 7.95, 5.9, 4.75) kbps / CS RAB + Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.38j.1 Uplink

See clause 6.10.3.4.1.38i.1

6.10.3.4.1.38j.2 Downlink

6.10.3.4.1.38j.2.1 Transport channel parameters

6.10.3.4.1.38j.2.1.1 Transport channel parameters for Conversational / speech / DL: (12.2, 7.95, 5.9, 4.75) kbps / CS RAB

See clause 6.10.3.4.1.4a.2.1.1.

6.10.3.4.1.38j.2.1.2 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB

See clause 6.10.3.4.1.27.2.1.1.

6.10.3.4.1.38j.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1

6.10.3.4.1.38j.2.1.4 TFCS

TFCS size	60
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,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0), (TF2,TF1,TF0,TF2,TF0), (TF3,TF2,TF0,TF2,TF0), (TF4,TF3,TF0,TF2,TF0), (TF5,TF4,TF1,TF2,TF0), (TF0,TF0,TF0,TF3,TF0), (TF1,TF0,TF0,TF3,TF0), (TF2,TF1,TF0,TF3,TF0), (TF3,TF2,TF0,TF3,TF0), (TF4,TF3,TF0,TF3,TF0), (TF5,TF4,TF1,TF3,TF0), (TF0,TF0,TF0,TF4,TF0), (TF1,TF0,TF0,TF4,TF0), (TF2,TF1,TF0,TF4,TF0), (TF3,TF2,TF0,TF4,TF0), (TF4,TF3,TF0,TF4,TF0), (TF5,TF4,TF1,TF4,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1), (TF0,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF2,TF1), (TF2,TF1,TF0,TF2,TF1), (TF3,TF2,TF0,TF2,TF1), (TF4,TF3,TF0,TF2,TF1), (TF5,TF4,TF1,TF2,TF1), (TF0,TF0,TF0,TF3,TF1), (TF1,TF0,TF0,TF3,TF1), (TF2,TF1,TF0,TF3,TF1), (TF3,TF2,TF0,TF3,TF1), (TF4,TF3,TF0,TF3,TF1), (TF5,TF4,TF1,TF3,TF1), (TF0,TF0,TF0,TF4,TF1), (TF1,TF0,TF0,TF4,TF1), (TF2,TF1,TF0,TF4,TF1), (TF3,TF2,TF0,TF4,TF1), (TF4,TF3,TF0,TF4,TF1), (TF5,TF4,TF1,TF4,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.38j.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 6 codes x 2 time slots
	Max. Number of data bits/radio frame	3280 bits
	TFCI code word	32 bits
	Puncturing limit	0.64

6.10.3.4.1.39 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

6.10.3.4.1.39.1 Uplink

See clause 6.10.3.4.1.38.1.

6.10.3.4.1.39.2 Downlink

6.10.3.4.1.39.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

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

See clause 6.10.3.4.1.25.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.39.2.1.4 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.39.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 8 codes x 1 time slot
	Max. Number of data bits/radio frame	1936 bits
	TFCI code word	16 bits
	Puncturing limit	0.68

6.10.3.4.1.40 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

6.10.3.4.1.40.1 Uplink

6.10.3.4.1.40.1.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.1.1.1.

6.10.3.4.1.40.1.1.2 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB

See clause 6.10.3.4.1.~~24~~26.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.40.1.1.4 TFCS

6.10.3.4.1.40.1.1.4.1 TFCS (one CCTrCH case)

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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.40.1.1.4.2 TFCS (two CCTrCH case)

6.10.3.4.1.40.1.1.4.2.1 TFCS (conversational + SRB)

TFCS size	6
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, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.40.1.1.4.2.2 TFCS (Interactive or background)

TFCS size	5
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF0, TF0, TF0, TF4, TF0)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.40.1.2 Physical channel parameters

6.10.3.4.1.40.1.2.1 Physical channel (one CCTrCH case)

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	1808 bits
	TFCI code word	16 bit
	TPC	2 bits
	Puncturing Limit	0.64 (alt. 0.56)~~0.68~~

6.10.3.4.1.40.1.2.2 Physical channel (two CCTrCH case)

6.10.3.4.1.40.1.2.2.1 Physical channel (conversational + SRB)

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	452 bits
	TFCI code word	16 bits
	TPC	2 bit
	Puncturing Limit	0.68

6.10.3.4.1.40.1.2.2.2 Physical channel (Interactive or background)

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	1808 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.84 (alt. 0.72)

6.10.3.4.1.40.2 Downlink

~~See clause 6.10.3.4.1.39.2.~~

6.10.3.4.1.40.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

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

See clause 6.10.3.4.1.25.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.40.2.1.4 TFCS

6.10.3.4.1.40.2.1.4.1 TFCS (one CCTrCH case)

See Clause 6.10.3.4.1.39.2.1.4.

6.10.3.4.1.40.2.1.4.2 TFCS (two CCTrCH case)

6.10.3.4.1.40.2.1.4.2.1 TFCS (conversational + SRB)

TFCS size	6
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, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.40.2.1.4.2.2 TFCS (Interactive or background)

TFCS size	5
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF0, TF0, TF0, TF4, TF0)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.40.2.2 Physical channel parameters

6.10.3.4.1.40.2.2.1 Physical channel parameters (one CCTrCH)

See Clause 6.10.3.4.1.39.2.2

6.10.3.4.1.40.2.2.2 Physical channel parameters (two CCTrCHs)

6.10.3.4.1.40.2.2.2.1 Physical channel parameters (conversational + SRB)

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	0.68

6.10.3.4.1.40.2.2.2.2 Physical channel parameters (Interactive or background)

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 5 codes x 1 time slot
	Max. Number of data bits/radio frame	1204 bits
	TFCI code word	16 bits
	Puncturing limit	0.56

6.10.3.4.1.41 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

6.10.3.4.1.41.1 Uplink

See clause 6.10.3.4.1.40.1.

6.10.3.4.1.41.2 Downlink

6.10.3.4.1.41.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.41.2.1.2 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB

See clause 6.10.3.4.1.27.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.41.2.1.4 TFCS

6.10.3.4.1.41.2.1.4.1 TFCS (one CCTrCH case)

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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.41.2.1.4.2 TFCS (two CCTrCH case)

6.10.3.4.1.41.2.1.4.2.1 TFCS (conversational + SRB)

TFCS size	6
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, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.41.2.1.4.2.2 TFCS (Interactive or background)

TFCS size	5
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 128 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF0, TF0, TF0, TF4, TF0)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.41.2.2 Physical channel parameters

6.10.3.4.1.41.2.2.1 Physical channel parameters (one CCTrCH)

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x ~~10~~ 5codes x ~~1~~ 2time slots
	Max. Number of data bits/radio frame	2744 bits
	TFCI code word	16 bits
	Puncturing limit	~~0,~~56~~0~~.52

6.10.3.4.1.41.2.2.2 Physical channel parameters (two CCTrCHs)

6.10.3.4.1.41.2.2.2.1 Physical channel parameters (conversational + SRB)

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	0.64

6.10.3.4.1.41.2.2.2.2 Physical channel parameters (Interactive or background)

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 1 time slot
	Max. Number of data bits/radio frame	2192 bits
	TFCI code word	16 bits
	Puncturing limit	0.48

6.10.3.4.1.42 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

6.10.3.4.1.42.1 Uplink

~~See clause 6.10.3.4.1.40.1.~~

6.10.3.4.1.42.1.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.1.1.1.

6.10.3.4.1.42.1.1.2 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB

See clause 6.10.3.4.1.26.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.42.1.1.4 TFCS

See Clause 6.10.3.4.1.40.1.1.4.1.

6.10.3.4.1.42.1.2 Physical channel parameters

See Clause 6.10.3.4.1.40.1.2.1

6.10.3.4.1.42.2 Downlink

6.10.3.4.1.42.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1

6.10.3.4.1.42.2.1.2 Transport channel parameters for Interactive or background / DL:256 kbps / PS RAB

See clause 6.10.3.4.1.31.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.42.2.1.4 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))
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.42.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	~~SF16 x 10 codes x 2 time slots~~ SF16 x 8 codes x 2 time slots +SF16 x 4 codes x 1 time slot
	Max. Number of data bits/radio frame	5504 bits (alt. 5488)
	TFCI code word	16 bits (alt. 32)
	Puncturing limit	0~~,~~.60

6.10.3.4.1.43 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

6.10.3.4.1.43.1 Uplink

See clause 6.10.3.4.1.40.1.

6.10.3.4.1.43.2 Downlink

6.10.3.4.1.43.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.43.2.1.2 Transport channel parameters for Interactive or background / DL:384 kbps / PS RAB

See clause 6.10.3.4.1.32.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.43.2.1.4 TFCS

6.10.3.4.1.43.2.1.4.1 TFCS (one CCTrCH case)

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))
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.43.2.1.4.2 TFCS (two CCTrCH case)

6.10.3.4.1.43.2.1.4.2.1 TFCS (conversational + SRB)

TFCS size	6
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, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.43.2.1.4.2.2 TFCS (Interactive or background)

TFCS size	6 (alt. 9)
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 384 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF0, TF0, TF0, TF5, TF0) (alt. (TF0, TF0, TF0, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF0, TF0, TF0, TF5, TF0), (TF0, TF0, TF0, TF6, TF0), (TF0, TF0, TF0, TF7, TF0), (TF0, TF0, TF0, TF8, TF0))
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.43.2.2 Physical channel parameters

6.10.3.4.1.43.2.2.1 Physical channel parameters (one CCTrCH)

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 3 time slots
	Max. Number of data bits/radio frame	6592 bits
	TFCI code word	32 bits
	Puncturing limit	0.48

6.10.3.4.1.43.2.2.2 Physical channel parameters (two CCTrCHs)

6.10.3.4.1.43.2.2.2.1 Physical channel parameters (conversational + SRB)

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	0.60

6.10.3.4.1.43.2.2.2.2 Physical channel parameters (Interactive or background)

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 3 time slots
	Max. Number of data bits/radio frame	6608 bits
	TFCI code word	16 bits
	Puncturing limit	0,52

6.10.3.4.1.44 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

6.10.3.4.1.44.1 Uplink

6.10.3.4.1.44.1.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.1.1.1.

6.10.3.4.1.44.1.1.2 Transport channel parameters for Interactive or background / UL:128 kbps / PS RAB

See clause 6.10.3.4.1.28.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.44.1.1.4 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

6.10.3.4.1.44.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	{SF8 x 1 code + SF2 x 1 code} x 1 time slot
	Max. Number of data bits/radio frame	2616~~2724~~ bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	~~0.56~~0.52 (alt. 0.44)

6.10.3.4.1.44.2 Downlink

6.10.3.4.1.44.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.44.2.1.2 Transport channel parameters for Interactive or background / DL:2048 kbps / PS RAB

See clause 6.10.3.4.1.35.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.44.2.1.4 TFCS

TFCS size	66 (alt. 114)
TFCS	(RAB subflow#1, RAB subflow#2, RAB subflow#3, 2048 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))
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise	

6.10.3.4.1.44.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 12 codes x 11 time slots~~SF1 x 1 code x time slots~~
	Max. Number of data bits/radio frame	36400 bits
	TFCI code word	32 bits
	Puncturing limit	0~~,~~.52

6.10.3.4.1.45 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

6.10.3.4.1.45.1 Uplink

6.10.3.4.1.45.1.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.1.1.1.

6.10.3.4.1.45.1.1.2 Transport channel parameters for Streaming / unknown / UL:57.6 kbps / CS RAB

See clause 6.10.3.4.1.17.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.45.1.1.4 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise	

6.10.3.4.1.45.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	{SF8 x 1 code x 1 time slot + SF4 x 1 code} x 1 time slot
	Max. Number of data bits/radio frame	1428 1392bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.560.60

6.10.3.4.1.45.2 Downlink

6.10.3.4.1.45.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.45.2.1.2 Transport channel parameters for Streaming / unknown / DL:57.6 kbps / CS RAB

See clause 6.10.3.4.1.17.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.45.2.1.4 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise	

6.10.3.4.1.45.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 6 codes x 1 time slot
	Max. Number of data bits/radio frame	1448 bits
	TFCI code word	16 bits
	Puncturing limit	0.560,6

6.10.3.4.1.46 Void

6.10.3.4.1.47 Void

6.10.3.4.1.48 Void

6.10.3.4.1.46 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

6.10.3.4.1.46.1 Uplink

See clause 6.10.3.4.1.4.1.

6.10.3.4.1.46.2 Downlink

6.10.3.4.1.46.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.46.2.1.2 Transport channel parameters for Streaming / unknown / DL:64 kbps / CS or PS RAB

See clause 6.10.3.4.1.18.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.46.2.1.4 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)

6.10.3.4.1.46.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 1 time slot
	Max. Number of data bits/radio frame	2192 bits
	TFCI code word	16 bits
	Puncturing limit	0,8

6.10.3.4.1.47 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

6.10.3.4.1.47.1 Uplink

See clause 6.10.3.4.1.4.1.

6.10.3.4.1.47.2 Downlink

6.10.3.4.1.47.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.47.2.1.2 Transport channel parameters for Streaming / unknown / DL:128 kbps / CS or PS RAB

See clause 6.10.3.4.1.20.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.47.2.1.4 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)

6.10.3.4.1.47.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 10 codes x 1 time slot
	Max. Number of data bits/radio frame	2728 bits
	TFCI code word	32 bits
	Puncturing limit	0,56

6.10.3.4.1.48 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

6.10.3.4.1.48.1 Uplink

See clause 6.10.3.4.1.4.1.

6.10.3.4.1.48.2 Downlink

6.10.3.4.1.48.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

~~6.10.3.4.1.48.2.1.2 Transport channel parameters for Streaming / unknown / DL:384 kbps / CS or PS RAB~~

~~See clause 6.10.3.4.1.22.2.1.1.~~

~~6.10.3.4.1.48.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.2.1.1.~~

~~6.10.3.4.1.48.2.1.4 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)~~

~~6.10.3.4.1.48.2.2 Physical channel parameters~~

~~DPCH Downlink~~	~~Midamble~~	~~256 chips~~
	~~Codes and time slots~~	~~SF16 x 10 codes x 3 time slots~~
	~~Max. Number of data bits/radio frame~~	~~8248 bits~~
	~~TFCI code word~~	~~32 bits~~
	~~Puncturing limit~~	~~0,64~~

6.10.3.4.1.49 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

6.10.3.4.1.49.1 Uplink

6.10.3.4.1.49.1.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.1.1.1.

6.10.3.4.1.49.1.1.2 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.49.1.1.4 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise	

6.10.3.4.1.49.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	2064 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.72

6.10.3.4.1.49.2 Downlink

6.10.3.4.1.49.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.49.2.1.2 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.49.2.1.4 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise	

6.10.3.4.1.49.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 1 time slot
	Max. Number of data bits/radio frame	2192 bits
	TFCI code word	16 bits
	Puncturing limit	~~0,88~~0.76

6.10.3.4.1.49a Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB + Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.49a.1 Uplink

6.10.3.4.1.49a.1.1 Transport channel parameters

6.10.3.4.1.49a.1.1.1 Transport channel parameters for Conversational / speech / UL: (12.2 7.95 5.9 4.75) kbps / CS RAB

See clause 6.10.3.4.1.4a.1.1.1.

6.10.3.4.1.49a.1.1.2 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.1.1.1.

6.10.3.4.1.49a.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.49a.1.1.4 TFCS

TFCS size	24
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,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.49a.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	2064 bits
	TFCI code word	16 bit
	TPC	2 bits
	Puncturing Limit	0.72

6.10.3.4.1.49a.2 Downlink

6.10.3.4.1.49a.2.1 Transport channel parameters

6.10.3.4.1.49a.2.1.1 Transport channel parameters for Conversational / speech / DL: (12.2 7.95 5.9 4.75) kbps / CS RAB

See clause 6.10.3.4.1.4a.2.1.1.

6.10.3.4.1.49a.2.1.2 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.2.1.1.

6.10.3.4.1.49a.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1

6.10.3.4.1.49a.2.1.4 TFCS

TFCS size	24
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,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.49a.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 7 codes x 1 time slot
	Max. Number of data bits/radio frame	1916 bits
	TFCI code word	16 bits
	Puncturing limit	0.68

6.10.3.4.1.50 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

6.10.3.4.1.50.1 Uplink

6.10.3.4.1.50.1.1 Transport channel parameters

6.10.3.4.1.50.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.~~5.~~4.1.13.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.50.1.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise	

6.10.3.4.1.50.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF~~1~~2 x 1 code x 1time slot + SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	~~3616~~ 2784bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.60~~0.88~~

6.10.3.4.1.50.2 Downlink

6.10.3.4.1.50.2.1 Transport channel parameters

6.10.3.4.1.50.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.50.2.1.3 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise	

6.10.3.4.1.50.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x ~~11~~ 6codes x ~~1~~2 time slots
	Max. Number of data bits/radio frame	~~2668~~ 2912bits
	TFCI code word	16 bits
	Puncturing limit	0~~.~~.64

6.10.3.4.1.51 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

6.10.3.4.1.51.1 Uplink

6.10.3.4.1.51.1.1 Transport channel parameters

6.10.3.4.1.51.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.1.1.1.

6.10.3.4.1.51.1.1.2 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB

See clause 6.10.3.4.1.~~24~~26.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.51.1.1.4 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise	

6.10.3.4.1.51.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	2064 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.44 (alt.0.40)

6.10.3.4.1.51.2 Downlink

6.10.3.4.1.51.2.1 Transport channel parameters

6.10.3.4.1.51.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.2.1.1.

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

See clause 6.10.3.4.1.25.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.51.2.1.4 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise	

6.10.3.4.1.51.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 1 time slot
	Max. Number of data bits/radio frame	2192 bits
	TFCI code word	16 bits
	Puncturing limit	0.48

6.10.3.4.1.51a Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or Background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.51a.1 Uplink

6.10.3.4.1.51a.1.1 Transport channel parameters

6.10.3.4.1.51a.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.1.1.1.

6.10.3.4.1.51a.1.1.2 Transport channel parameters for Interactive or Background / UL:8 kbps / PS RAB

See clause 6.10.3.4.1.23a.1.1.1.

6.10.3.4.1.51a.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.51a.1.1.4 TFCS

TFCS size	8 (alt. 12)
TFCS	(64 kbps Conversational RAB, 8 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1) (alt. (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF2, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF0, TF2, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF2, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1), (TF1, TF2, TF1))
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.51a.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	2064 bits
	TFCI code word	16 bit
	TPC	2 bits
	Puncturing Limit	0.76

6.10.3.4.1.51a.2 Downlink

6.10.3.4.1.51a.2.1 Transport channel parameters

6.10.3.4.1.51a.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / PS RAB

See clause 6.10.3.4.1.13.2.1.1.

6.10.3.4.1.51a.2.1.2 Transport channel parameters for Interactive or Background / DL:8 kbps / PS RAB

See clause 6.10.3.4.1.23.2.1.1

6.10.3.4.1.51a.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.51a.2.1.4 TFCS

TFCS size	8
TFCS	(64 kbps Conversational RAB, 8 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.51a.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 6 codes x 1 time slot
	Max. Number of data bits/radio frame	1640 bits
	TFCI code word	16 bits
	Puncturing limit	0.60

6.10.3.4.1.51b Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or Background / UL:16 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.51b.1 Uplink

6.10.3.4.1.51b.1.1 Transport channel parameters

6.10.3.4.1.51b.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.1.1.1.

6.10.3.4.1.51b.1.1.2 Transport channel parameters for Interactive or Background / UL:16 kbps / PS RAB

See clause 6.10.3.4.1.23b.1.1.1

6.10.3.4.1.51b.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.51b.1.1.4 TFCS

TFCS size	12
TFCS	(64 kbps Conversational RAB, 16 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF2, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF0, TF2, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF2, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1), (TF1, TF2, TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.51b.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	2064 bits
	TFCI code word	16 bit
	TPC	2 bits
	Puncturing Limit	~~0.72~~0.68

6.10.3.4.1.51b.2 Downlink

See clause 6.10.3.4.1.51.2.

6.10.3.4.1.52 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

6.10.3.4.1.52.1 Uplink

See clause 6.10.3.4.1.51.1.

6.10.3.4.1.52.2 Downlink

6.10.3.4.1.52.2.1 Transport channel parameters

6.10.3.4.1.52.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.2.1.1.

6.10.3.4.1.52.2.1.2 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB

See clause 6.10.3.4.1.27.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.52.2.1.4 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise	

6.10.3.4.1.52.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	{SF16 x 8 codes x 1 time slot} + {SF16 x 5 codes x 1 time slot}
	Max. Number of data bits/radio frame	3156 bits
	TFCI code word	16 bits
	Puncturing limit	0.44

6.10.3.4.1.53 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

6.10.3.4.1.53.1 Uplink

6.10.3.4.1.53.1.1 Transport channel parameters

6.10.3.4.1.53.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.1.1.1.

6.10.3.4.1.53.1.1.2 Transport channel parameters for Interactive or background / UL:128 kbps / PS RAB

See clause 6.10.3.4.1.28.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.53.1.1.4 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)
Note: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise	

6.10.3.4.1.53.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	~~{~~SF2 x 1 code x ~~1~~ 2 time-slots~~}~~ ~~+~~ ~~{SF16 x 1 code + SF4 x 1 code} x 1 time slot~~
	Max. Number of data bits/radio frame	3760 ~~3154~~ bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.52 (alt. 0.48)

6.10.3.4.1.53.2 Downlink

See clause 6.10.3.4.1.52.2.

6.10.3.4.1.54 Void

6.10.3.4.1.55 Void

~~6.10.3.4.1.54 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~~

~~6.10.3.4.1.54.1 Uplink~~

~~See clause 6.10.3.4.1.24.1.~~

~~6.10.3.4.1.54.2 Downlink~~

~~6.10.3.4.1.54.2.1 Transport channel parameters~~

~~6.10.3.4.1.54.2.1.1 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB~~

~~See clause 6.10.3.4.1.27.2.1.1.~~

~~6.10.3.4.1.54.2.1.2 Transport channel parameters for Streaming / unknown / DL:64 kbps / CS or PS RAB~~

~~See clause 6.10.3.4.1.18.2.1.1.~~

~~6.10.3.4.1.54.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH~~

~~See clause 6.10.3.4.1.2.2.1.1.~~

~~6.10.3.4.1.54.2.1.4 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)~~

~~6.10.3.4.1.54.2.4 Physical channel parameters~~

~~DPCH Downlink~~	~~Midamble~~	~~512 chips~~
	~~Codes and time slots~~	~~{SF16 x 8 codes x 1 time slot} + {SF16 x 5 codes x 1 time slot}~~
	~~Max. Number of data bits/radio frame~~	~~3140 bits~~
	~~TFCI code word~~	~~32 bits~~
	~~Puncturing limit~~	~~0,68~~

6.~~10.3.4.1.55 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~~

~~6.10.3.4.1.55.1 Uplink~~

~~See clause 6.10.3.4.1.24.1.~~

6.10.3.4.1.55.2 Downlink

6.10.3.4.1.55.2.1 Transport channel parameters

6.10.3.4.1.55.2.1.1 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB

See clause 6.10.3.4.1.27.2.1.1.

6.10.3.4.1.55.2.1.2 Transport channel parameters for Streaming / unknown / DL:128 kbps / CS or PS RAB

See clause 6.10.3.4.1.20.2.1.1.

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.55.2.1.4 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)

6.10.3.4.1.55.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 1 time slot
	Max. Number of data bits/radio frame	2176 bits
	TFCI code word	32 bits
	Puncturing limit	0,48

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

6.10.3.4.1.56.1 Uplink

6.10.3.4.1.56.1.1 Transport channel parameters

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

Higher Layer	RAB/Signalling RB		**RAB**	**RAB**
RLC	Logical channel type		DTCH	DTCH
	RLC mode		AM	AM
	Payload sizes, bit		320 (alt. 128)	320 (alt.128)
	Max data rate, bps		8000	8000
	AMD PDU header, bit		16	16
MAC	MAC header, bit		4	4
	MAC multiplexing		2 logical channel multiplexing	
Layer 1	TrCH type		DCH	
	TB sizes, bit		340 (alt. 148)	
	TFS	TF0, bits	0x340 (alt. 0x148)	
		TF1, bits	1x340 (alt. 1x148)	
		TF2, bits	N/A (alt. 5x148)	
	TTI, ms		40 (alt. 80)	
	Coding type		TC	
	CRC, bit		16	
	Max number of bits/TTI after channel coding		1080 (alt. 2472)	
	Max number of bits/radio frame before rate matching		270 (alt.309)	
	RM attribute		135-175	

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.56.1.1.3 TFCS

TFCS size	4 (alt. 6)
TFCS	(8 kbps RAB + 8 kbps RAB, DCCH)= (TF0,TF0), (TF1,TF0), (TF0,TF1), (TF1,TF1) (alt. (TF0,TF0), (TF1,TF0), (TF2,TF0), (TF0,TF1), (TF1,TF1), (TF2,TF1))
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.56.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	226 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.52 (alt. 0.48)
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 8 bits (alt. 16 bits).		

6.10.3.4.1.56.2 Downlink

6.10.3.4.1.56.2.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB		**RAB**	**RAB**
RLC	Logical channel type		DTCH	DTCH
	RLC mode		AM	AM
	Payload sizes, bit		320	320
	Max data rate, bps		8000	8000
	AMD PDU header, bit		16	16
MAC	MAC header, bit		4	4
	MAC multiplexing		2 logical channel multiplexing	
Layer 1	TrCH type		DCH	
	TB sizes, bit		340	
	TFS	TF0, bits	0x340	
		TF1, bits	1x340	
	TTI, ms		40	
	Coding type		TC	
	CRC, bit		16	
	Max number of bits/TTI after channel coding		1080	
	Max number of bits/radio frame before rate matching		270	
	RM attribute		135-175	

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.56.2.1.3 TFCS

TFCS size	4
TFCS	(8 kbps RAB + 8 kbps RAB, DCCH)= (TF0,TF0), (TF1,TF0), (TF0,TF1), (TF1,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.56.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 1 codes x 1 time slot
	Max. Number of data bits/radio frame	228 bits
	TFCI code word	16 bits
	Puncturing limit	0.56
Note: In case the first TFC in the TFCS is not configured, the TFCI code word will be 8 bits.		

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

6.10.3.4.1.57.1 Uplink

6.10.3.4.1.57.1.1 Transport channel parameters

6.10.3.4.1.57.1.1.1 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB + UL:64 kbps / PS RAB

See clause 6.10.3.4.1.38d.1.1.2.

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.57.1.1.3 TFCS

TFCS size	10
TFCS	(64 kbps RAB + 64 kbps RAB, DCCH)= (TF0,TF0), (TF1,TF0), (TF2,TF0), (TF3,TF0), (TF4,TF0), (TF0,TF1), (TF1,TF1), (TF2,TF1), (TF3,TF1), (TF4,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.57.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	2064 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.88 (alt. 0.76)

6.10.3.4.1.57.2 Downlink

6.10.3.4.1.57.2.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB		**RAB**	**RAB**
RLC	Logical channel type		DTCH	DTCH
	RLC mode		AM	AM
	Payload sizes, bit		320	320
	Max data rate, bps		64000	64000
	AMD PDU header, bit		16	16
MAC	MAC header, bit		4	4
	MAC multiplexing		2 logical channel multiplexing	
Layer 1	TrCH type		DCH	
	TB sizes, bit		340	
	TFS	TF0, bits	0x340	
		TF1, bits	1x340	
		TF2, bits	2x340	
		TF3, bits	3x340	
		TF4, bits	4x340	
	TTI, ms		20	
	Coding type		TC	
	CRC, bit		16	
	Max number of bits/TTI after channel coding		4284	
	Max number of bits/radio frame before rate matching		2142	
	RM attribute		130-170	

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.57.2.1.3 TFCS

TFCS size	10
TFCS	(64 kbps RAB + 64 kbps RAB, DCCH)= (TF0,TF0), (TF1,TF0), (TF2,TF0), (TF3,TF0), (TF4,TF0), (TF0,TF1), (TF1,TF1), (TF2,TF1), (TF3,TF1), (TF4,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.57.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 5 codes x 1 time slot
	Max. Number of data bits/radio frame	1364 bits
	TFCI code word	16 bits
	Puncturing limit	0.56

6.10.3.4.1.58 Streaming / unknown / UL:16 DL:64 kbps / PS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.58.1 Uplink

6.10.3.4.1.58.1.1 Transport channel parameters

6.10.3.4.1.58.1.1.1 Transport channel parameters for Streaming / unknown / UL:16 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		16000
	AMD PDU 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		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		1068
	Max number of bits/radio frame before rate matching		534
	RM attribute		135-175

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

See clause 6.10.3.4.1.23a.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.58.1.1.4 TFCS

TFCS size	8 (alt. 12)
TFCS	(16 kbps RAB, 8 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) (alt. (TF0,TF0,TF0), (TF1,TF0,TF0), (TF0,TF1,TF0), (TF1,TF1,TF0), (TF0,TF2,TF0), (TF1,TF2,TF0), (TF0,TF0,TF1), (TF1,TF0,TF1), (TF0,TF1,TF1), (TF1,TF1,TF1), (TF0,TF2,TF1), (TF1,TF2,TF1))
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.58.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot + SF16 x 1code x 1 time slot
	Max. Number of data bits/radio frame	696 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.72 (alt. 0.68)

6.10.3.4.1.58.2 Downlink

6.10.3.4.1.58.2.1 Transport channel parameters

6.10.3.4.1.58.2.1.1 Transport channel parameters for Streaming / unknown / DL:64 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		64000
	AM PDU header, bit		16
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		656
	TFS	TF0, bits	0x656
		TF1, bits	1x656
		TF2, bits	2x656
		TF3, bits	4x656
	TTI, ms		40
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		8076
	Max number of bits/radio frame before rate matching		2019
	RM attribute		125-165

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

See clause 6.10.3.4.1.23.2.1.1

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

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.58.2.1.4 TFCS

TFCS size	16
TFCS	(64 kbps RAB, 8 kbps RAB, DCCH)= (TF0,TF0,TF0), (TF1,TF0,TF0), (TF2,TF0,TF0), (TF3,TF0,TF0), (TF0,TF1,TF0), (TF1,TF1,TF0), (TF2,TF1,TF0), (TF3,TF1,TF0), (TF0,TF0,TF1), (TF1,TF0,TF1), (TF2,TF0,TF1), (TF3,TF0,TF1), (TF0,TF1,TF1), (TF1,TF1,TF1), (TF2,TF1,TF1), (TF3,TF1,TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.58.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF16 x 6 codes x 1 time slot
	Max. Number of data bits/radio frame	1640 bits
	TFCI code word	16 bits
	Puncturing limit	0.64

6.10.3.4.1.59 Reserved for future use

6.10.3.4.1.60 Reserved for future use

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

6.10.3.4.1.61.1 Uplink

6.10.3.4.1.61.1.1 Transport channel parameters

6.10.3.4.1.61.1.1.1 Transport channel parameters for Conversational / unknown / UL:8 kbps / PS RAB

Higher layer	RAB/Signalling RB		**RAB**
RLC	Logical channel type		DTCH
	RLC mode		UM
	Payload sizes, bit		320
	Max data rate, bps		8000
	UMD PDU header, bit		8
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		328 (alt 0, 328)
	TFS	TF0, bits	0x328 (alt 1x0) (note)
		TF1, bits	1x328
	TTI, ms		40
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		1044
	Max number of bits/radio frame before rate matching		261
	RM attribute		135-175
NOTE: In case of using this alternative, CRC parity bits are to be attached any time since number of TrBlks are 1 even if there is no data on the RAB (see clause 4.2.1.1 in TS 25.222).			

6.10.3.4.1.61.1.1.2 Transport channel parameters for Interactive or Background / UL:8 kbps / PS RAB

See clause 6.10.3.4.1.23a.1.1.1.

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

See clause 6.10.3.4.1.2.1.1.1

6.10.3.4.1.61.1.1.4 TFCS

TFCS size	8 (alt. 12)
TFCS	(8 kbps Conversational RAB, 8 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1) (alt. (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF2, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF0, TF2, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF2, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1), (TF1, TF2, TF1))
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.61.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	SF8 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	452 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.68 (alt. 0.64)

6.10.3.4.1.61.2 Downlink

6.10.3.4.1.61.2.1 Transport channel parameters

6.10.3.4.1.61.2.1.1 Transport channel parameters for Conversational / unknown / DL:8 kbps / PS RAB

Higher layer	RAB/Signalling RB		RAB
RLC	Logical channel type		DTCH
	RLC mode		UM
	Payload sizes, bit		320
	Max data rate, bps		8000
	AMD PDU header, bit		8
MAC	MAC header, bit		0
	MAC multiplexing		N/A
Layer 1	TrCH type		DCH
	TB sizes, bit		328 (alt 0, 328)
	TFS	TF0, bits	0x328 (alt 1x0) (note)
		TF1, bits	1x328
	TTI, ms		40
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		1044
	Max number of bits/radio frame before rate matching		261
	RM attribute		135-175
NOTE: In case of using this alternative, CRC parity bits are to be attached any time since number of TrBlks are 1 even if there is no data on the RAB (see clause 4.2.1.1 in TS 25.222).			

6.10.3.4.1.61.2.1.2 Transport channel parameters for Interactive or Background / DL:8 kbps / PS RAB

See clause 6.10.3.4.1.23.2.1.1

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

See clause 6.10.3.4.1.2.2.1.1

6.10.3.4.1.61.2.1.4 TFCS

TFCS size	8
TFCS	(8 kbps Conversational RAB, 8 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1)
Note: In case TB size zero is configured for any transport channel the first TFC is required; it is optional otherwise.	

6.10.3.4.1.61.2.2 Physical channel parameters

DPCH Downlink	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	0.68

6.10.3.4.2 Combinations on PDSCH, SCCPCH, PUSCH and PRACH

6.10.3.4.2.1 Interactive or background / UL: 64 DL: 256 kbps / PS RAB + UL: 3.4/16.8 DL: 3.4/33.6 kbps SRBs for DCCH, CCCH and BCCH + UL: 16.8 DL: 16 kbps SRBs for SHCCH

6.10.3.4.2.1.1 Uplink

6.10.3.4.2.1.1.1 Transport channel parameters

6.10.3.4.2.1.1.1.1 Transport channel parameters for Interactive or background / UL: 64 kbps / PS RAB and UL SRB for SHCCH mapped on USCH

Higher Layer	RAB/Signalling RB		**RAB**	**SRB#5**
RLC	Logical channel type		DTCH	SHCCH
	RLC mode		AM	TM
	Payload sizes, bit		320	168
	Max data rate, bps		64000	16800
	AMD/TrD PDU header, bit		16	0
MAC	MAC header, bit		~~0~~1	~~0~~1
	MAC multiplexing		N/A	N/A
Layer 1	TrCH type		USCH	USCH
	TB sizes, bit		~~336~~337 (alt. 145)	~~168~~169
	TFS	TF0, bits	~~0x336~~0x337 (alt. 0x145)	~~0x168~~0x169
		TF1, bits	~~1x336~~1x337 (alt. 1x145)	~~1x168~~1x169
		TF2, bits	~~2x336~~2x337 (alt. 3x145)	N/A
		TF3, bits	~~3x336~~3x337 (alt. 7x145)	N/A
		TF4, bits	~~4x336~~4x337 (alt. 10x145)	N/A
	TTI, ms		20	10
	Coding type		TC	CC 1/2
	CRC, bit		16	16
	Max number of bits/TTI after channel coding		~~4236~~4248 (alt. 4842)	~~384~~386
	Max number of bits/radio frame before rate matching		~~2118~~2124 (alt. 2421)	~~384~~386
	RM attribute		135-175	~~180-220~~230-250

6.10.3.4.2.1.1.1.2 Transport channel parameters for UL: 3.4 Kbps SRBs for DCCH mapped on USCH

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		3400	3200	3200	3200
	AMD/UMD PDU header, bit		8	16	16	16
MAC	MAC header, bit		5	5	5	5
	MAC multiplexing		4 logical channel multiplexing			
Layer 1	TrCH type		USCH			
	TB sizes, bit		149			
	TFS	TF0, bits	0x149			
		TF1, bits	1x149			
	TTI, ms		40			
	Coding type		CC 1/3			
	CRC, bit		16			
	Max number of bits/TTI before rate matching		519			
	Max number of bits/radio frame before rate matching		130			
	RM attribute		190-210			

6.10.3.4.2.1.1.1.~~2~~3 TFCS for USCH

TFCS size	~~10~~20
TFCS	(64 kbps RAB, SHCCH, SRBs for 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, 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)

6.10.3.4.2.1.1.1.~~3~~4 Transport channel parameters for SRB for CCCH and UL SRBs for DCCH and UL SRB for SHCCH mapped on RACH

6.10.3.4.2.1.1.1.4.1 RACH transport channel configuration without DTCH

Higher layer	RAB/signalling RB	**SRB#0**	**SRB#1**	**SRB#2**	**SRB#3**	**SRB#4**	**SRB#5**
	User of Radio Bearer	RRC	RRC	RRC	NAS_DT High prio	NAS_DT Low prio	RRC
RLC	Logical channel type	CCCH	DCCH	DCCH	DCCH	DCCH	SHCCH
	RLC mode	TM	UM	AM	AM	AM	TM
	Payload sizes, bit	168	136	128	128	128	168
	Max data rate, bps	16800	13600	12800	12800	12800	16800
	AMD/UMD/TrD PDU header, bit	0	8	16	16	16	0

Higher layer	RAB/signalling RB	SRB#0	SRB#1	SRB#2	SRB#3	SRB#4	SRB#5
	User of Radio Bearer	RRC	RRC	RRC	NAS_DT High prio	NAS_DT Low prio	RRC
MAC	MAC header, bit	2	26	26	26	26	2
	MAC multiplexing	6 logical channel multiplexing					
Layer 1	TrCH type	RACH					
	TB sizes, bit	170 ~~170~~ ~~170~~ ~~170~~ ~~170~~ ~~170~~					
	TFS TF0, bits	1x170					
	TTI, ms	10					
	Coding type	CC ½					
	CRC, bit	16					
	Max number of bits/TTI after channel coding	388 ~~388~~ ~~388~~ ~~388~~ ~~388~~ ~~388~~					
	Max number of bits/radio frame before rate matching	388					

6.10.3.4.2.1.1.1.4.2 RACH transport channel configuration with DTCH

Higher layer	RAB/signalling RB	**RAB**	**SRB#0**	**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	RRC
RLC	Logical channel type	DTCH	CCCH	DCCH	DCCH	DCCH	DCCH	SHCCH
	RLC mode	AM	TM	UM	AM	AM	AM	TM
	Payload sizes, bit	128	168	136	128	128	128	168
	Max data rate, bps	12800	16800	13600	12800	12800	12800	16800
	AMD/UMD/TrD PDU header, bit	16	0	8	16	16	16	0
MAC	MAC header, bit	26	2	26	26	26	26	2
	MAC multiplexing	7 logical channel multiplexing						
Layer 1	TrCH type	RACH						
	TB sizes, bit	170						
	TFS TF0, bits	1x170						
	TTI, ms	10						
	Coding type	CC ½						
	CRC, bit	16						
	Max number of bits/TTI after channel coding	388						
	Max number of bits/radio frame before rate matching	388						

6.10.3.4.2.1.1.2 Physical channel parameters

6.10.3.4.2.1.1.2.1 Physical channel parameters for PUSCH

PUSCH	Midamble	512 chips
	Codes and time slots	~~{SF16 x 1 code + SF4 x 1 code}~~ SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	1808~~1202~~ bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	~~0.48~~0.60 (alt. 0.56)

6.10.3.4.2.1.1.2.2 Physical channel parameters for PRACH

PRACH	Midamble	512 chips
	Codes and time slots	SF8 (alt. SF16) x 1 code x 1 time slot
	Max. Number of data bits/radio frame	464 (alt. 232)
	Puncturing Limit	1~~.0~~ (alt. 0.56)

6.10.3.4.2.1.2 Downlink

6.10.3.4.2.1.2.1 Transport channel parameters

6.10.3.4.2.1.2.1.1 Transport channel parameters for Interactive or background / DL: 256 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

Higher Layer	RAB/Signalling RB		**RAB**	**SRB#5**
RLC	Logical channel type		DTCH	SHCCH
	RLC mode		AM	UM
	Payload sizes, bit		320	160
	Max data rate, bps		256000	16000
	AMD/UMD PDU header, bit		16	8
MAC	MAC header, bit		~~0~~1	~~0~~1
	MAC multiplexing		N/A	N/A
Layer 1	TrCH type		DSCH	DSCH
	TB sizes, bit		~~336~~337	~~168~~169
	TFS	TF0, bits	~~0x336~~0x337	~~0x168~~0x169
		TF1, bits	~~1x336~~1x337	~~1x168~~1x169
		TF2, bits	~~2x336~~2x337	N/A
		TF3, bits	~~4x336~~4x337	N/A
		TF4, bits	~~8x336~~8x337	N/A
		TF5, bits	N/A (alt. ~~12x336~~12x337)	N/A
		TF6, bits	N/A (alt. ~~16x336~~16x337)	N/A
	TTI, ms		10 (alt. 20)	10
	Coding type		TC	CC 1/2
	CRC, bit		16	16
	Max number of bits/TTI after channel coding		~~8460~~ 8484 (alt. ~~16908~~16968)	~~384~~386
	Downlink: Max number of bits/radio frame before rate matching		~~8460~~ 8484 (alt. ~~8454~~8484)	~~384~~386
	RM attribute		135-175	~~180-220~~230-250

6.10.3.4.2.1.2.1.2 Transport channel parameters for DL: 3.4 Kbps SRBs for DCCH mapped on DSCH

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		3400	3200	3200	3200
	AMD/UMD PDU header, bit		8	16	16	16
MAC	MAC header, bit		5	5	5	5
	MAC multiplexing		4 logical channel multiplexing			
Layer 1	TrCH type		DSCH			
	TB sizes, bit		149			
	TFS	TF0, bits	0x149			
		TF1, bits	1x149			
	TTI, ms		40			
	Coding type		CC 1/3			
	CRC, bit		16			
	Max number of bits/TTI before rate matching		519			
	Max number of bits/radio frame before rate matching		130			
	RM attribute		155-165			

6.10.3.4.2.1.2.1.~~2~~3 TFCS for DSCH

TFCS size	~~10~~ 20 (alt. ~~14~~28)
TFCS	(256 kbps RAB, SHCCH, SRB for 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, 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) (alt. (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF0, TF0), (TF3, TF0, TF0), (TF4, TF0, TF0), (TF5, TF0, TF0), (TF6, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0), (TF2, TF1, TF0), (TF3, TF1, TF0), (TF4, TF1, TF0), (TF5, TF1, TF0), (TF6, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF0, TF1), (TF3, TF0, TF1), (TF4, TF0, TF1), (TF5, TF0, TF1), (TF6, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1), (TF2, TF1, TF1), (TF3, TF1, TF1), (TF4, TF1, TF1), (TF5, TF1, TF1), (TF6, TF1, TF1))

6.10.3.4.2.1.2.1.~~3~~4 Transport channel parameters for DL SRBs for DCCH and SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

6.10.3.4.2.1.2.1.4.1 FACH transport channel configuration without DTCH

Higher layer	RAB/signalling RB		**SRB#0**	**SRB#1**	**SRB#2**	**SRB#3**	**SRB#4**	**SRB#5**	**SRB#6**
	User of Radio Bearer		RRC	RRC	RRC	NAS_DT High prio	NAS_DT Low prio	RRC	RRC
RLC	Logical channel type		CCCH	DCCH	DCCH	DCCH	DCCH	SHCCH	BCCH
	RLC mode		UM	UM	AM	AM	AM	UM	TM
	Payload sizes, bit		160	136 or 120 (note)	128	128	128	160	168
	Max data rate, bps		32000 (alt. 16000~~4800 0~~)	27200 or 24000 (alt. 13600~~4080 0~~ or ~~36000~~1200 0)	25600 (alt. 12800~~3840 0~~)	25600 (alt. 12800~~3840 0~~)	25600 (alt. ~~38400~~1280 0)	32000 (alt. 16000~~4800 0~~)	33600 (alt. 16800~~5040 0~~)
	AMD/UMD/TrD PDU header, bit		8	8	16	16	16	8	0
MAC	MAC header, bit		3	27 or 43	27	27	27	3	3
	MAC multiplexing		7 logical channel multiplexing						
Layer 1	TrCH type		FACH						
	TB sizes, bit		171 ~~171~~ ~~171~~ ~~171~~ ~~171~~ ~~171~~ ~~171~~						
	TFS	TF0, bits	0x171						
		TF1, bits	1x171						
		TF2, bits	2x171						
		TF3, bits	3x171(alt. N/A)						
		TF4, bits	4x171(alt. N/A)						
		~~TF5, bits~~	~~N/A (alt. 5x171)~~						
		~~TF6, bits~~	~~N/A (alt. 6x171)~~						

	TTI, ms	20
	Coding type	~~CC 1/2~~TC
	CRC, bit	16
	Max number of bits/TTI after channel coding	2256 (alt. 1134) ~~1528 (alt. 2292)~~ ~~1528 (alt. 2292)~~ ~~1528 (alt. 2292)~~ ~~1528 (alt. 2292)~~ ~~1528 (alt. 2292)~~ ~~1528 (alt. 2292)~~ ~~1528 (alt. 2292)~~
	Max number of bits/radio frame before rate matching	1128 (alt. 567) ~~764 (alt. 1146)~~ ~~764 (alt. 1146)~~ ~~764 (alt. 1146)~~ ~~764 (alt. 1146)~~ ~~764 (alt. 1146)~~ ~~764 (alt. 1146)~~ ~~764 (alt. 1146)~~
NOTE: MAC header size and RLC payload size depend on use of U-RNTI or C-RNTI.		

6.10.3.4.2.1.2.1.4.2 FACH transport channel configuration with DTCH

Higher layer	RAB/signalling RB	**RAB**	**SRB#0**	**SRB#1**	**SRB#2**	**SRB#3**	**SRB#4**	**SRB#5**	**SRB#6**
	User of Radio Bearer	Interactive/ Background RAB	RRC	RRC	RRC	NAS DT High prio	NAS DT Low prio	RRC	RRC
RLC	Logical channel type	DTCH	CCCH	DCCH	DCCH	DCCH	DCCH	SHCCH	BCCH
	RLC mode	AM	UM	UM	AM	AM	AM	UM	TM
	Payload sizes, bit	320	160	136 or 120 (note)	128	128	128	160	168
	Max data rate, bps	32000 (alt. 16000)	32000 (alt. 16000)	27200 or 24000 (alt. 13600 or 12000)	25600 (alt. 12800)	25600 (alt. 12800)	25600 (alt. 12800)	32000 (alt. 16000)	33600 (alt. 16800)
	AMD/UMD/TrD PDU header, bit	16	8	8	16	16	16	8	0
MAC	MAC header, bit	27	3	27 or 43	27	27	27	3	3

	MAC multiplexing		8 logical channel multiplexing
Layer 1	TrCH type		FACH
	TB sizes, bit		171, 363
	TFS	TF0, bits	0x171
		TF1, bits	1x171
		TF2, bits	2x171
		TF3, bits	1x363
		TF4, bits	3x171 (alt N/A)
		TF5, bits	4x171 (alt. N/A)
		TF6, bits	2x363 (alt. N/A)
	TTI, ms		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI after channel coding		2286 (alt. 1149)
	Max number of bits/radio frame before rate matching		1143 (alt. 575)
NOTE: MAC header size and RLC payload size depend on use of U-RNTI or C-RNTI.			

6.10.3.4.2.1.2.1.~~4~~5 TFCS for FACH

6.10.3.4.2.1.2.1.5.1 TFCS for FACH transport channel configuration without DTCH

TFCS size	5 (alt. ~~7~~3)
TFCS	FACH = (TF0), (TF1), (TF2), (TF3), (TF4) (alt. FACH = (TF0), (TF1), (TF2)~~, TF3, TF4, TF5, T F6~~)

6.10.3.4.2.1.2.1.5.2 TFCS for FACH transport channel configuration with DTCH

TFCS size	7 (alt. 4)
TFCS	FACH = (TF0), (TF1), (TF2), (TF3), (TF4), (TF5), (TF6) (alt. FACH = (TF0), (TF1), (TF2), (TF3))

6.10.3.4.2.1.2.2 Physical channel parameters

6.10.3.4.2.1.2.2.1 Physical channel parameters for PDSCH

PDSCH	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 2 time slots
	Max. Number of data bits/radio frame	4400 bits
	TFCI code word	16 bits
	Puncturing Limit	~~0.48~~0.44

6.10.3.4.2.1.2.2.2 Physical channel parameters for SCCPCH

6.10.3.4.2.1.2.2.2.1 Physical channel parameters for SCCPCH without DTCH

SCCPCH	Midamble	512 chips
	Codes and time slots	SF16 x 5 codes x 1 time slot (alt. SF16 x 2 codes x 1 time slot)
	Max. Number of data bits/radio frame	1204 bits (alt. 480 bits)
	TFCI code word	16 bits (alt. 8 bits)
	Puncturing Limit	1 (alt. 0.84)

6.10.3.4.2.1.2.2.2.2 Physical channel parameters for SCCPCH with DTCH

SCCPCH ~~(burst type 1)~~	Midamble	512 chips
	Codes and time slots	SF16 x 5 codes x 1 time slot (alt. SF16 x 2 codes x 1 time slot)
	Max. Number of data bits/radio frame	1204 bits (alt. 472 bits)
	TFCI code word	16 bits
	Puncturing Limit	1 (alt. 0.80)

~~SCCPCH (burst type 2)~~	~~Midamble~~	~~256 chips~~
	~~Codes and time slots~~	~~SF16 x 5 codes x 1 time slot~~
	~~Max. Number of data bits/radio frame~~	~~1364 bits~~
	~~TFCI code word~~	~~16 bits~~
	~~Puncturing Limit~~	~~1~~

6.10.3.4.2.2 Interactive or background / UL: 64 DL: 384 kbps / PS RAB
+ UL: 3.4/16.8 DL: 3.4/33.6 kbps SRBs for DCCH, CCCH and BCCH
+ UL: 16.8 DL: 16 kbps SRBs for SHCCH

6.10.3.4.2.2.1 Uplink

See clause 6.10.3.4.2.1.1.

6.10.3.4.2.2.2 Downlink

6.10.3.4.2.2.2.1 Transport channel parameters

6.10.3.4.2.2.2.1.1 Transport channel parameters for Interactive or background / DL: 384 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

Higher Layer	RAB/Signalling RB		**RAB**	**SRB#5**
RLC	Logical channel type		DTCH	SHCCH
	RLC mode		AM	UM
	Payload sizes, bit		320	160
	Max data rate, bps		384000	16000
	AMD/UMD PDU header, bit		16	8
MAC	MAC header, bit		~~0~~1	~~0~~1
	MAC multiplexing		N/A	N/A
Layer 1	TrCH type		DSCH	DSCH
	TB sizes, bit		~~336~~337	~~168~~169
	TFS	TF0, bits	~~0x336~~0x337	~~0x168~~0x169
		TF1, bits	~~1x336~~1x337	~~1x168~~1x169
		TF2, bits	~~2x336~~2x337	N/A
		TF3, bits	~~4x336~~4x337	N/A
		TF4, bits	~~8x336~~8x337	N/A
		TF5, bits	~~12x336~~12x337	N/A
		TF6, bits	N/A (alt. ~~16x336~~16x337)	N/A
		TF7, bits	N/A (alt. ~~20x336~~20x337)	N/A
		TF8, bits	N/A (alt. ~~24x336~~24x337)	N/A
	TTI, ms		10 (alt. 20)	10
	Coding type		TC	CC 1/2
	CRC, bit		16	16
	Max number of bits/TTI after channel coding		~~12684~~12720 (alt. ~~25356~~25440)	~~384~~386
	Downlink: Max number of bits/radio frame before rate matching		~~12684~~12720 (alt. ~~12678~~12720)	~~384~~386
	RM attribute		135-175	230-250~~180-220~~

6.10.3.4.2.2.2.1.2 Transport channel parameters for DL: 3.4 Kbps SRBs for DCCH mapped on DSCH

See clause 6.10.3.4.2.1.2.1.2

6.10.3.4.2.2.2.1.~~2~~3 TFCS for DSCH

TFCS size	~~12~~ 24 (alt. ~~18~~36)
TFCS	(384 kbps RAB, SHCCH, SRBs for DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF0, TF0), (TF3, TF0, TF0), (TF4, TF0, TF0), (TF5, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0), (TF2, TF1, TF0), (TF3, TF1, TF0), (TF4, TF1, TF0), (TF5, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF0, TF1), (TF3, TF0, TF1), (TF4, TF0, TF1), (TF5, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1), (TF2, TF1, TF1), (TF3, TF1, TF1), (TF4, TF1, TF1), (TF5, TF1, TF1) (alt. (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF0, TF0), (TF3, TF0, TF0), (TF4, TF0, TF0), (TF5, TF0, TF0), (TF6, TF0, TF0), (TF7, TF0, TF0), (TF8, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0), (TF2, TF1, TF0), (TF3, TF1, TF0), (TF4, TF1, TF0), (TF5, TF1, TF0), (TF6, TF1, TF0), (TF7, ~~TF0~~TF1, TF0), (TF8, ~~TF0~~TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF0, TF1), (TF3, TF0, TF1), (TF4, TF0, TF1), (TF5, TF0, TF1), (TF6, TF0, TF1), (TF7, TF0, TF1), (TF8, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1), (TF2, TF1, TF1), (TF3, TF1, TF1), (TF4, TF1, TF1), (TF5, TF1, TF1), (TF6, TF1, TF1), (TF7, TF1, TF1), (TF8, TF1, TF1))

6.10.3.4.2.2.2.1.~~3~~4 Transport channel parameters for DL SRBs for DCCH and SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH (with & without DTCH)

See clause 6.10.3.4.2.1.2.1.~~3~~4.

6.10.3.4.2.2.2.1.~~4~~5 TFCS for FACH

See clause 6.10.3.4.2.1.2.1.~~4~~5.

6.10.3.4.2.2.2.2 Physical channel parameters

6.10.3.4.2.2.2.2.1 Physical channel parameters for PDSCH

PDSCH	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 3 time slots
	Max. Number of data bits/radio frame	6608 bits (alt. 6592 bits)
	TFCI code word	16 bits (alt. 32 bits)
	Puncturing Limit	0.48

6.10.3.4.2.2.2.2.2 Physical channel parameters for SCCPCH

See clause 6.10.3.4.2.1.2.2.2.

~~SCCPCH (burst type 1)~~	~~Midamble~~	~~512 chips~~
	~~Codes and time slots~~	~~SF16 x 5 codes x 1 time slot~~
	~~Max. Number of data bits/radio frame~~	~~1204 bits~~
	~~TFCI code word~~	~~16 bits~~
	~~Puncturing Limit~~	~~1~~

~~SCCPCH (burst type 2)~~	~~Midamble~~	~~256 chips~~
	~~Codes and time slots~~	~~SF16 x 5 codes x 1 time slot~~
	~~Max. Number of data bits/radio frame~~	~~1364 bits~~
	~~TFCI code word~~	~~16 bits~~
	~~Puncturing Limit~~	~~1~~

6.10.3.4.2.3 Interactive or background / UL: 64 DL: 2048 kbps / PS RAB
+ UL: 3.4/16.8 DL: 3.4/33.6 kbps SRBs for DCCH, CCCH and BCCH
+ UL: 16.8 DL: 16 kbps SRBs for SHCCH

6.10.3.4.2.3.1 Uplink

See clause 6.10.3.4.2.1.1.

6.10.3.4.2.3.2 Downlink

6.10.3.4.2.3.2.1 Transport channel parameters

6.10.3.4.2.3.2.1.1 Transport channel parameters for Interactive or background / DL: 2048 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

Higher Layer	RAB/Signalling RB		**RAB**	**SRB#5**
RLC	Logical channel type		DTCH	SHCCH
	RLC mode		AM	UM
	Payload sizes, bit		640	160
	Max data rate, bps		2048000	16000
	AMD/UMD PDU header, bit		16	8
MAC	MAC header, bit		~~0~~1	~~0~~1
	MAC multiplexing		N/A	N/A
Layer 1	TrCH type		DSCH	DSCH
	TB sizes, bit		~~656~~657	~~168~~169
	TFS	TF0, bits	~~0x656~~0x657	~~0x168~~0x169
		TF1, bits	~~1x656~~1x657	~~1x168~~1x169
		TF2, bits	~~2x656~~2x657	N/A
		TF3, bits	~~4x656~~4x657	N/A
		TF4, bits	~~8x656~~8x657	N/A
		TF5, bits	~~12x656~~12x657	N/A
		TF6, bits	~~16x656~~16x657	N/A
		TF7, bits	~~20x656~~20x657	N/A
		TF8, bits	~~24x656~~24x657	N/A
		TF9, bits	~~28x656~~28x657	N/A
		TF10, bits	~~32x656~~30x657 (alt. 32x657)	N/A
		TF11, bits	N/A (alt. ~~36x656~~36x657)	N/A
		TF12, bits	N/A (alt. ~~40x656~~40x657)	N/A
		TF13, bits	N/A (alt. ~~44x656~~44x657)	N/A
		TF14, bits	N/A (alt. ~~48x656~~48x657)	N/A
		TF15, bits	N/A (alt. ~~52x656~~52x657)	N/A
		TF16, bits	N/A (alt. ~~56x656~~56x657)	N/A
		TF17, bits	N/A (alt. ~~60x656~~60x657)	N/A
		TF18, bits	N/A (alt. ~~64x656~~64x657)	N/A
	TTI, ms		10 (alt. 20)	10
	Coding type		TC	CC ½
	CRC, bit		16	16
	Max number of bits/TTI after channel coding		~~64524~~ 60624 (alt. ~~129036~~129330)	~~384~~386
	Downlink: Max number of bits/radio frame before rate matching		~~64524~~ 60624 (alt. ~~64518~~64665)	~~384~~386
	RM attribute		135-175	~~180-220~~230-250

6.10.3.4.2.3.2.1.2 Transport channel parameters for DL: 3.4 Kbps SRBs for DCCH mapped on DSCH

See clause 6.10.3.4.2.1.2.1.2

6.10.3.4.2.3.2.1.~~2~~3 TFCS for DSCH

TFCS size	~~22 (alt. 38)~~41 (alt.76)
TFCS	(2048 kbps RAB, SHCCH, SRBs for DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF0, TF0), (TF3, TF0, TF0), (TF4, TF0, TF0), (TF5, TF0, TF0), (TF6, TF0, TF0), (TF7, TF0, TF0), (TF8, TF0, TF0), (TF9, TF0, TF0), (TF10, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0), (TF2, TF1, TF0), (TF3, TF1, TF0), (TF4, TF1, TF0), (TF5, TF1, TF0), (TF6, TF1, TF0), (TF7, TF1, TF0), (TF8, TF1, TF0), (TF9, TF1, TF0)~~, (TF10, TF1)~~, (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF0, TF1), (TF3, TF0, TF1), (TF4, TF0, TF1), (TF5, TF0, TF1), (TF6, TF0, TF1), (TF7, TF0, TF1), (TF8, TF0, TF1), (TF9, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1), (TF2, TF1, TF1), (TF3, TF1, TF1), (TF4, TF1, TF1), (TF5, TF1, TF1), (TF6, TF1, TF1), (TF7, TF1, TF1), (TF8, TF1, TF1), (TF9, TF1, TF1) (alt. (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF0, TF0), (TF3, TF0, TF0), (TF4, TF0, TF0), (TF5, TF0, TF0), (TF6, TF0, TF0), (TF7, TF0, TF0), (TF8, TF0, TF0), (TF9, TF0, TF0), (TF10, TF0, TF0),(TF11, TF0, TF0), (TF12, TF0, TF0), (TF13, TF0, TF0), (TF14, TF0, TF0), (TF15, TF0, TF0), (TF16, TF0, TF0), (TF17, TF0, TF0), (TF18, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0), (TF2, TF1, TF0), (TF3, TF1, TF0), (TF4, TF1, TF0), (TF5, TF1, TF0), (TF6, TF1, TF0), (TF7, TF1, TF0), (TF8, TF1, TF0), (TF9, TF1, TF0), (TF10, TF1, TF0),(TF11, TF1, TF0), (TF12, TF1, TF0), (TF13, TF1, TF0), (TF14, TF1, TF0), (TF15, TF1, TF0), (TF16, TF1, TF0), (TF17, TF1, TF0), (TF18, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF0, TF1), (TF3, TF0, TF1), (TF4, TF0, TF1), (TF5, TF0, TF1), (TF6, TF0, TF1), (TF7, TF0, TF1), (TF8, TF0, TF1), (TF9, TF0, TF1), (TF10, TF0, TF1),(TF11, TF0, TF1), (TF12, TF0, TF1), (TF13, TF0, TF1), (TF14, TF0, TF1), (TF15, TF0, TF1), (TF16, TF0, TF1), (TF17, TF0, TF1), (TF18, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1), (TF2, TF1, TF1), (TF3, TF1, TF1), (TF4, TF1, TF1), (TF5, TF1, TF1), (TF6, TF1, TF1), (TF7, TF1, TF1), (TF8, TF1, TF1), (TF9, TF1, TF1), (TF10, TF1, TF1),(TF11, TF1, TF1), (TF12, TF1, TF1), (TF13, TF1, TF1), (TF14, TF1, TF1), (TF15, TF1, TF1), (TF16, TF1, TF1), (TF17, TF1, TF1), (TF18, TF1, TF1))

6.10.3.4.2.3.2.1.~~3~~4 Transport channel parameters for DL SRBs for DCCH and SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

See clause 6.10.3.4.2.1.2.1.~~3~~4.1.

6.10.3.4.2.3.2.1.~~4~~5 TFCS for FACH

See clause 6.10.3.4.2.1.2.1.4~~5~~.1.

6.10.3.4.2.3.2.2 Physical channel parameters

6.10.3.4.2.3.2.2.1 Physical channel parameters for PDSCH

PDSCH	Midamble	256 chips
	Codes and time slots	SF16 x 12 codes x 11 time slots
	Max. Number of data bits/radio frame	~~36416 bits (alt.~~36400 bits~~)~~
	TFCI code word	~~16 bits (alt.~~32 bits~~)~~
	Puncturing Limit	~~0.56~~0.60~~0~~0.56 (alt. 0.52)

6.10.3.4.2.3.2.2.2 Physical channel parameters for SCCPCH

See clause 6.10.3.4.2.1.2.2.2.1

~~SCCPCH (burst type 1)~~	~~Midamble~~	~~512 chips~~
	~~Codes and time slots~~	~~SF16 x 5 codes x 1 time slot~~
	~~Max. Number of data bits/radio frame~~	~~1204 bits~~
	~~TFCI code word~~	~~16 bits~~
	~~Puncturing Limit~~	~~1~~

~~SCCPCH (burst type 2)~~	~~Midamble~~	~~256 chips~~
	~~Codes and time slots~~	~~SF16 x 5 codes x 1 time slot~~
	~~Max. Number of data bits/radio frame~~	~~1364 bits~~
	~~TFCI code word~~	~~16 bits~~
	~~Puncturing Limit~~	~~1~~

6.10.3.4.2.4 Interactive or background / UL: 384 DL: 2048 kbps / PS RAB
+ UL: 3.4/16.8 DL: 3.4/33.6 kbps SRBs for DCCH, CCCH and BCCH
+ UL: 16.8 DL: 16 kbps SRBs for SHCCH

6.10.3.4.2.4.1 Uplink

6.10.3.4.2.4.1.1 Transport channel parameters

6.10.3.4.2.4.1.1.1 Transport channel parameters for Interactive or background / UL:384 kbps / PS RAB

Higher Layer	RAB/Signalling RB		**RAB**	**SRB#5**
RLC	Logical channel type		DTCH	SHCCH
	RLC mode		AM	TM
	Payload sizes, bit		320 (alt. 128)	168
	Max data rate, bps		384000	16800
	AMD/TrD PDU header, bit		16	0
MAC	MAC header, bit		1	1
	MAC multiplexing		N/A	N/A
Layer 1	TrCH type		USCH	USCH
	TB sizes, bit		337 (alt. 145)	169
	TFS	TF0, bits	0x337 (alt. 0x145)	0x169
		TF1, bits	1x337 (alt. 1x145)	1x169
		TF2, bits	2x337 (alt. 5x145)	N/A
		TF3, bits	4x337 (alt. 10x145)	N/A
		TF4, bits	8x337 (alt. 20x145)	N/A
		TF5, bits	12x337 (alt. 30x145)	N/A
		TF6, bits	16x337 (alt. 40x145)	N/A
		TF7, bits	20x337 (alt. 50x145)	N/A
		TF8, bits	24x337 (alt. 60x145)	N/A
	TTI, ms		20	10
	Coding type		TC	CC 1/2
	CRC, bit		16	16
	Max number of bits/TTI after channel coding		25440 (alt. 29004)	386
	Max number of bits/radio frame before rate matching		12720 (alt. 14502)	386
	RM attribute		135-175	230-250

6.10.3.4.2.4.1.1.2 Transport channel parameters for UL: 3.4 Kbps SRBs for DCCH mapped on USCH

See clause 6.10.3.4.2.1.1.1.2

6.10.3.4.2.4.1.1.3 TFCS for USCH

TFCS size	36
TFCS	(384 kbps RAB, SHCCH, SRBs for DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF0, TF0), (TF3, TF0, TF0), (TF4, TF0, TF0), (TF5, TF0, TF0), (TF6, TF0, TF0), (TF7, TF0, TF0), (TF8, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0), (TF2, TF1, TF0), (TF3, TF1, TF0), (TF4, TF1, TF0), (TF5, TF1, TF0), (TF6, TF1, TF0), (TF7, TF1, TF0), (TF8, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF0, TF1), (TF3, TF0, TF1), (TF4, TF0, TF1), (TF5, TF0, TF1), (TF6, TF0, TF1), (TF7, TF0, TF1), (TF8, TF0, TF1) (TF0, TF1, TF1), (TF1, TF1, TF1), (TF2, TF1, TF1), (TF3, TF1, TF1), (TF4, TF1, TF1), (TF5, TF1, TF1), (TF6, TF1, TF1), (TF7, TF1, TF1), (TF8, TF1, TF1)

6.10.3.4.2.4.1.1.4 Transport channel parameters for SRB for CCCH and UL SRBs for DCCH and UL SRB for SHCCH mapped on RACH

See clause 6.10.3.4.2.1.1.1.4

6.10.3.4.2.4.1.2 Physical channel parameters

6.10.3.4.2.4.1.2.1 Physical channel parameters for PUSCH

PUSCH	Midamble	512 chips
	Codes and time slots	SF1 x 1 code x 2 time slots
	Max. Number of data bits/radio frame	7264 bits
	TFCI code word	32 bits
	TPC	2 bits
	Puncturing Limit	0.52 (alt. 0.44)

6.10.3.4.2.4.1.2.2 Physical channel parameters for PRACH

See clause 6.10.3.4.2.1.1.2.2

6.10.3.4.2.4.2 Downlink

6.10.3.4.2.4.2.1 Transport channel parameters

See clause 6.10.3.4.2.3.2.1

6.10.3.4.2.4.2.2 Physical channel parameters

6.10.3.4.2.4.2.2.1 Physical channel parameters for PDSCH

PDSCH	Midamble	256 chips
	Codes and time slots	SF1 x 1 codes x 9 time slots
	Max. Number of data bits/radio frame	39712 bits
	TFCI code word	32 bits
	Puncturing Limit	~~0.60~~0.64 (alt. 0.60)

6.10.3.4.2.4.2.2.2 Physical channel parameters for SCCPCH

See clause 6.10.3.4.2.1.2.2.2.1

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

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

6.10.3.4.3.1.1 Uplink

6.10.3.4.3.1.1.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.1.1.1.

6.10.3.4.3.1.1.1.2 Transport channel parameters for UL SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.3.1.1.1.3 TFCS for DCH

See clause 6.10.3.4.1.4.1.1.3.

6.10.3.4.3.1.1.1.4 Transport channel parameters for Interactive or background / UL: 64 kbps / PS RAB and UL SRB for SHCCH mapped on USCH

See clause 6.10.3.4.2.1.1.1.1.

6.10.3.4.3.1.1.1.5 TFCS for USCH

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

~~See clause 6.10.3.4.2.1.1.1.2.~~

6.10.3.4.3.1.1.1.6 Transport channel parameters for SRB for CCCH and UL SRB for SHCCH mapped on RACH

Higher layer	RAB/signalling RB	**SRB#0**	**SRB#5**
	User of Radio Bearer	RRC	RRC
RLC	Logical channel type	CCCH	SHCCH
	RLC mode	TM	TM
	Payload sizes, bit	168	168
	Max data rate, bps	16800	16800
	TrD PDU header, bit	0	0
MAC	MAC header, bit	2	2
	MAC multiplexing	2 logical channel multiplexing	
Layer 1	TrCH type	RACH	
	TB sizes, bit	170	
	TFS TF0, bits	1x170	
	TTI, ms	10	
	Coding type	CC 1/2	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	388	
	Max number of bits/radio frame before rate matching	388	

6.10.3.4.3.1.1.2 Physical channel parameters

6.10.3.4.3.1.1.2.1 Physical channel parameters for DPCH

~~Physical channel parameters for uplink DPCH s~~See clause 6.10.3.4.1.4.1.2.

~~Physical channel parameters for PUSCH see clause 6.10.3.4.2.1.1.2.~~

~~Physical channel parameters for PRACH see clause 6.10.3.4.2.1.1.2.~~

6.10.3.4.3.1.1.2.2 Physical channel parameters for PUSCH

PUSCH	Midamble	512 chips
	Codes and time slots	SF2 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	1808 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	~~0.64~~0.76 (alt. 0.68)

6.10.3.4.3.1.1.2.3 Physical channel parameters for PRACH

See clause 6.10.3.4.2.1.1.2.2.

6.10.3.4.3.1.2 Downlink

6.10.3.4.3.1.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.3.1.2.1.2 Transport channel parameters for DL SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.3.1.2.1.3 TFCS for DCH

See clause 6.10.3.4.1.4.2.1.3.

6.10.3.4.3.1.2.1.4 Transport channel parameters for Interactive or background / DL: 256 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

See clause 6.10.3.4.2.1.2.1.1.

6.10.3.4.3.1.2.1.5 TFCS for DSCH

TFCS size	10 (alt. 14)
TFCS	(256 kbps RAB, SHCCH)= (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))

~~See clause 6.10.3.4.2.1.2.1.2.~~

6.10.3.4.3.1.2.1.6 Transport channel parameters for SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

Higher layer	RAB/Signalling RB	SRB#0	SRB#5	SRB#6
	User of Radio Bearer	RRC	RRC	RRC
RLC	Logical channel type	CCCH	SHCCH	BCCH
	RLC mode	UM	UM	TM
	Payload sizes, bit	160	160	168
	Max data rate, bps	32000 (alt. ~~-~~16000)	32000 (alt. 16000)	33600 (alt. 16800)
	UMD/TrD PDU header, bit	8	8	0
MAC	MAC header, bit	3		
	MAC multiplexing	3 logical channel multiplexing		
Layer 1	TrCH type	FACH		
	TB sizes, bit	171		
	TFS TF0, bits	0x171		
	TFS TF1, bits	1x171		
	TFS TF2, bits	2x171		
	TFS TF3, bits	3x171 (alt. N/A)		
	TFS TF4, bits	4x171 (alt. N/A)		
	TTI, ms	~~10~~20		
	Coding type	~~CC 1/2~~TC		
	CRC, bit	16		
	Max number of bits/TTI after channel coding	~~1528~~2256 (alt. 1134)		
	Max number of bits/radio frame before rate matching	1128 (alt ~~764~~567)		

6.10.3.4.3.1.2.1.7 TFCS for FACH

TFCS size	5 (alt. 3)
TFCS	FACH = (TF0), (TF1), (TF2), (TF3), (TF4) (alt. FACH = (TF0), (TF1), (TF2))

6.10.3.4.3.1.2.2 Physical channel parameters

6.10.3.4.3.1.2.2.1 Physical channel parameters for DPCH

~~Physical channel parameters for downlink DPCH see~~ See clause 6.10.3.4.1.4.2.2.

6.10.3.4.3.1.2.2.2 Physical channel parameters for PDSCH

PDSCH	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 2 time slots
	Max. Number of data bits/radio frame	4400 bits
	TFCI code word	16 bits
	Puncturing Limit	0.48

~~Physical channel parameters for downlink PDSCH see clause 6.10.3.4.2.1.2.2.~~

6.10.3.4.3.1.2.2.3 Physical channel parameters for SCCPCH

See clause 6.10.3.4.2.1.2.2.2.1.

~~Physical channel parameters for SCCPCH see clause 6.10.3.4.2.1.2.2.~~

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

6.10.3.4.3.2.1 Uplink

See clause 6.10.3.4.3.1.1.

6.10.3.4.3.2.2 Downlink

6.10.3.4.3.2.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.3.2.2.1.2 Transport channel parameters for DL SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.3.2.2.1.3 TFCS for DCH

See clause 6.10.3.4.1.4.2.1.3.

6.10.3.4.3.2.2.1.4 Transport channel parameters for Interactive or background / DL: 384 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

See clause 6.10.3.4.2.2.2.1.1.

6.10.3.4.3.2.2.1.5 TFCS for DSCH

TFCS size	12 (alt. 18)
TFCS	(384 kbps RAB, SHCCH)= (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))

~~See clause 6.10.3.4.2.2.2.1.2.~~

6.10.3.4.3.2.2.1.6 Transport channel parameters for SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

See clause 6.10.3.4.3.1.2.1.6.

6.10.3.4.3.2.2.1.7 TFCS for FACH

See clause 6.10.3.4.3.1.2.1.7.

6.10.3.4.3.2.2.2 Physical channel parameters

6.10.3.4.3.2.2.2.1 Physical channel parameters for downlink DPCH

~~Physical channel parameters for downlink DPCH see~~ See clause 6.10.3.4.1.4.2.2.

6.10.3.4.3.2.2.2.2 Physical channel parameters for PDSCH

PDSCH	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 3 time slots
	Max. Number of data bits/radio frame	6608 bits
	TFCI code word	16 bits
	Puncturing Limit	0.48

6.10.3.4.3.2.2.2.3 Physical channel parameters for SCCPCH

See clause 6.10.3.4.2.1.2.2.2.1.

~~Physical channel parameters for PDSCH see clause 6.10.3.4.2.2.2.2.~~

~~Physical channel parameters for SCCPCH see clause 6.10.3.4.2.1.2.2.~~

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

6.10.3.4.3.3.1 Uplink

See clause 6.10.3.4.3.1.1.

6.10.3.4.3.3.2 Downlink

6.10.3.4.3.3.2.1 Transport channel parameters

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

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.3.3.2.1.2 Transport channel parameters for DL SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.3.3.2.1.3 TFCS for DCH

See clause 6.10.3.4.1.4.2.1.3.

6.10.3.4.3.3.2.1.4 Transport channel parameters for Interactive or background / DL: 2048 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

See clause 6.10.3.4.2.3.2.1.1.

6.10.3.4.3.3.2.1.5 TFCS for DSCH

TFCS size	22 (alt. 38)
TFCS	(2048 kbps RAB, SHCCH)= (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) (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, TF1), (TF12, TF1), (TF13, TF1), (TF14, TF1), (TF15, TF1), (TF16, TF1), (TF17, TF1), (TF18, TF1))

~~See clause 6.10.3.4.2.3.2.1.2.~~

6.10.3.4.3.3.2.1.6 Transport channel parameters for SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

See clause 6.10.3.4.3.1.2.1.6.

6.10.3.4.3.3.2.1.7 TFCS for FACH

See clause 6.10.3.4.3.1.2.1.7.

6.10.3.4.3.3.2.2 Physical channel parameters

6.10.3.4.3.3.2.2.1 Physical channel parameters for downlink DPCH

See clause 6.10.3.4.1.4.2.2.

6.10.3.4.3.3.2.2.2 Physical channel parameters for PDSCH

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF1 x 1 code x 7 time slot
	Max. Number of data bits/radio frame	30896 bits (alt. 30880)
	TFCI code word	16 bits (alt. 32 bits)
	Puncturing limit	0.48 (alt. 0.44)

6.10.3.4.3.3.2.2.3 Physical channel parameters for SCCPCH

See clause 6.10.3.4.2.1.2.2.2.1.

~~Physical channel parameters for downlink DPCH see clause 6.10.3.4.1.4.2.2.~~

~~Physical channel parameters for PDSCH see clause 6.10.3.4.2.3.2.2.~~

~~Physical channel parameters for SCCPCH see clause 6.10.3.4.2.1.2.2.~~

6.10.3.4.4 Combinations on SCCPCH

6.10.3.4.4.1 Stand-alone signalling RB for PCCH

6.10.3.4.4.1.1 Transport channel parameters

6.10.3.4.4.1.1.1 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~~ 12000 (alt. 8000)
	TrD PDU 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, bts	0x240 (alt. 0x80)
		TF1, bits	1x240 (alt. 1x80)
		TF2, bits	~~2x240~~ N/A (alt.2x80)
	TTI, ms		20
	Coding type		CC 1/2
	CRC, bit		16
	Max number of bits/TTI before rate matching		~~1056~~ 528 (alt. 400)
	Max number of bits/radio frame before rate matching		~~528~~ 264 (alt. 200)
	RM attribute		210-250

6.10.3.4.4.1.1.2 TFCS

TFCS size	2 (alt. 3)
TFCS	SRBs for PCCH = (TF0), (TF1)~~,~~ (alt. (TF0), (TF1), (TF2))

6.10.3.4.~~2~~4.1.2 Physical channel parameters

S-CCPCH	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot (alt. SF16 x 1 code x 1 time slot)
	Max. Number of data bits/radio frame	~~472~~ 480 bits (alt. 236 bits)
	TFCI code word	~~16~~ 8 bits
	Puncturing limit	~~0,.88~~1

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

6.10.3.4.4.2.1 Transport channel parameters

6.10.3.4.4.2.1.1 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 (alt. 16000)
	AMD PDU header, bit		16
MAC	MAC header, bit		27
	MAC multiplexing		N/A
Layer 1	TrCH type		FACH
	TB sizes, bit		363
	TFS	TF0, bits	0 x363
		TF1, bits	1x363
		TF2, bits	2x~~-~~363 (alt. N/A)
	TTI, ms		20
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI before rate matching		2286 (alt. 1149)
	Max number of bits/radio frame before rate matching		1143 (alt. 575)
	RM attribute		110-150

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

Higher layer	RAB/signalling RB		SRB#0	SRB#1	SRB#2	SRB#3	SRB#4	SRB#5
	User of Radio Bearer		RRC	RRC	RRC	NAS_DT High prio	NAS_DT Low prio	RRC
RLC	Logical channel type		CCCH	DCCH	DCCH	DCCH	DCCH	BCCH
	RLC mode		UM	UM	AM	AM	AM	TM
	Payload sizes, bit		160	136 or 120 (note)	128	128	128	168
	Max data rate, bps		32000 (alt. ~~48000~~160 00)	27200 or 2400~~0~~ (alt. ~~40800~~ 24000 or 12000~~360 00~~)	25600 (alt. 12800~~384 00~~)	25600 (alt. 12800~~384 00~~)	25600 (alt. 12800~~384 00~~)	33600 (alt. ~~12800~~168 00~~50400~~)
	AMD/UMD/TrD PDU header, bit		8	8	16	16	16	0
MAC	MAC header, bit		3	27 or 43	27	27	27	3
	MAC multiplexing		6 logical channel multiplexing					
Layer 1	TrCH type		FACH					
	TB sizes, bit		171					
	TFS	TF0, bits	0x171					
		TF1, bits	1x171					
		TF2, bits	2x171					
		TF3, bits	3x171 (alt. N/A)					
		TF4, bits	4x171 (alt. N/A)					

	~~TF5, bits~~	~~N/A (alt. 5x171)~~
	~~TF6, bits~~	~~N/A (alt. 6x171)~~
TTI, ms		20
Coding type		~~CC ½~~TC
CRC, bit		16
Max number of bits/TTI before rate matching		~~1528~~ 2256 (alt. ~~2292~~1134)
Max number of bits/radio frame before rate matching		~~764~~ 1128 (alt.~~1146~~567)
RM attribute		200-240
NOTE: MAC header size and RLC payload size depend on use of U-RNTI or C-RNTI.		

6.10.3.4.4.2.1.3 TFCS

TFCS size	~~15~~ 9 (alt. ~~21~~4)
TFCS	(32kbps RAB, SRBs for CCCH/DCCH/BCCH) = (TF0, TF0), (TF0, TF1), (TF0, TF2), (TF0, TF3), (TF0, TF4),(TF1, TF0), (TF1, TF1), (TF1, TF2), ~~(TF1, TF3), (TF1, TF4),~~(TF2, TF0)~~, (TF2, TF1), (TF2, TF2), (TF2, TF3), (TF2, TF4)~~ (alt. (TF0, TF0), (TF0, TF1), (TF0, TF2), ~~(TF0, TF3), (TF0, TF4), (TF0, TF5), (TF0, TF6),~~ (TF1, TF0)~~, (TF1, TF1), (TF1, TF2), (TF1, TF3), (TF1, TF4), (TF1, TF5), (TF1, TF6),~~ ~~(TF2, TF0), (TF2, TF1), (TF2, TF2), (TF2, TF3), (TF2, TF4), (TF2, TF5), (TF2, TF6)~~)
Note: First TFCS applies when the alternative for the 32kbps RAB and the alternative for the SRBs for CCCH/DCCH/BCCH are both not configured. The alt. TFCS applies when both the alt. for the 32kbps RAB and the alt. for the SRBs for CCCH/DCCH/BCCH are configured. All other combinations of these alternatives are not valid.	

6.10.3.4.4.2.2 Physical channel parameters

~~(burst type 1):~~

S-CCPCH	Midamble	512 chips
	Codes and time slots	SF16 x ~~6~~ 5 codes x 1 time slot (alt. SF16 x 2 codes x 1 time slot)
	Max. Number of data bits/radio frame	~~1448~~ 1204 bits (alt. 472)
	TFCI code word	16 bits
	Puncturing limit	~~0,6~~0.60 (alt. 0.48)

~~(burst type 2):~~

~~S-CCPCH~~	~~Midamble~~	~~256 chips~~
	~~Codes and time slots~~	~~SF16 x 6 codes x 1 time slot~~
	~~Max. Number of data bits/radio frame~~	~~1640 bits~~
	~~TFCI code word~~	~~16 bits~~
	~~Puncturing limit~~	~~0,68~~

6.10.3.4.4.2a Interactive/Background 32 kbps PS RAB + Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH

6.10.3.4.4.2a.1 Transport channel parameters

6.10.3.4.4.2a.1.1 Transport channel parameters for Interactive/Background 32 kbps PS RAB + Interactive/Background 32 kbps PS RAB

Higher Layer	RAB/Signalling RB User of Radio Bearer		RAB Interactive/Background RAB	RAB Interactive/Background RAB
RLC	Logical channel type		DTCH	DTCH
	RLC mode		AM	AM
	Payload sizes, bit		320	320
	Max data rate, bps		32000 (alt. 16000)	32000 (alt. 16000)
	AMD PDU header, bit		16	16
MAC	MAC header, bit		27	27
	MAC multiplexing		2 logical channel multiplexing	
Layer 1	TrCH type		FACH	
	TB sizes, bit		363	
	TFS	TF0, bits	0x363	
		TF1, bits	1x363	
		TF2, bits	2x363 (alt. N/A)	
	TTI, ms		20	
	Coding type		TC	
	CRC, bit		16	
	Max number of bits/TTI before rate matching		2286 (alt. 1149)	
	Max number of bits/radio frame before rate matching		1143 (alt. 575)	
	RM attribute		110 - 150	

6.10.3.4.4.2a.1.2 Transport channel parameters of SRBs for CCCH, SRB for DCCH, and SRB for BCCH

See clause 6.10.3.4.4.2.1.2

6.10.3.4.4.2a.1.3 TFCS

TFCS size	9 (alt. 4)
TFCS	(32kbps RAB + 32kbps RAB, SRBs for CCCH/DCCH/BCCH) = (TF0, TF0), (TF0, TF1), (TF0, TF2), (TF0, TF3), (TF0, TF4), (TF1, TF0), (TF1, TF1), (TF1, TF2), (TF2, TF0) (alt. (TF0, TF0), (TF0, TF1), (TF0, TF2), (TF1, TF0))
Note: First TFCS applies when the alternative for the 32kbps RABs and the alternative for the SRBs for CCCH/DCCH/BCCH are both not configured. The alt. TFCS applies when both the alt. for the 32kbps RABs and the alt. for the SRBs for CCCH/DCCH/BCCH are configured. All other combinations of these alternatives are not valid.	

6.10.3.4.4.2a.2 Physical channel parameters

S-CCPCH	Midamble	512 chips
	Codes and time slots	SF16 x 5 codes x 1 time slot (alt. SF16 x 2 codes x 1 time slot)
	Max. Number of data bits/radio frame	1204 bits (alt. 472)
	TFCI code word	16 bits
	Puncturing limit	0.60 (alt. 0.48)

6.10.3.4.4.2~~a~~b SRBs for CCCH + SRB for DCCH + SRB for BCCH

6.10.3.4.4.2~~a~~b.1 Transport channel parameters

6.10.3.4.4.2~~a~~b.1.1 Transport channel parameters of SRBs for CCCH, SRB for DCCH, and SRB for BCCH

See clause 6.10.3.4.4.2.1.2

6.10.3.4.4.2~~a~~b.1.2 TFCS

TFCS size	5 (alt. 3)
TFCS	(SRBs for CCCH/DCCH/BCCH) = (TF0), (TF1), (TF2), (TF3), (TF4) (alt. (TF0), (TF1), (TF2))

6.10.3.4.4.2~~a~~b.2 Physical channel parameters

S-CCPCH	Midamble	512 chips
	Codes and time slots	SF16 x 5 codes x 1 time slot (alt. SF16 x 2 codes x 1 time slot)
	Max. Number of data bits/radio frame	1204 bits (alt. 480 bits)
	TFCI code word	16 bits (alt. 8 bits)
	Puncturing limit	1 (alt. 0.84)

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

6.10.3.4.4.3.1 Transport channel parameters

6.10.3.4.4.3.1.1 Transport channel parameters ~~of SRB~~ for Interactive/Background 32 kbps RAB

See clause 6.10.3.4.4.2.1.1.

6.10.3.4.4.3.1.2 Transport channel parameters of SRB for PCCH

See clause 6.10.3.4.4.1.1.1.

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

See clause 6.10.3.4.4.2.1.2.

6.10.3.4.4.3.1.4 TFCS

TFCS size	~~45 (alt.63)~~ 30 (alt. 8~~-~~)
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, TF0, TF4), (TF0, TF1, TF0), (TF0, TF1, TF1), (TF0, TF1, TF2), (TF0, TF1, TF3), (TF0, TF1, TF4),~~(TF0, TF2, TF0), (TF0, TF2, TF1), (TF0, TF2, TF2), (TF0, TF2, TF3), (TF0, TF2, TF4),~~(TF1, 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, TF2, TF0), (TF1, TF2, TF1), (TF1, TF2, TF2), (TF1, TF2, TF3), (TF1, TF2, TF4),~~(TF2, TF0, TF0), (TF2, TF0, TF1), (TF2, TF0, TF2), (TF2, TF0, TF3), (TF2, TF0, TF4),(TF2, TF1, TF0), (TF2, TF1, TF1), (TF2, TF1, TF2), (TF2, TF1, TF3), (TF2, TF1, TF4) ,~~(TF2, TF2, TF0), (TF2, TF2, TF1), (TF2, TF2, TF2), (TF2, TF2, TF3), (TF2, TF2, TF4)~~ (alt. (TF0, TF0, TF0), (TF0, TF0, TF1), (TF0, TF0, TF2), (TF0, TF1, TF0), (TF0, TF1, TF1), (TF0, TF2, TF0), (TF0, TF2, TF1), (TF1, TF0, TF0)) ~~(alt. (TF0, TF0, TF0), (TF0, TF0, TF1), (TF0, TF0, TF2), (TF0, TF0, TF3), (TF0, TF0, TF4), (TF0, TF0, TF5), (TF0, TF0, TF6),(TF0, TF1, TF0), (TF0, TF1, TF1), (TF0, TF1, TF2), (TF0, TF1, TF3), (TF0, TF1, TF4), (TF0, TF1, TF5), (TF0, TF1, TF6),(TF0, TF2, TF0), (TF0, TF2, TF1), (TF0, TF2, TF2), (TF0, TF2, TF3), (TF0, TF2, TF4), (TF0, TF2, TF5), (TF0, TF2, TF6), (TF1, TF0, TF0), (TF1, TF0, TF1), (TF1, TF0, TF2), (TF1, TF0, TF3), (TF1, TF0, TF4), (TF1, TF0, TF5), (TF1, TF0, TF6),(TF1, TF1, TF0), (TF1, TF1, TF1), (TF1, TF1, TF2), (TF1, TF1, TF3), (TF1, TF1, TF4), (TF1, TF1, TF5), (TF1, TF1, TF6),(TF1, TF2, TF0), (TF1, TF2, TF1), (TF1, TF2, TF2), (TF1, TF2, TF3), (TF1, TF2, TF4), (TF1, TF2, TF5), (TF1, TF2, TF6), (TF2, TF0, TF0), (TF2, TF0, TF1), (TF2, TF0, TF2), (TF2, TF0, TF3), (TF2, TF0, TF4), (TF2, TF0, TF5), (TF2, TF0, TF6),(TF2, TF1, TF0), (TF2, TF1, TF1), (TF2, TF1, TF2), (TF2, TF1, TF3), (TF2, TF1, TF4), (TF2, TF1, TF5), (TF2, TF1, TF6),(TF2, TF2, TF0), (TF2, TF2, TF1), (TF2, TF2, TF2), (TF2, TF2, TF3), (TF2, TF2, TF4), (TF2, TF2, TF5) (TF2, TF2, TF6))~~
Note~~-~~: alt. TFCS applies when alts for 32 kbps RAB, SRB for PCCH, and SRBs for CCCH/ DCCH/ BCCH are all configured.	

6.10.3.4.4.3.2 Physical channel parameters

~~(burst type 1):~~

S-CCPCH	Midamble	512 chips
	Codes and time slots	SF16 x 8 codes x 1 time slot (alt. SF16 x 2 codes x 1 time slot)
	Max. Number of data bits/radio frame	~~1920~~ 1936 bits (alt. 472 bits)
	TFCI code word	~~32~~ 16 bits
	Puncturing limit	~~0,68~~ 0.52 (alt. ~~0.60~~0.56)
Note: Alt. applies when alts for 32 kbps RAB and SRBs for CCCH/ DCCH/ BCCH are both configured.		

~~(burst type 2):~~

~~S-CCPCH~~	~~Midamble~~	~~256 chips~~
	~~Codes and time slots~~	~~SF16 x 7 codes x 1 time slot~~
	~~Max. Number of data bits/radio frame~~	~~1900 bits~~
	~~TFCI code word~~	~~32 bits~~
	~~Puncturing limit~~	~~0,64~~

6.10.3.4.4.3a SRB for PCCH + SRB for CCCH + SRB for DCCH + SRB for BCCH

6.10.3.4.4.3a.1 Transport channel parameters

6.10.3.4.4.3a.1.1 Transport channel parameters of SRB for PCCH

See clause 6.10.3.4.4.1.1.1.

6.10.3.4.4.3a.1.2 Transport channel parameters of SRBs for CCCH, SRB for DCCH, and SRB for BCCH

See clause 6.10.3.4.4.2.1.2.

6.10.3.4.4.3a.1.3 TFCS

TFCS size	10 (alt.~~4~~7)
TFCS	(SRB for PCCH, SRBs for CCCH/ DCCH/ BCCH) = (TF0, TF0), (TF0, TF1), (TF0, TF2), (TF0, TF3), (TF0, TF4), (TF1, TF0), (TF1, TF1), (TF1, TF2), (TF1, TF3), (TF1, TF4) (alt. (TF0, TF0), (TF0, TF1), (TF0, TF2), (TF1, TF0), (TF1, TF1), (TF2, TF0), (TF2, TF1))
Note: alt. TFCS applies when alts for SRB for PCCH and SRBs for CCCH/ DCCH/ BCCH are both configured.	

6.10.3.4.4.3a.2 Physical channel parameters

S-CCPCH	Midamble	512 chips
	Codes and time slots	SF16 x 5 codes x 1 time slot (alt. SF16 x 2 codes x 1 time slot)
	Max. Number of data bits/radio frame	1204 bits (alt. 480 bits)
	TFCI code word	16 bits (alt. 8 bits)
	Puncturing limit	0.84 (~~0.80~~alt. 0.84)
Note: Alt. applies when alt for SRBs for CCCH/ DCCH/ BCCH is configured.		

6.10.3.4.4.4 RB for CTCH + SRB for CCCH + SRB for BCCH

6.10.3.4.4.4.1 Transport channel parameters

6.10.3.4.4.4.1.1 Transport channel parameters of RB for CTCH

Higher layer	RAB/signalling RB		N/A
	User of Radio Bearer		BMC
RLC	Logical channel type		CTCH
	RLC mode		UM
	Payload sizes, bit		152
	Max data rate, bps		15200
	UMD PDU header, bit		8
MAC	MAC header, bit		3
	MAC multiplexing		N/A
Layer 1	TrCH type		FACH
	TB sizes, bit		163
	TFS	TF0, bits	0x163
		TF1, bits	1x163
		TF2, bits	2x163
	TTI, ms		20
	Coding type		CC 1/3
	CRC, bit		16
	Max number of bits/TTI before rate matching		1098
	Max number of bits/radio frame before rate matching		549
	RM attribute		200-240

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

Higher layer	RAB/signalling RB		SRB#0	SRB#5
	User of Radio Bearer		RRC	RRC
RLC	Logical channel type		CCCH	BCCH
	RLC mode		UM	TM
	Payload sizes, bit		160	168
	Max data rate, bps		16000	16800
	AMD/UMD/TrD PDU header, bit		8	0
MAC	MAC header, bit		3	3
	MAC multiplexing		2 logical channel multiplexing	
Layer 1	TrCH type		FACH	
	TB sizes, bit		171	
	TFS	TF0, bits	0x171	
		TF1, bits	1x171	
		TF2, bits	2x171	
	TTI, ms		20	
	Coding type		TC	
	CRC, bit		16	
	Max number of bits/TTI before rate matching		1134	
	Max number of bits/radio frame before rate matching		567	
	RM attribute		200-240	

6.10.3.4.4.4.1.3 TFCS

TFCS size	4
TFCS	(RB for CTCH, SRBs for CCCH/BCCH) = (TF0, TF0), (TF0, TF1), (TF0, TF2), (TF1, TF0)

6.10.3.4.4.4.2 Physical channel parameters

S-CCPCH	Midamble	512 chips
	Codes and time slots	SF16 x 2 codes x 1 time slot
	Max. Number of data bits/radio frame	472 bits
	TFCI code word	16 bits
	Puncturing limit	0.80

6.10.3.4.5 Combinations on PRACH

6.10.3.4.5.1 SRB for CCCH + SRB for DCCH

6.10.3.4.5.1.1 Transport channel parameters

6.10.3.4.5.1.1.1 Transport channel parameter for SRB for CCCH, SRB for DCCH

Higher layer	RAB/signalling RB		**SRB#0**	**SRB#1**	**SRB#2**	**SRB#3**	**SRB#4**
	User of Radio Bearer		RRC	RRC	RRC	NAS_DT High priority	NAS_DT Low priority
RLC	Logical channel type		CCCH	DCCH	DCCH	DCCH	DCCH
	RLC mode		TM	UM	AM	AM	AM
	Payload sizes, bit		168	136	128	128	128
	Max data rate, bps		16800	13600	12800	12800	12800
	AMD/UMD/TrD PDU header, bit		0	8	16	16	16
MAC	MAC header, bit		2	26	26	26	26
	MAC multiplexing		5 logical channel multiplexing				
Layer 1	TrCH type		RACH				
	TB sizes, bit		170 ~~170~~ ~~170~~ ~~170~~ ~~170~~				
	TFS	TF0, bits	1x170				

TTI, ms	10
Coding type	CC ½
CRC, bit	16
Max number of bits/TTI after channel coding	388 ~~388~~ ~~388~~ ~~388~~ ~~388~~
Max number of bits/Radio frame before rate matching	388 ~~388~~ ~~388~~ ~~388~~ ~~388~~

6.10.3.4.5.1.1.2 TFCS

TFCS size	1
TFCS	SRBs for CCCH/ DCCH = (TF0)

6.10.3.4.5.1.2 Physical channel parameters

PRACH	Midamble	512 chips
	Codes and time slots	SF8 (alt. SF16) x 1 code x 1 time slot
	Max. Number of data bits/radio frame	488 bits (alt. 244 bits)
	Puncturing Limit	1.0 (alt. 0.~~75~~60)

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

6.10.3.4.5.2.1 Transport channel parameters

Higher layer	RAB/signalling RB User of Radio Bearer	**RAB** Interactive/ Background RAB	**SRB#0** RRC	**SRB#1** RRC	**SRB#2** RRC	**SRB#3** NAS_DT High priority	**SRB#4** NAS_DT Low priority
RLC	Logical channel type	DTCH	CCCH	DCCH	DCCH	DCCH	DCCH
	RLC mode	AM	TM	UM	AM	AM	AM
	Payload sizes, bit	128	168	136	128	128	128
	Max data rate, bps	12800	16800	13600	12800	12800	12800
	AMD/UMD/TrD PDU header, bit	16	0	8	16	16	16

Higher layer	RAB/signalling RB	**RAB**	**SRB#0**	**SRB#1**	**SRB#2**	**SRB#3**	**SRB#4**
	User of Radio Bearer	Interactive/ Background RAB	RRC	RRC	RRC	NAS_DT High priority	NAS_DT Low priority
MAC	MAC header, bit	26	2	26	26	26	26
	MAC multiplexing	6 logical channel multiplexing					
Layer 1	TrCH type	RACH					
	TB sizes, bit	170					
	TFS TF0, bits	1x170					
	TTI, ms	10					
	Coding type	CC 1/2					
	CRC, bit	16					
	Max number of bits/TTI after channel coding	388					
	Max number of bits/ Radio frame before rate matching	388					

6.10.3.4.5.2.2 Physical channel parameters

See clause 6.10.3.4.5.1.2.

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

6.10.3.4.5.3.1 Transport channel parameters

Higher layer	RAB/signalling RB	**RAB**	**RAB**	**SRB#0**	**SRB#1**	**SRB#2**	**SRB#3**	**SRB#4**
	User of Radio Bearer	Interactive/ Background RAB	Interactive/ Background RAB	RRC	RRC	RRC	NAS_DT High prio	NAS_DT Low prio
RLC	Logical channel type	DTCH	DTCH	CCCH	DCCH	DCCH	DCCH	DCCH
	RLC mode	AM	AM	TM	UM	AM	AM	AM
	Payload sizes, bit	128	128	168	136	128	128	128
	Max data rate, bps	12800	12800	16800	13600	12800	12800	12800
	AMD/UMD/TrD PDU header, bit	16	16	0	8	16	16	16

Higher layer	RAB/signalling RB	**RAB**	**RAB**	**SRB#0**	**SRB#1**	**SRB#2**	**SRB#3**	**SRB#4**
	User of Radio Bearer	Interactive/ Background RAB	Interactive/ Background RAB	RRC	RRC	RRC	NAS_DT High prio	NAS_DT Low prio
MAC	MAC header, bit	26	26	2	26	26	26	26
	MAC multiplexing	7 logical channel multiplexing						
Layer 1	TrCH type	RACH						
	TB sizes, bit	170						
	TFS TF0, bits	1x170						
	TTI, ms	10						
	Coding type	CC ½						
	CRC, bit	16						
	Max number of bits/TTI after channel coding	388						
	Max number of bits/ Radio frame before rate matching	388						

6.10.3.4.5.3.2 Physical channel parameters

See clause 6.10.3.4.5.1.2.

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Hyderabad, India, 2nd – 6th February 2004

Tdoc ⌘T1-040095

CR-Form-v7

CHANGE REQUEST

⌘ **34.108** **CR** **289** ⌘**rev** **-** ⌘ Current version: **4.9.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	Correction to Default parameters for Cells 1 to 8 in MultiPLMN cell environments – Rel-4
Source:	⌘	Sasken Communication Technologies Limited, MCC task 160
Work item code:	⌘	TEI
Date:	⌘	22/01/04
Category:	⌘	**F**
Release:	⌘	Rel-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 *(GSM Phase 2)*
R96 *(Release 1996)*
R97 *(Release 1997)*
R98 *(Release 1998)*
R99 *(Release 1999)*
Rel-4 *(Release 4)*
Rel-5 *(Release 5)*
Rel-6 *(Release 6)*

Reason for change: ⌘

1) As per section 8.1.1.6.18 of 25.331:

"if the number of identities in a PLMN list (if any) is lower than the number of neighbour cells in the paired list, the missing PLMN identities are replaced by the last PLMN identity in the list if present, otherwise by the identity of the selected PLMN"

Thus, in the default content for SIB 18 there is no need to send PLMN ID for PLMNs of intra-frequency cells list IE.

UE will consider all the cells in Intra and Inter Cell list of SIB 11 to belong to selected PLMN.

2) As per 25.331 section 8.1.1.6.18 "UE will obtain knowledge of the PLMN identity of the neighbour cells from SIB 18 if present. "

Also as per 34.108 in SIB 18 same PLMN ID is broadcasted as in MIB, for intra-frequency cells list IE.

Thus all the cells present in SIB 11 will belong to the PLMN ID transmitted in SIB 18.

In order to differentiate between cells of different PLMN's, cells belonging to different PLMN's needs to be broadcasted at different frequency and also SIB 18 should contain the list of these PLMN's.

Summary of change: ⌘

1) In the default contents for SYSTEM INFORMATION BLOCK 18, changed the value of "PLMNs of intra-frequency cells list" IE to Not Present.

		2) As per the above reasoning for the Multi PLMN test cases environment, added Message Specific content for SIB 11 and SIB 18, which will ensure that cells of different PLMN will be configured at a different frequency.
Consequences if not approved:	⌘	Test procedure is not consistent with the core specs. A good UE will fail the test case.

Clauses affected:	⌘	6.1.0b, New clauses 6.1.4.1 and 6.1.4.2			
		Y	**N**		
Other specs affected:	⌘		**X**	Other core specifications	⌘
			X	Test specifications	34.123-1 clause 9 and 12 34.123-3 in TTCN
			X	O&M Specifications	
Other comments:	⌘	It is a critical CR, affects R99, Rel-4 and Rel-5 test cases with multiple PLMNs.			

How to create CRs using this form:

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

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

6.1.0b Default System Information Block Messages

……

<Start of Changed Section>

Contents of System Information Block type 18

- Idle mode PLMN identities	
- PLMNs of intra-frequency cells list	Not present
~~- PLMN identity~~	~~Set to the same value as indicated in MIB~~
- PLMNs of inter-frequency cells list	Not present
- PLMNs of inter-RAT cells list	Not present
- Connected mode PLMN identities	Not present

<End of Changed Section>

6.1.4 Default parameters for 1 to 8 cell environments

Default settings for cell No.1 (FDD):

Downlink input level	Reference clause 6.10 Parameter Set
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference clause 6.10 Parameter Set
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	100

Contents of System Information Block type 11 for cell No.1 (FDD)

See sub-clause 6.1.0b for contents of System Information Block type 11 (FDD) for cell 1.

Contents of System Information Block type 12 in connected mode for cell No.1 (FDD)

See sub-clause 6.1.0b for contents of System Information Block type 12 (FDD) for cell 1.

…..

Cell No.10

Contents of System Information for cell No.10 (GSM)

See TS 51.010-1 [31], clause 10.1.2.

Default settings for cell No.10 (GSM):

See table 6.1.10

<Start of Changed Section>

6.1.4.1 Default Cell parameters Two PLMN in UTRAN test scenario

In this scenario two cell groups belong to two different PLMN, Cell 1,2,3,7,8 (for PLMN1) and Cell 4,5,6 (for PLMN2) shall be configured on two different frequencies.

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.1 to 8 are identical to those of cell No.1-8 in subclause 6.1.4. Exceptions are found in SYSTEM INFORMATION BLOCK TYPE 11:

- SYSTEM INFORMATION BLOCK TYPE 11 for cell No.1, 2, 3, 7, 8 contains cell No.1, 2, 3, 7, 8 in Intra-frequency measurement system information, and cell No.4, 5, 6 in Inter-frequency measurement system information.
- SYSTEM INFORMATION BLOCK TYPE 11 for cell No.4,5,6 contains cell No.4,5,6 in Intra-frequency measurement system information, and cell No. 1, 2, 3, 7, 8 in Inter-frequency measurement system information.
- All other parameters in SYSTEM INFORMATION BLOCK TYPE 11 are set to identical to subclause 6.1.4.

Contents of System Information Block type 18 for cell No.1,2,3,7,8

- Idle mode PLMN identities - PLMNs of intra-frequency cells list - PLMNs of inter-frequency cells list - PLMN identity - PLMNs of inter-RAT cells list - Connected mode PLMN identities	 Not Present Set to PLMN2 Not present Not present

Contents of System Information Block type 18 for cell No.4,5,6

- Idle mode PLMN identities - PLMNs of intra-frequency cells list - PLMNs of inter-frequency cells list - PLMN identity - PLMNs of inter-RAT cells list - Connected mode PLMN identities	 Not Present Set to PLMN1 Not present Not present

6.1.4.2 Default Cell parameters Three PLMN in UTRAN test scenario

In this scenario three cell groups belong to three different PLMN, Cell 1, 2, 3 (for PLMN1), Cell 4, 5, 6 (for PLMN2) and Cell 7, 8 (for PLMN3) shall be configured on three different frequencies.

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.1 to 8 are identical to those of cell No.1-8 in subclause 6.1.4. Exceptions are found in SYSTEM INFORMATION BLOCK TYPE 11:

- SYSTEM INFORMATION BLOCK TYPE 11 for cell No.1, 2, 3 contains cell No.1, 2, 3 in Intra-frequency measurement system information, and cell No.4, 5, 6, 7, 8 in Inter-frequency measurement system information.
- SYSTEM INFORMATION BLOCK TYPE 11 for cell No.4, 5, 6 contains cell No. 4, 5, 6 in Intra-frequency measurement system information, and cell No. 1, 2, 3, 7, 8 in Inter-frequency measurement system information.
- SYSTEM INFORMATION BLOCK TYPE 11 for cell No. 7, 8 contains cell No. 7, 8 in Intra-frequency measurement system information, and cell No. 1, 2, 3, 4, 5, 6 in Inter-frequency measurement system information.
- All other parameters in SYSTEM INFORMATION BLOCK TYPE 11 are set to identical to subclause 6.1.4.~~:~~

Contents of System Information Block type 18 for cell No.1,2,3,

- Idle mode PLMN identities	
- PLMNs of intra-frequency cells list	Not Present
- PLMNs of inter-frequency cells list	
- PLMN identity	Set to PLMN2
- PLMN identity	Set to PLMN2
- PLMN identity	Set to PLMN2
- PLMN identity	Set to PLMN3
- PLMNs of inter-RAT cells list	Not present
- Connected mode PLMN identities	Not present

Contents of System Information Block type 18 for cell No.4,5,6

- Idle mode PLMN identities	
- PLMNs of intra-frequency cells list	Not Present
- PLMNs of inter-frequency cells list	
- PLMN identity	Set to PLMN1
- PLMN identity	Set to PLMN1
- PLMN identity	Set to PLMN1
- PLMN identity	Set to PLMN3
- PLMNs of inter-RAT cells list	Not present
- Connected mode PLMN identities	Not present

Contents of System Information Block type 18 for cell No.7,8

- Idle mode PLMN identities	
- PLMNs of intra-frequency cells list	Not Present
- PLMNs of inter-frequency cells list	
- PLMN identity	Set to PLMN1
- PLMN identity	Set to PLMN1
- PLMN identity	Set to PLMN1
- PLMN identity	Set to PLMN2
- PLMNs of inter-RAT cells list	Not present
- Connected mode PLMN identities	Not present

<End of Changed Section>

6.1.5 Reference Radio Conditions for signalling test cases (FDD)

3GPP TSG–T1 Meeting #22
Hyderabad, India, 2nd – 6th February 2004

Tdoc ⌘T1-040094

CR-Form-v7

CHANGE REQUEST

⌘ **34.108** **CR** **288** ⌘ **rev** **-** ⌘ Current version: **3.e.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	Correction to Default parameters for Cells 1 to 8 in MultiPLMN cell environments – R99
Source:	⌘	Sasken Communication Technologies Limited, MCC task 160
Work item code:	⌘	TEI
Date:	⌘	22/01/04
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 *(GSM Phase 2)*
R96 *(Release 1996)*
R97 *(Release 1997)*
R98 *(Release 1998)*
R99 *(Release 1999)*
Rel-4 *(Release 4)*
Rel-5 *(Release 5)*
Rel-6 *(Release 6)*

Reason for change: ⌘

1) As per section 8.1.1.6.18 of 25.331:

"if the number of identities in a PLMN list (if any) is lower than the number of neighbour cells in the paired list, the missing PLMN identities are replaced by the last PLMN identity in the list if present, otherwise by the identity of the selected PLMN"

Thus, in the default content for SIB 18 there is no need to send PLMN ID for PLMNs of intra-frequency cells list IE.

UE will consider all the cells in Intra and Inter Cell list of SIB 11 to belong to selected PLMN.

2) As per 25.331 section 8.1.1.6.18 "UE will obtain knowledge of the PLMN identity of the neighbour cells from SIB 18 if present. "

Also as per 34.108 in SIB 18 same PLMN ID is broadcasted as in MIB, for intra-frequency cells list IE.

Thus all the cells present in SIB 11 will belong to the PLMN ID transmitted in SIB 18.

In order to differentiate between cells of different PLMN's, cells belonging to different PLMN's needs to be broadcasted at different frequency and also SIB 18 should contain the list of these PLMN's.

Summary of change: ⌘

1) In the default contents for SYSTEM INFORMATION BLOCK 18, changed the value of "PLMNs of intra-frequency cells list" IE to Not Present.

		2) As per the above reasoning for the Multi PLMN test cases environment, added Message Specific content for SIB 11 and SIB 18, which will ensure that cells of different PLMN will be configured at a different frequency.
Consequences if not approved:	⌘	Test procedure is not consistent with the core specs. A good UE will fail the test case.

Clauses affected:	⌘	6.1.0b, New clauses 6.1.4.1 and 6.1.4.2			
		Y	**N**		
Other specs affected:	⌘		**X**	Other core specifications	⌘
			X	Test specifications	34.123-1 clause 9 and 12 34.123-3 in TTCN
			X	O&M Specifications	
Other comments:	⌘	It is a critical CR, affects R99, Rel-4 and Rel-5 test cases with multiple PLMNs.			

How to create CRs using this form:

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1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

6.1.0b Default System Information Block Messages

……

<Start of Changed Section>

Contents of System Information Block type 18

- Idle mode PLMN identities	
- PLMNs of intra-frequency cells list	Not present
~~- PLMN identity~~	~~Set to the same value as indicated in MIB~~
- PLMNs of inter-frequency cells list	Not present
- PLMNs of inter-RAT cells list	Not present
- Connected mode PLMN identities	Not present

<End of Changed Section>

6.1.4 Default parameters for 1 to 8 cell environments

Default settings for cell No.1 (FDD):

Downlink input level	Reference clause 6.10 Parameter Set
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference clause 6.10 Parameter Set
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	100

Contents of System Information Block type 11 for cell No.1 (FDD)

See sub-clause 6.1.0b for contents of System Information Block type 11 (FDD) for cell 1.

Contents of System Information Block type 12 in connected mode for cell No.1 (FDD)

See sub-clause 6.1.0b for contents of System Information Block type 12 (FDD) for cell 1.

…..

Cell No.10

Contents of System Information for cell No.10 (GSM)

See TS 51.010-1 [31], clause 10.1.2.

Default settings for cell No.10 (GSM):

See table 6.1.10

<Start of Changed Section>

6.1.4.1 Default Cell parameters Two PLMN in UTRAN test scenario

In this scenario two cell groups belong to two different PLMN, Cell 1,2,3,7,8 (for PLMN1) and Cell 4,5,6 (for PLMN2) shall be configured on two different frequencies.

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.1 to 8 are identical to those of cell No.1-8 in subclause 6.1.4. Exceptions are found in SYSTEM INFORMATION BLOCK TYPE 11:

- SYSTEM INFORMATION BLOCK TYPE 11 for cell No.1, 2, 3, 7, 8 contains cell No.1, 2, 3, 7, 8 in Intra-frequency measurement system information, and cell No.4, 5, 6 in Inter-frequency measurement system information.
- SYSTEM INFORMATION BLOCK TYPE 11 for cell No.4,5,6 contains cell No.4,5,6 in Intra-frequency measurement system information, and cell No. 1, 2, 3, 7, 8 in Inter-frequency measurement system information.
- All other parameters in SYSTEM INFORMATION BLOCK TYPE 11 are set to identical to subclause 6.1.4.

Contents of System Information Block type 18 for cell No.1,2,3,7,8

- Idle mode PLMN identities - PLMNs of intra-frequency cells list - PLMNs of inter-frequency cells list - PLMN identity - PLMNs of inter-RAT cells list - Connected mode PLMN identities	 Not Present Set to PLMN2 Not present Not present

Contents of System Information Block type 18 for cell No.4,5,6

- Idle mode PLMN identities - PLMNs of intra-frequency cells list - PLMNs of inter-frequency cells list - PLMN identity - PLMNs of inter-RAT cells list - Connected mode PLMN identities	 Not Present Set to PLMN1 Not present Not present

6.1.4.2 Default Cell parameters Three PLMN in UTRAN test scenario

In this scenario three cell groups belong to three different PLMN, Cell 1, 2, 3 (for PLMN1), Cell 4, 5, 6 (for PLMN2) and Cell 7, 8 (for PLMN3) shall be configured on three different frequencies.

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.1 to 8 are identical to those of cell No.1-8 in subclause 6.1.4. Exceptions are found in SYSTEM INFORMATION BLOCK TYPE 11:

- SYSTEM INFORMATION BLOCK TYPE 11 for cell No.1, 2, 3 contains cell No.1, 2, 3 in Intra-frequency measurement system information, and cell No.4, 5, 6, 7, 8 in Inter-frequency measurement system information.
- SYSTEM INFORMATION BLOCK TYPE 11 for cell No.4, 5, 6 contains cell No. 4, 5, 6 in Intra-frequency measurement system information, and cell No. 1, 2, 3, 7, 8 in Inter-frequency measurement system information.
- SYSTEM INFORMATION BLOCK TYPE 11 for cell No. 7, 8 contains cell No. 7, 8 in Intra-frequency measurement system information, and cell No. 1, 2, 3, 4, 5, 6 in Inter-frequency measurement system information.
- All other parameters in SYSTEM INFORMATION BLOCK TYPE 11 are set to identical to subclause 6.1.4.~~:~~

Contents of System Information Block type 18 for cell No.1,2,3,

- Idle mode PLMN identities	
- PLMNs of intra-frequency cells list	Not Present
- PLMNs of inter-frequency cells list	
- PLMN identity	Set to PLMN2
- PLMN identity	Set to PLMN2
- PLMN identity	Set to PLMN2
- PLMN identity	Set to PLMN3
- PLMNs of inter-RAT cells list	Not present
- Connected mode PLMN identities	Not present

Contents of System Information Block type 18 for cell No.4,5,6

- Idle mode PLMN identities	
- PLMNs of intra-frequency cells list	Not Present
- PLMNs of inter-frequency cells list	
- PLMN identity	Set to PLMN1
- PLMN identity	Set to PLMN1
- PLMN identity	Set to PLMN1
- PLMN identity	Set to PLMN3
- PLMNs of inter-RAT cells list	Not present
- Connected mode PLMN identities	Not present

Contents of System Information Block type 18 for cell No.7,8

- Idle mode PLMN identities	
- PLMNs of intra-frequency cells list	Not Present
- PLMNs of inter-frequency cells list	
- PLMN identity	Set to PLMN1
- PLMN identity	Set to PLMN1
- PLMN identity	Set to PLMN1
- PLMN identity	Set to PLMN2
- PLMNs of inter-RAT cells list	Not present
- Connected mode PLMN identities	Not present

<End of Changed Section>

6.1.5 Reference Radio Conditions for signalling test cases (FDD)

3GPP TSG-T1 Meeting #22
Hyderabad, India, 2nd – 6th February 2004

T1⌘040080

CR-Form-v7

CHANGE REQUEST

⌘ **34.108** **CR** **287** ⌘ **rev** **-** ⌘ Current version: **4.8.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	Corrections to default message contents of RRC Connection Setup message
Source:	⌘	Nokia
Work item code:	⌘	TEI
Date:	⌘	10/12/2003
Category:	⌘	**F**
Release:	⌘	Rel-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	The default message contents of the RRC Connection Setup message for transition to states DCH and FACH are changed from containing "TFCS representation Addition" to "TFCS representation Complete". It is more reasonable to see a complete TFCS when establishing an RRC Connection that it is to see an Addition of a TFCS. Test cases should not assume that any TFCS are already in place when establishing an RRC Connection, therefore a complete configuration should be given, not an addition.
Summary of change:	⌘	TFCS Representation is changed from Addition to Complete
Consequences if not approved:	⌘	If this change is not made, the default message contents will not represent the "default"

Clauses affected:	⌘	9.1.1			
Other specs affected:	⌘	**Y** / **N**	Other core specifications	⌘	34.108 v3.d.0, 34.123-1, 34.123-3
		N / **X**			
		X /	Test specifications		
		/ **X**	O&M Specifications		
Other comments:	⌘				

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

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Contents of RRC CONNECTION SETUP message: UM (Transition to CELL_DCH)

Information Element	Value/remark
Message Type	
Initial UE identity	Select the same identity as in the IE "Initial UE Identity" in received RRC CONNECTION REQUEST" message
RRC transaction identifier	Arbitrarily selects an integer between 0 and 3
Activation time	Not Present(Now)
New U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
New C-RNTI	Not present
RRC State Indicator	CELL_DCH
UTRAN DRX cycle length coefficient	9
Capability update requirement	
- UE radio access FDD capability update requirement	TRUE
- UE radio access TDD capability update requirement	FALSE
- System specific capability update requirement list	Gsm
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	Not present
- CHOICE RLC info type	
- RLC info	
- CHOICE Uplink RLC mode	UM RLC
- Transmission RLC discard	Not present
- CHOICE Downlink RLC mode	UM RLC
- RB mapping info	
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- Logical channel identity	1
- CHOICE RLC size list	Configured
- MAC logical channel priority	1
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	1
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	1
- CHOICE RLC size list	Explicit List
- RLC size index	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- MAC logical channel priority	1
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	Not Present
- CHOICE RLC info type	
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	32
- Timer_RST	500
- Max_RST	1

Information Element	Value/remark
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	32
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- Logical channel identity	2
- CHOICE RLC size list	Configured
- MAC logical channel priority	2
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	2
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	2
- CHOICE RLC size list	Explicit List
- RLC size index	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- MAC logical channel priority	2
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	Not Present
- CHOICE RLC info type	
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	32
- Timer_RST	500
- Max_RST	1
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present

Information Element	Value/remark
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	32
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- Logical channel identity	3
- CHOICE RLC size list	Configured
- MAC logical channel priority	3
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	3
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	3
- CHOICE RLC size list	Explicit List
- RLC size index	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- MAC logical channel priority	3
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	Not present
- CHOICE RLC info type	
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No discard
- MAX_DAT	15
- Transmission window size	32
- Timer_RST	500
- Max_RST	1
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_PDU	Not present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Window	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	32
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	

Information Element	Value/remark
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- Logical channel identity	4
- CHOICE RLC size list	Configured
- MAC logical channel priority	4
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	4
- RLC logical channel mapping indicator	Not Present
- Number of RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	4
- CHOICE RLC size list	Explicit List
- RLC size index	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- MAC logical channel priority	4
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	4
UL Transport channel information for all transport channels	
- PRACH TFCS	Not Present
- CHOICE Mode	FDD
- TFC subset	Not Present
- UL DCH TFCS	
- CHOICE TFCI signalling	Normal
- TFCI Field 1 information	
- CHOICE TFCS representation	~~Addition~~Complete
- TFCS complete reconfigure	
- CHOICE CTFC Size	2bit CTFC
- CTFC information	This IE is repeated for TFC numbers according to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- CTFC	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- Power offset information	
- CHOICE Gain Factors	Computed Gain Factors (The last TFC is set to Signalled Gain Factors)
- Gain factor ßc	11 (below 64 kbps) 9 (higher than 64 kbps) (Not Present if the above is set to Computed Gain Factors)
- Gain factor ßd	15 (Not Present if the above is set to Computed Gain Factors)
- Reference TFC ID	0
- CHOICE mode	FDD
- Power offset Pp-m	Not Present
Added or Reconfigured UL TrCH information	
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- TFS	
- CHOICE Transport channel type	Dedicated transport channels
- Dynamic Transport format information	
- RLC size	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- Number of TBs and TTI lists	(This IE is repeated for TFI number)
- Transmission Time Interval	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)

Information Element	Value/remark
- Number of Transport blocks	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- CHOICE Logical channel list	All
- Semi-static Transport Format information	
- Transmission time interval	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- Type of channel coding	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- Coding Rate	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- Rate matching attribute	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- CRC size	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- CHOICE mode	FDD
- CHOICE DL parameters	Same as UL
Added or Reconfigured DL TrCH information	
- Downlink transport channel type	DCH
- DL Transport channel identity	10
- CHOICE DL parameters	Same as UL
- Uplink transport channel type	DCH
- UL TrCH Identity	5
- DCH quality target	
- BLER Quality value	-2.0
Frequency info	Not Present
Maximum allowed UL TX power	Not Present
Uplink DPCH info	
- Uplink DPCH power control info	
- DPCCH power offset	-6dB
- PC Preamble	1 frame
- SRB delay	7 frames
- Power Control Algorithm	Algorithm1
- TPC step size	1dB
- Scrambling code type	Long
- Scrambling code number	0 (0 to 16777215)
- Number of DPDCH	Not Present(1)
- Spreading factor	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- TFCI existence	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- Number of FBI bit	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- Puncturing Limit	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indication	Initialise
- CFN-targetSFN frame offset	Not Present
- CHOICE mode	FDD
- Downlink DPCH power control information	
- DPC mode	0 (single)
- Power offset $P_{Pilot\text{-}DPDCH}$	0
- DL rate matching restriction information	Not Present
- Spreading factor	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- Fixed or Flexible Position	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- TFCI existence	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- CHOICE SF	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- DPCH compressed mode info	Not Present
- TX Diversity mode	None
- SSDT information	Not Present

Information Element	Value/remark
- Default DPCH Offset Value	Arbitrary set to value 0..306688 by step of 512
Downlink information for each radio links list	
- Downlink information for each radio links	
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Reference to clause 6.1 "Default settings (FDD)"
- PDSCH with SHO DCH info	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	Set to value: Default DPCH Offset Value mod 38400
- Secondary CPICH info	Not Present
- DL channelisation code	
- Secondary scrambling code	1
- Spreading factor	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- Code number	0
- Scrambling code change	Not Present
- TPC combination index	0
- SSDT Cell Identity	Not Present
- Closed loop timing adjustment mode	Not Present
- SCCPCH information for FACH	Not Present

Contents of RRC CONNECTION SETUP message: UM (Transition to CELL_FACH)

Information Element	Value/remark
Message Type	
Initial UE identity	Select the same identity as in the IE "Initial UE Identity" in received RRC CONNECTION REQUEST" message
RRC transaction identifier	Arbitrarily selects an integer between 0 and 3
Activation time	Not Present (Now)
New U-RNTI	
- SRNC identity	0000 0000 0001B
- S-RNTI	0000 0000 0000 0000 0001B
New C-RNTI	0000 0000 0000 0001B
RRC state indicator	CELL_FACH
UTRAN DRX cycle length coefficient	9
Capability update requirement	Not Present
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	Not present
- CHOICE RLC info type	RLC info
- CHOICE Uplink RLC mode	UM RLC
- Transmission RLC discard	Not present
- SDU discard mode	Not present
- CHOICE Downlink RLC mode	UM RLC
- RB mapping info	
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- Logical channel identity	1
- CHOICE RLC size list	Configured
- MAC logical channel priority	1
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	1
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present

Information Element	Value/remark
- Logical channel identity	1
- CHOICE RLC size list	Explicit list
- RLC size index	According to TS34.108 clause 6.10.2.4.4.1
- MAC logical channel priority	1
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	Not Present
- CHOICE RLC info type	RLC info
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No Discard
- MAX_DAT	15
- Transmission window size	32
- Timer_RST	500
- Max_RST	1
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_PDU	Not Present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Windows	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	32
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- Logical channel identity	2
- CHOICE RLC size list	Configured
- MAC logical channel priority	2
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	2
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	2
- CHOICE RLC size list	Explicit list
- RLC size index	According to TS34.108 clause 6.10.2.4.4.1
- MAC logical channel priority	2
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)

Information Element	Value/remark
- RB identity	Not present
- CHOICE RLC info type	RLC info
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No Discard
- MAX_DAT	15
- Transmission window size	32
- Timer_RST	500
- Max_RST	1
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_PDU	Not Present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Windows	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	32
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- Logical channel identity	3
- CHOICE RLC size list	Configured
- MAC logical channel priority	3
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	3
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	RACH
- UL DCH Transport channel identity	Not Present
- Logical channel identity	3
- CHOICE RLC size list	Explicit list
- RLC size index	According to TS34.108 clause 6.10.2.4.4.1
- MAC logical channel priority	3
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	Not Present
- CHOICE RLC info type	RLC info
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	No Discard
- MAX_DAT	15
- Transmission window size	32
- Timer_RST	500
- Max_RST	1
- Polling info	
- Timer_poll_prohibit	200

Information Element	Value/remark
- Timer_poll	200
- Poll_PDU	Not Present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Windows	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	32
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	
- Information for each multiplexing option	2 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- Logical channel identity	4
- CHOICE RLC size list	Configured
- MAC logical channel priority	4
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DCH
- DL DCH Transport channel identity	10
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	4
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	4
- CHOICE RLC size list	Explicit list
- RLC size index	According to TS34.108 clause 6.10.2.4.4.1
- MAC logical channel priority	4
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	4
UL Transport channel information for all transport channels	
- PRACH TFCS	Not Present
- CHOICE Mode	FDD
- TFC subset	Not Present
- UL DCH TFCS	
- CHOICE TFCI signalling	Normal
- TFCI Field 1 information	
- CHOICE TFCS representation	~~Addition~~Complete
- TFCS complete reconfigure	
- CHOICE CTFC Size	2bit CTFC
- CTFC information	This IE is repeated for TFC numbers according to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- CTFC	According to TS34.108 clause 6.10.2.4.1.3 (standalone 13.6 kbps signalling radio bearer)
- Power offset information	
- CHOICE Gain Factors	Computed Gain Factors (The last TFC is set to Signalled Gain Factors)
- Gain factor ßc	11 (below 64 kbps) 9 (higher than 64 kbps) (Not Present if the above is set to Computed Gain Factors)

Information Element	Value/remark
- Gain factor ßd	15 (Not Present if the above is set to Computed Gain Factors)
- Reference TFC ID	0
- CHOICE mode	FDD
- Power offset Pp-m	Not Present
Added or Reconfigured TrCH information list	TS 25.331 specifies that "Although this IE is not required when the IE "RRC state indicator" is set to "CELL_FACH", need is MP to align with ASN.1"
- Added or Reconfigured UL TrCH information	
- Uplink transport channel type	DCH
- UL Transport channel identity	5
- TFS	
- CHOICE Transport channel type	Delicated transport channels
- Dynamic Transport format information	
- RLC Size	Value 16 results in an RLC size of 144 bits; OctetModeType1 ((8*sizeType1)+16).
- Number of TBs and TTI List	List with single entry
- Transmission Time Interval	Not Present
- Number of Transport blocks	0
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	
- Transmission time interval	40 ms
- Type of channel coding	Convolutional
- Coding Rate	1/3
- Rate matching attribute	160
- CRC size	16
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- CHOICE mode	FDD
- CHOICE DL parameters	Same as UL
Added or Reconfigured TrCH information list	TS 25.331 specifies that "Although this IE is not required when the IE "RRC state indicator" is set to "CELL_FACH", need is MP to align with ASN.1"
- Added or Reconfigured DL TrCH information	
- Downlink transport channel type	DCH
- DL Transport channel identity	10
- CHOICE DL parameters	Same as UL
- Uplink Transport channel type	DCH
- UL TrCH identity	5
- DCH quality target	Not Present
Frequency info	Not present
Maximum allowed UL TX power	Not present
CHOICE channel requirement	Not Present
Downlink information common for all radio links	Not Present
Downlink information for each radio link list	Not present