

Source: T1
Title: CR's to TS 34.108 v3.3.0 for approval
Agenda item: 5.1.3
Document for: Approval

This document contains 8 CRs to TS 34.108 v3.3.0. These CRs have been agreed by T1 and are put forward to TSG T for approval.

CRs related to Radio Bearers:

Spec	CR	Rev	Phase	Subject	Cat	Version-Current	Version-New	Doc-2nd-Level
34.108	040		R99	Corrections to clause 6.10 FDD parameters	F	3.3.0	3.4.0	T1-010205
34.108	041		R99	Corrections to clause 6.10 TDD parameters	F	3.3.0	3.4.0	T1-010206
34.108	042		R99	Adding section for radio bearer configurations intended for functional testing	D	3.3.0	3.4.0	T1-010210

CRs due to general updates:

Spec	CR	Rev	Phase	Subject	Cat	Version-Current	Version-New	Doc-2nd-Level
34.108	043		R99	Update of list of abbreviations	D	3.3.0	3.4.0	T1-010211
34.108	044		R99	Updates to clause 6.1 and 9	F	3.3.0	3.4.0	T1-010212
34.108	045		R99	Updates to clause 7.4	F	3.3.0	3.4.0	T1-010213
34.108	046		R99	clause 6.1: System Information Blocks for TDD Mode	F	3.3.0	3.4.0	T1-010214
34.108	047		R99	Editorial corrections and removal of a reference document	F	3.3.0	3.4.0	T1-010215

3GPP TSG-T1 Meeting #11
Melbourne, Australia, 17 – 18 May 2001

Tdoc T1-010205

3GPP TSG-T1/SIG Meeting #17
Melbourne, Australia, 14-16 May, 2001

Tdoc T1S-010084r1

CR-Form-v3

CHANGE REQUEST

⌘ **34.108 CR 040** ⌘ rev **-** ⌘ Current version: **3.3.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title: ⌘ CR for 6.10(34.108) "Reference Radio Bearer configurations" FDD parameters

Source: ⌘ NTT DoCoMo

Work item code: ⌘

Date: ⌘

Category: ⌘ **F**

Release: ⌘ R99

Use one of the following categories:

- F** (essential 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)

Reason for change: ⌘ Correction for the current version.

Summary of change: ⌘ Based on the proposal for "Reference Radio Bearer configurations" raised in T1/T1S, GSMA ISG (GSM Association IMT2000 Steering Group) have revised the "Typical Radio Parameter sets".

This CR propose new reference radio bearer configurations based on the latest version of "Typical Radio Parameter sets".

1) Rate matching attribute for Stand-alone SRBs for DCCH

Ranges of RM attributes for UL:1.7 DL:1.7 kbps SRBs for DCCH were clarified according to simulation results. And range of RM attribute for UL:3.4 kbps DL:3.4 kbps SRBs for DCCH were extended from 155-165 to 155-185. The reason of this range extension is that DCCH target quality of 5 % was assumed in the previous version and the target quality was extended to the range of 1-5 % in this version in terms of operation flexibility.

2) Puncture limit

In 34.108 v3.3.0, puncture limits for several RABs are mismatched to determine on SF. These are error of puncture limits for several RABs. These errors were corrected in this CR.

3) Deletion of PS mode for unidirectional streaming RABs

In order to use RLC transparent mode in uplink or downlink the transmitted IP-packets should be of constant size (or all the possible sizes known beforehand) for the network to configure the TF's and TFCS's for the radio bearer. This information should be known to the application receiving or sending the packets or

alternatively this information should be exchanged with UTRAN before the start of receiving or sending. Currently this is not specified in R99 specifications. Considering these background, PS mode for unidirectional streaming RABs were deleted.

4) Deletion of the note *1 under the tables of Transport channel parameters for UL conversational speech

The note “*1 The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212).” under the tables of Transport channel parameters for UL conversational speech was deleted. The reason is that concept of “guiding channel” is for a channel which applies BTFD(Blind Transport Format Detection) and BTFD is not applied to UL conversational speech.

5) Change of the slot format for associated DPCH with PDSCH

In 34.108 v3.3.0, slot formats without TFCI is used for an associated DPCH with PDSCH. In 3GPP TSG RAN#11, CR091 for 25.211 was approved, which describes that TFCI shall be used for TF detection on DSCH. Therefore, the slot format was changed to that with TFCI. There are two alternatives of slot format with TFCI for 256 of SF, i.e. the number of pilot bits is 4 or 8. In order to use shorter (1 slot) adjustment delay of feedback command for closed loop Tx diversity, a slot format with 4 bits of pilot bits are selected.

6) Change “Spreading factor” to “Minimum spreading factor” in the tables of Physical channel parameters for PDSCH

On the PDSCH, SF can be changed frame by frame. Therefore, “Spreading factor” in the tables of Physical channel parameters for PDSCH was changed to “Minimum spreading factor”.

7) Change on the MAC header for DSCH

In 34.108 v3.3.0, the MAC header is not applied to DSCH. According to 3GPP 25.321 section 9.2.1.1, however, UE-Id type and UE-Id of the MAC header are required for DSCH. Therefore, it was changed to apply the MAC header for DSCH. In section 5.6.5.1 of 3GPP 25.301, it is stated that “MAC multiplexing of different UEs shall not be applied within a radio frame, i.e. within one radio frame a PDSCH is assigned to a single UE. However, MAC multiplexing is allowed on a frame by frame basis, i.e. one PDSCH may be allocated to different UEs at each frame”. Concerning “MAC multiplexing” in the table for transport channel parameters, therefore, “Logical channel multiplexing on a frame by frame basis” was described in this CR.

8) Deletion of terms, “DPDCH” and “DPCCH” in the tables of Physical channel parameters for SCCPCH and PRACH

In TS25.211, the terms, “DPDCH” and “DPCCH” is not used for SCCPCH and PRACH. Therefore, these terms in the tables of Physical channel parameters for SCCPCH and PRACH were deleted.

9) Change of the note under the table of TFCS for SCCPCH

According to simulation results, it was found that required Tx power for a TFC, 0x360+2x168 (TF0, TF2), is larger than that for a TFC, 1x360+0x168 (TF1, TF0). It seems that these results comes from higher coding gain of Turbo coding than that of CC. The note under the table of TFCS for SCCPCH was changed according to these results.

10) Others

There are some editorial errors in 34.108 v3.3.0. These errors are corrected in this CR.

11) Change of the wording of “RLC header”

T1 received LS from R2 (T1-010120(R2-01761)).

In the LS,

It was concluded in RAN2 meeting #19 that the RLC header and PDU

header shall be clarified. The conclusion was as following: UMD PDU header and AMD PDU header consist of the octets that contain SN field and are one and two octets long respectively. The RLC header consists the octets that contain the SN field and the Length Indication fields. 'RLC header' is changed to 'AMD/UMD/TrD PDU header' wherever AM/UM/Tr modes are applicable.

Consequences if not approved: ⌘ Test parameters don't satisfy the core specification and real environment.

Clauses affected: ⌘ 6.10

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/3G_Specs/CRs.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://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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 Reference Radio Bearer configurations

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.

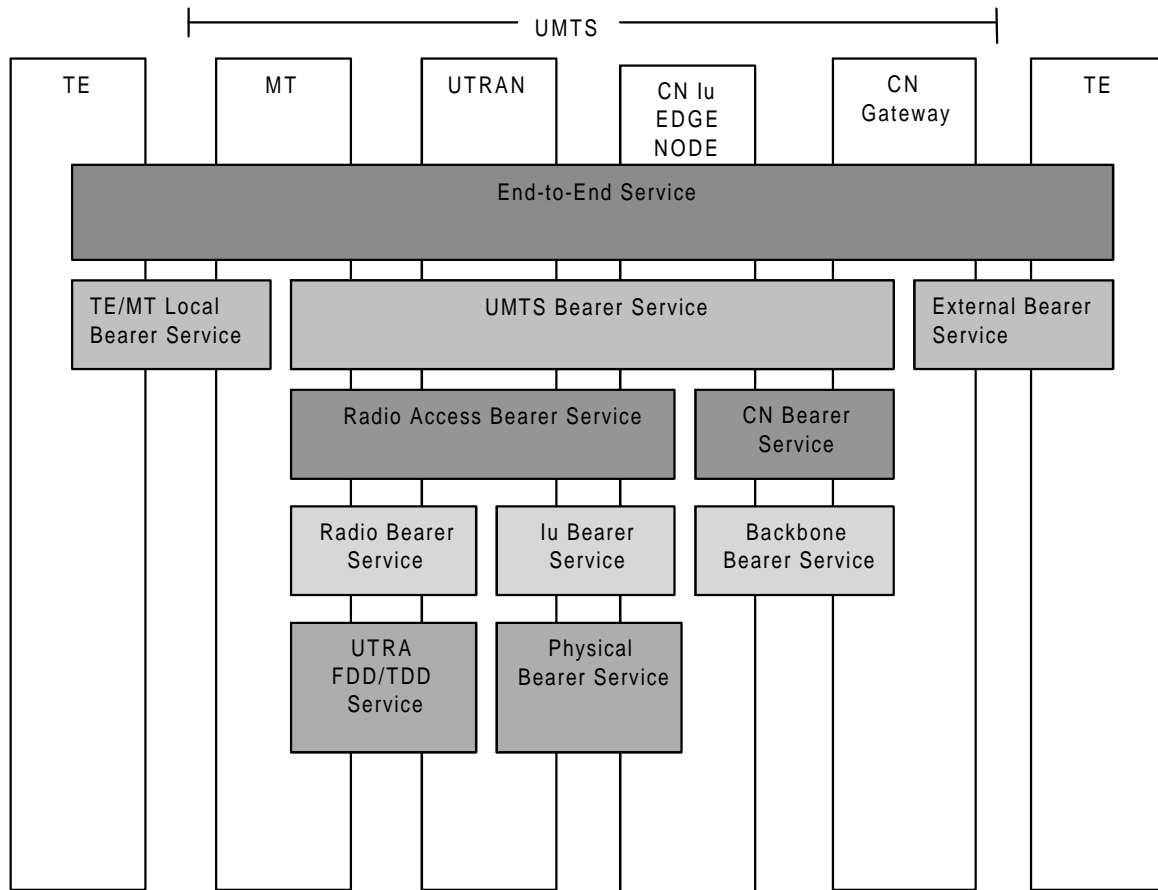


Figure 6.10.1.1: UMTS QoS Architecture

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:

- 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.

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
2	Conversational	Speech	UL:10.2 DL:10.2	CS
3	Conversational	Speech	UL:7.95 DL:7.95	CS
4	Conversational	Speech	UL:7.4 DL:7.4	CS
5	Conversational	Speech	UL:6.7 DL:6.7	CS
6	Conversational	Speech	UL:5.9 DL:5.9	CS
7	Conversational	Speech	UL:5.15 DL:5.15	CS
8	Conversational	Speech	UL:4.75 DL:4.75	CS
9	Conversational	Unknown	UL:28.8 DL:28.8	CS
10	Conversational	Unknown	UL:64 DL:64	CS
11	Conversational	Unknown	UL:32 DL:32	CS
12	Streaming	Unknown	UL:14.4 DL:14.4	CS
13	Streaming	Unknown	UL:28.8 DL:28.8	CS
14	Streaming	Unknown	UL:57.6 DL:57.6	CS
15	Streaming	Unknown	UL:0 DL:64	CS -or-PS
16	Streaming	Unknown	UL:64 DL:0	CS -or-PS
17	Streaming	Unknown	UL:0 DL:128	CS -or-PS
18	Streaming	Unknown	UL:128 DL:0	CS -or-PS
19	Streaming	Unknown	UL:0 DL:384	CS -or-PS
20	Interactive or Background	N/A	UL:32 DL:8	PS
21	Interactive or Background	N/A	UL:64 DL:8	PS
22	Interactive or Background	N/A	UL:32 DL:64	PS
23	Interactive or Background	N/A	UL:64 DL:64	PS
24	Interactive or Background	N/A	UL:64 DL:128	PS
25	Interactive or Background	N/A	UL:128 DL:128	PS
26	Interactive or Background	N/A	UL:64 DL:384	PS
27	Interactive or Background	N/A	UL:128 DL:384	PS
28	Interactive or Background	N/A	UL:384 DL:384	PS
29	Interactive or Background	N/A	UL:64 DL:2048	PS
30	Interactive or Background	N/A	UL:128 DL:2048	PS
31	Interactive or Background	N/A	UL:384 DL:2048	PS

Table 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 this document, physical channel parameters for following combinations of RABs and signalling RBs on a CCTrCH are described.

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

Combinations on DPCH

- 1) Stand-alone UL:1.7 DL:1.7 kbps SRBs for DCCH
- 2) Stand-alone UL:3.4 DL:3.4 kbps SRBs for DCCH
- 3) Stand-alone UL:13.6 DL:13.6 kbps SRBs for DCCH
- 4) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 5) Conversational / speech / UL:10.2 DL:10.2 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 6) Conversational / speech / UL:7.95 DL:7.95 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 7) Conversational / speech / UL:7.4 DL:7.4 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 8) Conversational / speech / UL:6.7 DL:6.7 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 9) Conversational / speech / UL:5.9 DL:5.9 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 10) Conversational / speech / UL:5.15 DL:5.15 kbps / CS RAB
+ UL:1.7 DL:1.7 kbps SRBs for DCCH
- 11) Conversational / speech / UL:4.75 DL:4.75 kbps / CS RAB
+ UL:1.7 DL:1.7 kbps SRBs for DCCH
- 12) Conversational / unknown / UL:28.8 DL:28.8 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 13) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 14) Conversational / unknown / UL:32 DL:32 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 15) Streaming / unknown / UL:14.4/DL:14.4 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 16) Streaming / unknown / UL:28.8/DL:28.8 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 17) Streaming / unknown / UL:57.6/DL:57.6 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 18) Streaming / unknown / UL:0 DL:64 kbps / CS ~~or PS~~-RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 19) Streaming / unknown / UL:64 DL:0 kbps / CS ~~or PS~~-RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 20) Streaming / unknown / UL:0 DL:128 kbps / CS ~~or PS~~-RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 21) Streaming / unknown / UL:128 DL:0 kbps / CS ~~or PS~~-RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 22) Streaming / unknown / UL:0 DL:384 kbps / CS ~~or PS~~-RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

- 23) Interactive or background / UL:32 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 24) Interactive or background / UL:64 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 25) Interactive or background / UL:32 DL: 64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 26) Interactive or background / UL:64 DL: 64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 27) Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 28) Interactive or background / UL:128 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 29) Interactive or background / UL:64 DL:144 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 30) Interactive or background / UL:144 DL:144 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 31) Interactive or background / UL:64 DL:256 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH
- 32) Interactive or background / UL:64 DL:384 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH
- 33) Interactive or background / UL:128 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 34) Interactive or background / UL:384 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 35) Interactive or background / UL:64 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 36) Interactive or background / UL:128 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 37) Interactive or background / UL:384 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 38) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:32 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 39) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:32 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 40) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH
- 41) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 42) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:256 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

- 43) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 44) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:128 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 45) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:57.6 DL:57.6 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 46) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:0 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 47) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:0 DL:128 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 48) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:0 DL:384 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 49) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 50) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 51) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 52) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 53) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or background / UL:128 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 54) Interactive or /background / UL:64 kbps DL:128 kbps / PS RAB
+ Streaming / unknown / UL:0 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 55) Interactive or /background / UL:64 kbps DL:128 kbps / PS RAB
+ Streaming / unknown / UL:0 DL:128 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

Combinations on DSCH and DPCH

- 1) Interactive or background / UL:64 DL:256 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH
- 2) Interactive or background / UL:64 DL:384 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH
- 3) Interactive or background / UL:64 DL:2048 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH
- 4) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:256 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
 + Interactive or background / UL:64 DL:384 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH

56) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + Interactive or background / UL:64 DL:2048 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH

Combinations on SCCPCH

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

Combinations on PRACH

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

6.10.2.3 Example of linkage between RABs and services

RABs, which are included in this document, can provide the services as shown in Table 6.10.1.1. Furthermore, the required BER for each RAB, which is assumed in this 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 [16]	Services
Traffic class [16]	SSD [16]	Max. rate, kbps	CS/PS		
Conversational	Speech	UL:4.75-12.2 DL:4.75-12.2	CS	5×10^{-4} , 1×10^{-3} , 5×10^{-3}	AMR speech
Conversational	Unknown	UL:64 DL:64	CS	1×10^{-4} or 1×10^{-6}	UDI 1B, 64k 3G-324M [16]
Conversational	Unknown	UL:32 DL:32	CS	1×10^{-4} or 1×10^{-6}	32k 3G-324M [16]
Conversational	Unknown	UL:28.8 DL:28.8	CS	1×10^{-3}	Transparent modem
Streaming	Unknown	UL:14.4 DL:14.4	CS	1×10^{-3}	FAX ^[6]
Streaming	Unknown	UL:28.8 DL:28.8	CS	1×10^{-3}	FAX [18] PIAFS 32 kbps
Streaming	Unknown	UL:57.6 DL:57.6	CS	1×10^{-3}	Modem [18], FTM [17] PIAFS 64 kbps
Streaming	Unknown	UL:64-128 or DL:64-384	CS or-PS	1×10^{-3} or 1×10^{-4}	Streaming video, uni-directional
Interactive or Background	N/A	UL:32-384 DL:8-2048	PS	1×10^{-3} or 1×10^{-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

6.10.2.4.1 Combinations on DPCH

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

6.10.2.4.1.1.1 Uplink

6.10.2.4.1.1.1.1 Transport channel parameters

6.10.2.4.1.1.1.1.1 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 prio	NAS_DT Low prio
RLC	Logical channel type	DCCH	DCCH	DCCH	DCCH
	RLC mode	UM	AM	AM	AM
	Payload sizes, bit	136	128	128	128
	Max data rate, bps	1700	1600	1600	1600
	RLC header/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	80			
	Coding type	CC 1/3			
	CRC, bit	16			
	Max number of bits/TTI before rate matching	516			
	Uplink; Max number of bits/radio frame before rate matching	65			
	RM attribute	<u>155-185</u>			

6.10.2.4.1.1.1.1.2 TFCS

TFCS size	2
TFCS	SRBs for DCCH = TF0, TF1

6.10.2.4.1.1.1.2 Physical channel parameters

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

6.10.2.4.1.1.2 Downlink

6.10.2.4.1.1.2.1 Transport channel parameters

6.10.2.4.1.1.2.1.1 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 prio	NAS_DT Low prio
RLC	Logical channel type	DCCH	DCCH	DCCH	DCCH
	RLC mode	UM	AM	AM	AM
	Payload sizes, bit	136	128	128	128
	Max data rate, bps	1700	1600	1600	1600
	RLC header/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	80			
	Coding type	CC 1/3			
	CRC, bit	16			
	Max number of bits/TTI before rate matching	516			
	<u>RM attribute</u>	<u>155-185</u>			

6.10.2.4.1.1.2.1.2 TFCS

TFCS size	2
TFCS	SRBs for DCCH = TF0, TF1

6.10.2.4.1.1.2.2 Physical channel parameters

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

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

6.10.2.4.1.2.1 Uplink

6.10.2.4.1.2.1.1 Transport channel parameters

6.10.2.4.1.2.1.1.1 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 prio	NAS_DT Low prio
RLC	Logical channel type	DCCH	DCCH	DCCH	DCCH
	RLC mode	UM	AM	AM	AM
	Payload sizes, bit	136	128	128	128
	Max data rate, bps	3400	3200	3200	3200
	RLC header/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	40			
	Coding type	CC 1/3			
	CRC, bit	16			
	Max number of bits/TTI before rate matching	516			
	Uplink; Max number of bits/radio frame before rate matching	129			
	RM attribute	155- 165 185			

6.10.2.4.1.2.1.1.2 TFCS

TFCS size	2
TFCS	SRBs for DCCH = TF0, TF1

6.10.2.4.1.2.1.2 Physical channel parameters

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

6.10.2.4.1.2.2 Downlink

6.10.2.4.1.2.2.1 Transport channel parameters

6.10.2.4.1.2.2.1.1 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 prio	NAS_DT Low prio
RLC	Logical channel type	DCCH	DCCH	DCCH	DCCH
	RLC mode	UM	AM	AM	AM
	Payload sizes, bit	136	128	128	128
	Max data rate, bps	3400	3200	3200	3200
	RLC header/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	40			
	Coding type	CC 1/3			
	CRC, bit	16			
	Max number of bits/TTI before rate matching	516			
	RM attribute	155- 165 185			

6.10.2.4.1.2.2.1.2 TFCS

TFCS size	2
TFCS	SRBs for DCCH = TF0, TF1

6.10.2.4.1.2.2.2 Physical channel parameters

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

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

6.10.2.4.1.3.1 Uplink

6.10.2.4.1.3.1.1 Transport channel parameters

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

Higher layer	RAB/signalling RB	SRB#1	SRB#2	SRB#3	SRB#4
	User of Radio Bearer	RRC	RRC	NAS_DT High prio	NAS_DT Low prio
RLC	Logical channel type	DCCH	DCCH	DCCH	DCCH
	RLC mode	UM	AM	AM	AM
	Payload sizes, bit	136	128	128	128
	Max data rate, bps	13600	12800	12800	12800
	RLC header/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	10			
	Coding type	CC 1/3			
	CRC, bit	16			
	Max number of bits/TTI before rate matching	516			
	Uplink; Max number of bits/radio frame before rate matching	516			

6.10.2.4.1.3.1.1.2 TFCS

TFCS size	2
TFCS	SRBs for DCCH = TF0, TF1

6.10.2.4.1.3.1.2 Physical channel parameters

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

6.10.2.4.1.3.2 Downlink

6.10.2.4.1.3.2.1 Transport channel parameters

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

Higher layer	RAB/signalling RB	SRB#1	SRB#2	SRB#3	SRB#4
	User of Radio Bearer	RRC	RRC	NAS_DT High prio	NAS_DT Low prio
RLC	Logical channel type	DCCH	DCCH	DCCH	DCCH
	RLC mode	UM	AM	AM	AM
	Payload sizes, bit	136	128	128	128
	Max data rate, bps	13600	12800	12800	12800
	RLC header/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	10			
	Coding type	CC 1/3			
	CRC, bit	16			
	Max number of bits/TTI before rate matching	516			

6.10.2.4.1.3.2.1.2 TFCS

TFCS size	2
TFCS	SRBs for DCCH = TF0, TF1

6.10.2.4.1.3.2.2 Physical channel parameters

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

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

6.10.2.4.1.4.1 Uplink

6.10.2.4.1.4.1.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB subflow #1	RAB subflow #2	RAB subflow #3
RLC	Logical channel type	DTCH		
	RLC mode	TM	TM	TM
	Payload sizes, bit	39, 81 (alt. 0, 39, 81)	103	60

	Max data rate, bps	12200			
	RLC header 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* ¹	TF0, bits	0x81(alt. 1x0* 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	
	Uplink: Max number of bits/radio frame before rate matching	152	167	68	
RM attribute	180-220	170-210	215-256		

*1: ~~The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212).~~

*2: 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 TS25.212.).

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

See 6.10.2.4.1.2.1.1.

6.10.2.4.1.4.1.1.3 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)

6.10.2.4.1.4.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	64
	Max number of DPDCH data bits/radio frame	600
	Puncturing Limit	0-880.84

6.10.2.4.1.4.2 Downlink

6.10.2.4.1.4.2.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB subflow #1	RAB subflow #2	RAB subflow #3	
RLC	Logical channel type	DTCH			
	RLC mode	TM	TM	TM	
	Payload sizes, bit	0 39 81	103	60	
	Max data rate, bps	12200			
	RLC header, 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	103	60	
		39			
		81			
	TFS*1	TF0, bits	1x0*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		
RM attribute	180-220	170-210	215-256		

*1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212).

*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 TS25.212.).

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.4.2.1.3 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)

6.10.2.4.1.4.2.2 Physical channel parameters

DPCH	DTX position	Fixed	
Downlink	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	

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

6.10.2.4.1.5.1 Uplink

6.10.2.4.1.5.1.1 Transport channel parameters

6.10.2.4.1.5.1.1.1 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			
	RLC header, bit	0			
MAC	MAC header, bit	0			
	MAC multiplexing	N/A			
Layer 1	TrCH type	DCH	DCH	DCH	
	TB sizes, bit	39, 65 (alt. 0, 39, 65)	99	40	
	TFS* ⁺	TF0, bits	0x65 (alt. 1x0* ²¹)	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	
	Uplink: Max number of bits/radio frame before rate matching	128	161	48	
RM attribute	180-220	170-210	215-256		

*1: ~~The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212).~~

*2: ~~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 TS25.212).~~

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.5.1.1.3 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)

6.10.2.4.1.5.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	64
	Max number of DPDCH data bits/radio frame	600
	Puncturing Limit	<u>40.96</u>

6.10.2.4.1.5.2 Downlink

6.10.2.4.1.5.2.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB subflow #1	RAB subflow #2	RAB subflow #3	
RLC	Logical channel type	DTCH			
	RLC mode	TM	TM	TM	
	Payload sizes, bit	0	99	40	
		39			
		65			
Max data rate, bps	10200				
RLC header, 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	99	40	
		39			
		65			
	TFS	TF0, bits	1x0* 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		
RM attribute	180-220	170-210	215-256		

*1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212).

*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 TS25.212.).

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.5.2.1.3 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)

6.10.2.4.1.5.2.2 Physical channel parameters

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

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

6.10.2.4.1.6.1 Uplink

6.10.2.4.1.6.1.1 Transport channel parameters

6.10.2.4.1.6.1.1.1 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		
	RLC header 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* ¹	TF0, bits	0x75 (alt. 1x0* ²¹)	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	
	Uplink: Max number of bits/radio frame before rate matching	143	138	
RM attribute	180-220	170-210		

*1: ~~The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212).~~

*2: 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 TS25.212.).

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.6.1.1.3 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)

6.10.2.4.1.6.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	64
	Max number of DPDCH data bits/radio frame	600
	Puncturing Limit	40.96

6.10.2.4.1.6.2 Downlink

6.10.2.4.1.6.2.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB subflow #1	RAB subflow #2	
RLC	Logical channel type	DTCH		
	RLC mode	TM	TM	
	Payload sizes, bit	0	84	
		39		
		75		
Max data rate, bps	7950			
	RLC header, bit	0		
MAC	MAC header, bit	0		
	MAC multiplexing	N/A		
Layer 1	TrCH type	DCH	DCH	
	TB sizes, bit	0	84	
		39		
		75		
	TFS*1	TF0, bits	1x0*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		
RM attribute	180-220	170-210		

*1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212).

*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 TS25.212.).

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.6.2.1.3 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)

6.10.2.4.1.6.2.2 Physical channel parameters

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

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

6.10.2.4.1.7.1 Uplink

6.10.2.4.1.7.1.1 Transport channel parameters

6.10.2.4.1.7.1.1.1 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		
	RLC header 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* ¹	TF0, bits	0x61 (alt. 1x0* 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	
	Uplink: Max number of bits/radio frame before rate matching	122	143	
RM attribute	180-220	170-210		

*1: ~~The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212).~~

*2: 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 TS25.212.).

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.7.1.1.3 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)

6.10.2.4.1.7.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	64
	Max number of DPDCH data bits/radio frame	600
	Puncturing Limit	40.96

6.10.2.4.1.7.2 Downlink

6.10.2.4.1.7.2.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB subflow #1	RAB subflow #2	
RLC	Logical channel type	DTCH		
	RLC mode	TM	TM	
	Payload sizes, bit	0	87	
		39		
		61		
Max data rate, bps	7400			
	RLC header, bit	0		
MAC	MAC header, bit	0		
	MAC multiplexing	N/A		
Layer 1	TrCH type	DCH	DCH	
	TB sizes, bit	0	87	
		39		
		61		
	TFS* ¹	TF0, bits	1x0* 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		
RM attribute	180-220	170-210		

*1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212).

*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 TS25.212.).

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.7.2.1.3 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)

6.10.2.4.1.7.2.2 Physical channel parameters

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

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

6.10.2.4.1.8.1 Uplink

6.10.2.4.1.8.1.1 Transport channel parameters

6.10.2.4.1.8.1.1.1 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		
	RLC header 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* ¹	TF0, bits	0x58 (alt. 1x0* ²¹)	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	
	Uplink: Max number of bits/radio frame before rate matching	117	126	
RM attribute	180-220	170-210		

*1: ~~The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212).~~

*2: 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 TS25.212.).

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.8.1.1.3 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)

6.10.2.4.1.8.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	64
	Max number of DPDCH data bits/radio frame	600
	Puncturing Limit	40.96

6.10.2.4.1.8.2 Downlink

6.10.2.4.1.8.2.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB subflow #1	RAB subflow #2	
RLC	Logical channel type	DTCH		
	RLC mode	TM	TM	
	Payload sizes, bit	0	76	
		39		
		58		
Max data rate, bps	6700			
	RLC header, bit	0		
MAC	MAC header, bit	0		
	MAC multiplexing	N/A		
Layer 1	TrCH type	DCH	DCH	
	TB sizes, bit	0	76	
		39		
		58		
	TFS* ¹	TF0, bits	1x0* 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		
RM attribute	180-220	170-210		

*1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212).

*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 TS25.212.).

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.8.2.1.3 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)

6.10.2.4.1.8.2.2 Physical channel parameters

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

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

6.10.2.4.1.9.1 Uplink

6.10.2.4.1.9.1.1 Transport channel parameters

6.10.2.4.1.9.1.1.1 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		
	RLC header 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* ²¹)	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	
	Uplink: Max number of bits/radio frame before rate matching	113	107	
RM attribute	180-220	170-210		

*1: ~~The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212).~~

*2: 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 TS25.212.).

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.9.1.1.3 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)

6.10.2.4.1.9.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	64
	Max number of DPDCH data bits/radio frame	600
	Puncturing Limit	40.96

6.10.2.4.1.9.2 Downlink

6.10.2.4.1.9.2.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB subflow #1	RAB subflow #2	
RLC	Logical channel type	DTCH		
	RLC mode	TM	TM	
	Payload sizes, bit	0	63	
		39		
		55		
Max data rate, bps	5900			
	RLC header, bit	0		
MAC	MAC header, bit	0		
	MAC multiplexing	N/A		
Layer 1	TrCH type	DCH	DCH	
	TB sizes, bit	0	63	
		39		
		55		
	TFS* ¹	TF0, bits	1x0* 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		
RM attribute	180-220	170-210		

*1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212).

*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 TS25.212.).

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.9.2.1.3 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)

6.10.2.4.1.9.2.2 Physical channel parameters

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

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

6.10.2.4.1.10.1 Uplink

6.10.2.4.1.10.1.1 Transport channel parameters

6.10.2.4.1.10.1.1 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		
	RLC header, bit	0		
MAC	MAC header, bit	0		
	MAC multiplexing	N/A		
Layer 1	TrCH type	DCH	DCH	
	TB sizes, bit	39, 49 (alt. 0, 39, 49)	54	
	TFS* ¹	TF0, bits	0x49 (alt. 1x0* ²¹)	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	
	Uplink: Max number of bits/radio frame before rate matching	104	93	
RM attribute	180-220	170-210		

*1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212).

*2: 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 TS25.212.).

6.10.2.4.1.10.1.1.2 Transport channel parameters for UL:3.41.7 kbps SRBs for DCCH

See [6.10.2.4.1.2.1.1.16.10.2.4.1.1.1.1.1](#)

6.10.2.4.1.10.1.1.3 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)

6.10.2.4.1.10.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	128
	Max number of DPDCH data bits/radio frame	300
	Puncturing Limit	40.84

6.10.2.4.1.10.2 Downlink

6.10.2.4.1.10.2.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB subflow #1	RAB subflow #2	
RLC	Logical channel type	DTCH		
	RLC mode	TM	TM	
	Payload sizes, bit	0	54	
		39		
		49		
Max data rate, bps	5150			
	RLC header, bit	0		
MAC	MAC header, bit	0		
	MAC multiplexing	N/A		
Layer 1	TrCH type	DCH	DCH	
	TB sizes, bit	0	54	
		39		
		49		
	TFS* ¹	TF0, bits	1x0	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		
RM attribute	180-220	170-210		

*1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212).

*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 TS25.212.).

6.10.2.4.1.10.2.1.2 Transport channel parameters for DL:3.41.7 kbps SRBs for DCCH

See [6.10.2.4.1.2.2.1.16.10.2.4.1.1.2.1.1](#)

6.10.2.4.1.10.2.1.3 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)

6.10.2.4.1.10.2.2 Physical channel parameters

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

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

6.10.2.4.1.11.1 Uplink

6.10.2.4.1.11.1.1 Transport channel parameters

6.10.2.4.1.11.1.1.1 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		
	RLC header 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* ¹	TF0, bits	0x42 (alt. 1x0* 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	
	Uplink: Max number of bits/radio frame before rate matching	93	92	
RM attribute	180-220	170-210		

*1: ~~The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212).~~

*2: 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 TS25.212.).

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

See ~~6.10.2.4.1.2.1.1.16~~6.10.2.4.1.1.1.1.1

6.10.2.4.1.11.1.1.3 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)

6.10.2.4.1.11.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	128
	Max number of DPDCH data bits/radio frame	300
	Puncturing Limit	10 <u>92</u>

6.10.2.4.1.11.2 Downlink

6.10.2.4.1.11.2.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB subflow #1	RAB subflow #2	
RLC	Logical channel type	DTCH		
	RLC mode	TM	TM	
	Payload sizes, bit	0	53	
		39		
		42		
Max data rate, bps	4750			
	RLC header, bit	0		
MAC	MAC header, bit	0		
	MAC multiplexing	N/A		
Layer 1	TrCH type	DCH	DCH	
	TB sizes, bit	0	53	
		39		
		42		
	TFS*1	TF0, bits	1x0*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		
RM attribute	180-220	170-210		

*1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212).

*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 TS25.212.).

6.10.2.4.1.11.2.1.2 Transport channel parameters for DL:3.41.7 kbps SRBs for DCCH

See [6.10.2.4.1.2.2.1.16.10.2.4.1.1.2.1.1](#)

6.10.2.4.1.11.2.1.3 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)

6.10.2.4.1.11.2.2 Physical channel parameters

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

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

6.10.2.4.1.12.1 Uplink

6.10.2.4.1.12.1.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	TM	
	Payload sizes, bit	576	
	Max data rate, bps	28800	
	RLC header/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	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	3564	
	Uplink: Max number of bits/radio frame before rate matching	891	
RM attribute	160-200		

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.12.1.1.3 TFCS

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

6.10.2.4.1.12.1.2 Physical channel parameters

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

6.10.2.4.1.12.2 Downlink

6.10.2.4.1.12.2.1 Transport channel parameters

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

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

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.12.2.1.3 TFCS

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

6.10.2.4.1.12.2.2 Physical channel parameters

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

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

6.10.2.4.1.13.1 Uplink

6.10.2.4.1.13.1.1 Transport channel parameters

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

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

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.13.1.1.3 TFCS

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

6.10.2.4.1.13.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	16
	Max number of DPDCH data bits/radio frame	2400
	Puncturing Limit	0.920.88

6.10.2.4.1.13.2 Downlink

6.10.2.4.1.13.2.1 Transport channel parameters

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

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

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.13.2.1.3 TFCS

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

6.10.2.4.1.13.2.2 Physical channel parameters

DPCH Downlink	DTX position	Flexible
	Spreading factor	32
DPCCH	Number of TFCl 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

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

6.10.2.4.1.14.1 Uplink

6.10.2.4.1.14.1.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	TM	
	Payload sizes, bit	640	
	Max data rate, bps	32000	
	RLC header/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)	
	Uplink: Max number of bits/radio frame before rate matching	990(alt. 987)	
	RM attribute	165-210	

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.13.1.1.3 TFCS

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

6.10.2.4.1.14.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	32
	Max number of DPDCH data bits/radio frame	1200
	Puncturing Limit	0.80

6.10.2.4.1.14.2 Downlink

6.10.2.4.1.14.2.1 Transport channel parameters

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

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

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.14.2.1.3 TFCS

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

6.10.2.4.1.14.2.2 Physical channel parameters

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

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

6.10.2.4.1.15.1 Uplink

6.10.2.4.1.15.1.1 Transport channel parameters

6.10.2.4.1.15.1.1.1 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	
	RLC header/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	
	Uplink: Max number of bits/radio frame before rate matching	447	
	RM attribute	145-185	

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.15.1.1.3 TFCS

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

6.10.2.4.1.15.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	64
	Max number of DPDCH data bits/radio frame	600
	Puncturing Limit	40.88

6.10.2.4.1.15.2 Downlink

6.10.2.4.1.15.2.1 Transport channel parameters

6.10.2.4.1.15.2.1.1 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	
	RLC header/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	
	RM attribute	145-185	

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.15.2.1.3 TFCS

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

6.10.2.4.1.15.2.2 Physical channel parameters

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

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

6.10.2.4.1.16.1 Uplink

6.10.2.4.1.16.1.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	TM	
	Payload sizes, bit	576	
	Max data rate, bps	28800	
	RLC header 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	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	3564	
	Uplink: Max number of bits/radio frame before rate matching	891	
RM attribute	135-175		

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.16.1.1.3 TFCS

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

6.10.2.4.1.16.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	32
	Max number of DPDCH data bits/radio frame	1200
	Puncturing Limit	<u>40.96</u>

6.10.2.4.1.16.2 Downlink

6.10.2.4.1.16.2.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	TM	
	Payload sizes, bit	576	
	Max data rate, bps	28800	
	RLC headerTrD 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	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	3564	
	RM attribute	135-175	

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.16.2.1.3 TFCS

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

6.10.2.4.1.16.2.2 Physical channel parameters

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

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

6.10.2.4.1.17.1 Uplink

6.10.2.4.1.17.1.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	TM	
	Payload sizes, bit	576	
	Max data rate, bps	57600	
	RLC headerTrD 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		
Uplink: Max number of bits/radio frame before rate matching	1779		

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.17.1.1.3 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)

6.10.2.4.1.17.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	16
	Max number of DPDCH data bits/radio frame	2400
	Puncturing Limit	40.96

6.10.2.4.1.17.2 Downlink

6.10.2.4.1.17.2.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	TM	
	Payload sizes, bit	576	
	Max data rate, bps	57600	
	RLC header, bit 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	
RM attribute	125-165		

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.17.2.1.3 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)

6.10.2.4.1.17.2.2 Physical channel parameters

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

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

6.10.2.4.1.18.1 Uplink

6.10.2.4.1.18.1.1 Transport channel parameters

6.10.2.4.1.18.1.1.1 Transport channel parameters for Streaming / unknown / UL:0 kbps / CS-or-PS RAB

N/A

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.18.1.1.3 TFCS

See 6.10.2.4.1.2.1.1.2

6.10.2.4.1.18.1.2 Physical channel parameters

See 6.10.2.4.1.2.1.2.

6.10.2.4.1.18.2 Downlink

6.10.2.4.1.18.2.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB		
RLC	Logical channel type	DTCH		
	RLC mode	TM		
	Payload sizes, bit	320		
	Max data rate, bps	64000		
	RLC headerTrD 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			
RM attribute	125-165			

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.18.2.1.3 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)

6.10.2.4.1.18.2.2 Physical channel parameters

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

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

6.10.2.4.1.19.1 Uplink

6.10.2.4.1.19.1.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	TM	
	Payload sizes, bit	320	
	Max data rate, bps	64000	
	RLC header 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	
	Uplink: Max number of bits/radio frame before rate matching	2019	
RM attribute	125-165		

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.19.1.1.3 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)

6.10.2.4.1.19.1.2 Physical channel parameters

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

6.10.2.4.1.19.2 Downlink

6.10.2.4.1.19.2.1 Transport channel parameters

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

N/A

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.19.2.1.3 TFCS

See 6.10.2.4.1.2.2.1.2

6.10.2.4.1.19.2.2 Physical channel parameters

See 6.10.2.4.1.2.2.2.

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

6.10.2.4.1.20.1 Uplink

6.10.2.4.1.20.1.1 Transport channel parameters

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

N/A

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.20.1.1.3 TFCS

See 6.10.2.4.1.2.1.1.2

6.10.2.4.1.20.1.2 Physical channel parameters

See 6.10.2.4.1.2.1.2.

6.10.2.4.1.20.2 Downlink

6.10.2.4.1.20.2.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	TM	
	Payload sizes, bit	320	
	Max data rate, bps	128000	
	RLC header 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		
RM attribute	125-165		

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.20.2.1.3 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)

6.10.2.4.1.20.2.2 Physical channel parameters

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

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

6.10.2.4.1.21.1 Uplink

6.10.2.4.1.21.1.1 Transport channel parameters

6.10.2.4.1.21.1.1.1 Transport channel parameters for Streaming / unknown / UL:128 kbps / CS-or-PS RAB

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	TM	
	Payload sizes, bit	320	
	Max data rate, bps	128000	
	RLC header/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		

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.21.1.1.3 TFCS

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

6.10.2.4.1.21.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	8
	Max number of DPDCH data bits/radio frame	4800
	Puncturing Limit	<u>40.96</u>

6.10.2.4.1.21.2 Downlink

6.10.2.4.1.21.2.1 Transport channel parameters

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

N/A

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.21.2.1.3 TFCS

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.21.2.2 Physical channel parameters

See 6.10.2.4.1.2.2.2.

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

6.10.2.4.1.22.1 Uplink

6.10.2.4.1.22.1.1 Transport channel parameters

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

N/A

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.22.1.1.3 TFCS

See 6.10.2.4.1.2.1.1.2

6.10.2.4.1.22.1.2 Physical channel parameters

See 6.10.2.4.1.2.1.2

6.10.2.4.1.22.2 Downlink

6.10.2.4.1.22.2.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	TM	
	Payload sizes, bit	320	
	Max data rate, bps	384000	
	RLC header/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		
RM attribute	110-150		

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.22.2.1.3 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)

6.10.2.4.1.22.2.2 Physical channel parameters

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

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

6.10.2.4.1.23.1 Uplink

6.10.2.4.1.23.1.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	AM	
	Payload sizes, bit	320	
	Max data rate, bps	32000	
	RLC header/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 (alt. N/A)
	TTI, ms	20 (alt. 10)	
	Coding type	TC (alt. CC 1/3)	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	2124 (alt. 1080)	
	Uplink: Max number of bits/radio frame before rate matching	1062 (alt. 1080)	
RM attribute	135-175		

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.23.1.1.3 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))

6.10.2.4.1.23.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	32
	Max number of DPDCH data bits/radio frame	1200
	Puncturing Limit	0.960.88

6.10.2.4.1.23.2 Downlink

6.10.2.4.1.23.2.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	AM	
	Payload sizes, bit	320	
	Max data rate, bps	8000	
	RLC header/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)	
	RM attribute	135-175	

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.23.2.1.3 TFCS

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

6.10.2.4.1.23.2.2 Physical channel parameters

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

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

6.10.2.4.1.24.1 Uplink

6.10.2.4.1.24.1.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	AM	
	Payload sizes, bit	320	
	Max data rate, bps	64000	
	RLC header 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	
	Uplink: Max number of bits/radio frame before rate matching	2118	
RM attribute	130-170		

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.24.1.1.3 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)

6.10.2.4.1.24.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	16
	Max number of DPDCH data bits/radio frame	2400
	Puncturing Limit	<u>40.96</u>

6.10.2.4.1.24.2 Downlink

See 6.10.2.4.1.23.2

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

6.10.2.4.1.25.1 Uplink

See 6.10.2.4.1.23.1

6.10.2.4.1.25.2 Downlink

6.10.2.4.1.25.2.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	AM	
	Payload sizes, bit	320	
	Max data rate, bps	64000	
	RLC header/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		
RM attribute	130-170		

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.25.2.1.3 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)

6.10.2.4.1.25.2.2 Physical channel parameters

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

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

6.10.2.4.1.26.1 Uplink

See 6.10.2.4.1.24.1

6.10.2.4.1.26.2 Downlink

See 6.10.2.4.1.25.2

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

6.10.2.4.1.27.1 Uplink

See 6.10.2.4.1.24.1

6.10.2.4.1.27.2 Downlink

6.10.2.4.1.27.2.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	AM	
	Payload sizes, bit	320	
	Max data rate, bps	128000	
	RLC header/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	
RM attribute	120-160		

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.27.2.1.3 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)

6.10.2.4.1.27.2.2 Physical channel parameters

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

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

6.10.2.4.1.28.1 Uplink

6.10.2.4.1.28.1.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	AM	
	Payload sizes, bit	320	
	Max data rate, bps	128000	
	RLC header 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	
	Uplink: Max number of bits/radio frame before rate matching	4230	
RM attribute	120-160		

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.28.1.1.3 TFCS

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

6.10.2.4.1.28.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	8
	Max number of DPDCH data bits/radio frame	4800
	Puncturing Limit	<u>40.96</u>

6.10.2.4.1.28.2 Downlink

See 6.10.2.4.1.27.2.

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

6.10.2.4.1.29.1 Uplink

See 6.10.2.4.1.24.1.

6.10.2.4.1.29.2 Downlink

6.10.2.4.1.29.2.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	AM	
	Payload sizes, bit	320	
	Max data rate, bps	144000	
	RLC header/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		
RM attribute	140-180		

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.29.2.1.3 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)

6.10.2.4.1.29.2.2 Physical channel parameters

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

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

6.10.2.4.1.30.1 Uplink

6.10.2.4.1.30.1.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	AM	
	Payload sizes, bit	320	
	Max data rate, bps	144000	
	RLC header 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	9 x336	
	TTI, ms	20	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	9516	
	Uplink: Max number of bits/radio frame before rate matching	4758	
RM attribute	140-180		

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.30.1.1.3 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)

6.10.2.4.1.30.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	8
	Max number of DPDCH data bits/radio frame	4800
	Puncturing Limit	0.960.84

6.10.2.4.1.30.2 Downlink

See 6.10.2.4.1.29.2.

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

6.10.2.4.1.31.1 Uplink

See 6.10.2.4.1.24.1

6.10.2.4.1.31.2 Downlink

6.10.2.4.1.31.2.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	AM	
	Payload sizes, bit	320	
	Max data rate, bps	384000	
	RLC header/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)		
RM attribute	135-175		

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.31.2.1.3 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))

6.10.2.4.1.31.2.2 Physical channel parameters

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

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

6.10.2.4.1.32.1 Uplink

See 6.10.2.4.1.24.1.

6.10.2.4.1.32.2 Downlink

6.10.2.4.1.32.2.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	AM	
	Payload sizes, bit	320	
	Max data rate, bps	384000	
	RLC header/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)		
RM attribute	110-150		

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.32.2.1.3 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))

6.10.2.4.1.32.2.2 Physical channel parameters

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

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

6.10.2.4.1.33.1 Uplink

See 6.10.2.4.1.28.1.

6.10.2.4.1.33.2 Downlink

See 6.10.2.4.1.32.2.

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

6.10.2.4.1.34.1 Uplink

6.10.2.4.1.34.1.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	AM	
	Payload sizes, bit	320	
	Max data rate, bps	384000	
	RLC header/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	16x336(alt. N/A)
		TF7, bits	20x336(alt. N/A)
	TF8, bits	24 x336 (alt. N/A)	
	TTI, ms	20 (alt. 10)	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	25368	
Uplink: Max number of bits/radio frame before rate matching	12684		
RM attribute	110-150		

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.34.1.1.3 TFCS

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

6.10.2.4.1.34.1.2 Physical channel parameters

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

6.10.2.4.1.34.2 Downlink

See 6.10.2.4.1.32.2.

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

6.10.2.4.1.35.1 Uplink

See 6.10.2.4.1.24.1.

6.10.2.4.1.35.2 Downlink

6.10.2.4.1.35.2.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	AM	
	Payload sizes, bit	640	
	Max data rate, bps	2048000	
	RLC header/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
		TF4, bits	8 x656
		TF5, bits	12x656
		TF6, bits	16x656
		TF7, bits	20x656
		TF8, bits	24x656
		TF9, bits	28x656
		TF10, bits	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	64572 (alt. 129132)
	RM attribute	130-170

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.35.2.1.3 TFCS

TFCS size	22 (alt.38)
TFCS	(2048 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0), (TF7, TF0), (TF8, TF0), (TF9, TF0), (TF10, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF1), (TF8, TF1), (TF9, TF1), (TF10, TF1) (alt. TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0), (TF7, TF0), (TF8, TF0), (TF9, TF0), (TF10, TF0), (TF11, TF0), (TF12, TF0), (TF13, TF0), (TF14, TF0), (TF15, TF0), (TF16, TF0), (TF17, TF0), (TF18, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF1), (TF8, TF1), (TF9, TF1), (TF10, TF1), (TF11, TF0), (TF12, TF0), (TF13, TF0), (TF14, TF0), (TF15, TF0), (TF16, TF0), (TF17, TF0), (TF18, TF0))

6.10.2.4.1.35.2.2 Physical channel parameters

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

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

6.10.2.4.1.36.1 Uplink

See 6.10.2.4.1.28.1.

6.10.2.4.1.36.2 Downlink

See 6.10.2.4.1.35.2.

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

6.10.2.4.1.37.1 Uplink

See 6.10.2.4.1.34.1.

6.10.2.4.1.37.2 Downlink

See 6.10.2.4.1.35.2.

6.10.2.4.1.38 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

6.10.2.4.1.38.1 Uplink

6.10.2.4.1.38.1.1 Transport channel parameters

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

See 6.10.2.4.1.4.1.1.1

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

See 6.10.2.4.1.23.1.1.1

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.38.1.1.4 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))

6.10.2.4.1.38.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	16
	Max number of DPDCH data bits/radio frame	2400
	Puncturing Limit	40.96

6.10.2.4.1.38.2 Downlink

6.10.2.4.1.38.2.1 Transport channel parameters

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

See 6.10.2.4.1.4.2.1.1

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

See 6.10.2.4.1.23.2.1.1

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

See 6.10.2.4.1.2.2.1

6.10.2.4.1.38.2.1.4 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)

6.10.2.4.1.38.2.2 Physical channel parameters

DPCH Downlink	DTX position		Flexible
	Spreading factor		64
	DPCCH	Number of TF1 bits/slot	8
		Number of TPC bits/slot	4
		Number of Pilot bits/slot	8
	DPDCH	Number of data bits/slot	60
Number of data bits/frame		900	

6.10.2.4.1.39 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

6.10.2.4.1.39.1 Uplink

See 6.10.2.4.1.38.1.

6.10.2.4.1.39.2 Downlink

6.10.2.4.1.39.2.1 Transport channel parameters

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

See 6.10.2.4.1.4.2.1.1

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

See 6.10.2.4.1.25.2.1.1

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.39.2.1.4 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)

6.10.2.4.1.39.2.2 Physical channel parameters

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

6.10.2.4.1.40 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

6.10.2.4.1.40.1 Uplink

6.10.2.4.1.40.1.1 Transport channel parameters

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

See 6.10.2.4.1.4.1.1.1

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

See 6.10.2.4.1.24.1.1.1

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.40.1.1.4 TFCS

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

6.10.2.4.1.40.1.2 Physical channel parameters

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

6.10.2.4.1.40.2 Downlink

See 6.10.2.4.1.39.2.

6.10.2.4.1.41 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

6.10.2.4.1.41.1 Uplink

See 6.10.2.4.1.40.1.

6.10.2.4.1.41.2 Downlink

6.10.2.4.1.41.2.1 Transport channel parameters

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

See 6.10.2.4.1.4.2.1.1

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

See 6.10.2.4.1.27.2.1.1

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.41.2.1.4 TFCS

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

6.10.2.4.1.41.2.2 Physical channel parameters

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

6.10.2.4.1.42 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

6.10.2.4.1.42.1 Uplink

See 6.10.2.4.1.40.1

6.10.2.4.1.42.2 Downlink

6.10.2.4.1.42.2.1 Transport channel parameters

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

See 6.10.2.4.1.4.2.1.1

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

See 6.10.2.4.1.31.2.1.1

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.42.2.1.4 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))

6.10.2.4.1.42.2.2 Physical channel parameters

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

6.10.2.4.1.43 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

6.10.2.4.1.43.1 Uplink

See 6.10.2.4.1.40.1.

6.10.2.4.1.43.2 Downlink

6.10.2.4.1.43.2.1 Transport channel parameters

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

See 6.10.2.4.1.4.2.1.1

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

See 6.10.2.4.1.32.2.1.1

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.43.2.1.4 TFCS

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

6.10.2.4.1.43.2.2 Physical channel parameters

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

6.10.2.4.1.44 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

6.10.2.4.1.44.1 Uplink

6.10.2.4.1.44.1.1 Transport channel parameters

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

See 6.10.2.4.1.4.1.1.1

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

See 6.10.2.4.1.28.1.1.1

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.44.1.1.4 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)

6.10.2.4.1.44.1.2 Physical channel parameters

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

6.10.2.4.1.44.2 Downlink

6.10.2.4.1.44.2.1 Transport channel parameters

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

See 6.10.2.4.1.4.2.1.1

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

See 6.10.2.4.1.35.2.1.1

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.44.2.2 Physical channel parameters

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

6.10.2.4.1.45 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

6.10.2.4.1.45.1 Uplink

6.10.2.4.1.45.1.1 Transport channel parameters

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

See 6.10.2.4.1.4.1.1.1

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

See 6.10.2.4.1.17.1.1.1

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.45.1.1.4 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)

6.10.2.4.1.45.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	16
	Max number of DPDCH data bits/radio frame	2400
	Puncturing Limit	40.88

6.10.2.4.1.45.2 Downlink

6.10.2.4.1.45.2.1 Transport channel parameters

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

See 6.10.2.4.1.4.2.1.1

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

See 6.10.2.4.1.17.2.1.1

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

See 6.10.2.4.1.2.2.11

6.10.2.4.1.45.2.1.4 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)

6.10.2.4.1.45.2.2 Physical channel parameters

DPCH Downlink	DTX position		Flexible
		Spreading factor	
DPCCH	Number of TFCl 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

6.10.2.4.1.46 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

6.10.2.4.1.46.1 Uplink

See 6.10.2.4.1.4.1.

6.10.2.4.1.46.2 Downlink

6.10.2.4.1.46.2.1 Transport channel parameters

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

See 6.10.2.4.1.4.2.1.1

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

See 6.10.2.4.1.18.2.1.1

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.46.2.1.4 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)

6.10.2.4.1.46.2.2 Physical channel parameters

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

6.10.2.4.1.47 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

6.10.2.4.1.47.1 Uplink

See 6.10.2.4.1.4.1.

6.10.2.4.1.47.2 Downlink

6.10.2.4.1.47.2.1 Transport channel parameters

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

See 6.10.2.4.1.4.2.1.1

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

See 6.10.2.4.1.20.2.1.1

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.47.2.1.4 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)

6.10.2.4.1.47.2.2 Physical channel parameters

DPCH Downlink	DTX position		Flexible
	Spreading factor		16
	DPCCH	Number of TF1 bits/slot	8
		Number of TPC bits/slot	8
		Number of Pilot bits/slot	16
	DPDCH	Number of data bits/slot	288
		Number of data bits/frame	4320

6.10.2.4.1.48 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

6.10.2.4.1.48.1 Uplink

See 6.10.2.4.1.4.1.

6.10.2.4.1.48.2 Downlink

6.10.2.4.1.48.2.1 Transport channel parameters

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

See 6.10.2.4.1.4.2.1.1

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

See 6.10.2.4.1.22.2.1.1

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.48.2.1.4 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)

6.10.2.4.1.48.2.2 Physical channel parameters

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

6.10.2.4.1.49 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

6.10.2.4.1.49.1 Uplink

6.10.2.4.1.49.1.1 Transport channel parameters

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

See 6.10.2.4.1.4.1.1.1

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

See 6.10.2.4.1.13.1.1.1

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.49.1.1.4 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)

6.10.2.4.1.49.1.2 Physical channel parameters

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

6.10.2.4.1.49.2 Downlink

6.10.2.4.1.49.2.1 Transport channel parameters

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

See 6.10.2.4.1.4.2.1.1

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

See 6.10.2.4.1.13.2.1.1

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

See 6.10.2.4.1.2.2.11

6.10.2.4.1.49.2.1.4 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)

6.10.2.4.1.49.2.2 Physical channel parameters

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

6.10.2.4.1.50 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

6.10.2.4.1.50.1 Uplink

6.10.2.4.1.50.1.1 Transport channel parameters

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

See 6.10.2.4.1.13.1.1.1

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.50.1.1.3 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)

6.10.2.4.1.50.1.2 Physical channel parameters

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

6.10.2.4.1.50.2 Downlink

6.10.2.4.1.50.2.1 Transport channel parameters

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

See 6.10.2.4.1.13.2.1.1

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.50.2.1.3 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)

6.10.2.4.1.50.2.2 Physical channel parameters

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

6.10.2.4.1.51 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

6.10.2.4.1.51.1 Uplink

6.10.2.4.1.51.1.1 Transport channel parameters

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

See 6.10.2.4.1.13.1.1.1

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

See 6.10.2.4.1.24.1.1.1

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.51.1.1.4 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)

6.10.2.4.1.51.1.2 Physical channel parameters

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

6.10.2.4.1.51.2 Downlink

6.10.2.4.1.51.2.1 Transport channel parameters

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

See 6.10.2.4.1.13.2.1.1

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

See 6.10.2.4.1.25.2.1.1

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.51.2.1.4 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)

6.10.2.4.1.51.2.2 Physical channel parameters

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

6.10.2.4.1.52 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

6.10.2.4.1.52.1 Uplink

See 6.10.2.4.1.51.1.

6.10.2.4.1.52.2 Downlink

6.10.2.4.1.52.2.1 Transport channel parameters

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

See 6.10.2.4.1.13.2.1.1.

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

See 6.10.2.4.1.27.2.1.1

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.52.2.1.4 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)

6.10.2.4.1.52.2.2 Physical channel parameters

DPCH Downlink	DTX position		Flexible
	Spreading factor		8
	DPCCH	Number of TFCl 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

6.10.2.4.1.53 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

6.10.2.4.1.53.1 Uplink

6.10.2.4.1.53.1.1 Transport channel parameters

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

See 6.10.2.4.1.13.1.1.1

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

See 6.10.2.4.1.28.1.1.1

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

See 6.10.2.4.1.2.1.1.1

6.10.2.4.1.53.1.1.4 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)

6.10.2.4.1.53.1.2 Physical channel parameters

DPCH Uplink	Min spreading factor	4
	Max number of DPDCH data bits/radio frame	9600
	Puncturing Limit	40.96

6.10.2.4.1.53.2 Downlink

See 6.10.2.4.1.52.2.

6.10.2.4.1.54 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

6.10.2.4.1.54.1 Uplink

See 6.10.2.4.1.24.1.

6.10.2.4.1.54.2 Downlink

6.10.2.4.1.54.2.1 Transport channel parameters

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

See 6.10.2.4.1.27.2.1.1

6.10.2.4.1.54.2.1.2 Transport channel parameters for Streaming / unknown / DL:64 kbps / CS-or-PS RAB

See 6.10.2.4.1.18.2.1.1

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.54.2.1.4 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)

6.10.2.4.1.54.2.4 Physical channel parameters

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

6.10.2.4.1.55 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

6.10.2.4.1.55.1 Uplink

See 6.10.2.4.1.24.1.

6.10.2.4.1.55.2 Downlink

6.10.2.4.1.55.2.1 Transport channel parameters

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

See 6.10.2.4.1.27.2.1.1

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

See 6.10.2.4.1.20.2.1.1

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.55.2.1.4 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)

6.10.2.4.1.55.2.2 Physical channel parameters

DPCH	DTX position	Flexible	
Downlink	Spreading factor	8	
	DPCCH	Number of TFC1 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	

6.10.2.4.2 Combinations on PDSCH and DPCH

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

6.10.2.4.2.1.1 Uplink

See 6.10.2.4.1.24.1

6.10.2.4.2.1.2 Downlink

6.10.2.4.2.1.2.1 Transport channel parameters

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

<u>Higher layer</u>	<u>RAB/Signalling RB</u>	<u>RAB</u>	
<u>RLC</u>	<u>Logical channel type</u>	<u>DTCH</u>	
	<u>RLC mode</u>	<u>AM</u>	
	<u>Payload sizes, bit</u>	<u>320</u>	
	<u>Max data rate, bps</u>	<u>384000</u>	
	<u>RLC header/AMD PDU header, bit</u>	<u>16</u>	
<u>MAC</u>	<u>MAC header, bit</u>	<u>18</u>	
	<u>MAC multiplexing</u>	<u>Logical channel multiplexing on a frame by frame basis</u>	
<u>Layer 1</u>	<u>TrCH type</u>	<u>DSCH</u>	
	<u>TB sizes, bit</u>	<u>354</u>	
	<u>TFS</u>	<u>TF0, bits</u>	<u>0x354</u>
		<u>TF1, bits</u>	<u>1x354</u>
		<u>TF2, bits</u>	<u>2x354</u>
		<u>TF3, bits</u>	<u>4 x354</u>
		<u>TF4, bits</u>	<u>8 x354</u>
		<u>TF5, bits</u>	<u>N/A (alt. 12x354)</u>
	<u>TF6, bits</u>	<u>N/A (alt. 16x354)</u>	
	<u>TTI, ms</u>	<u>10(alt. 20)</u>	
	<u>Coding type</u>	<u>TC</u>	
	<u>CRC, bit</u>	<u>16</u>	
	<u>Max number of bits/TTI after channel coding</u>	<u>8892(alt. 17784)</u>	
<u>RM attribute</u>	<u>135-175</u>		

See 6.10.2.4.1.31.2.1.4

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.2.1.2.1.3 TFCS

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

6.10.2.4.2.1.2.2 Physical channel parameters

PDSCH	RAB or SRB, TrCh	Interactive or background / 256 kbps / PS RAB, DSCH	
	DTX position	N/A (SingleTrCH)	
	Minimum Spreading <u>Spreading</u> factor	8	
DPCH Downlink associated with PDSCH	RAB or SRB, TrCh	3.4 kbps SRB for DCCH, DCH	
	DTX position	N/A (SingleTrCH)	
	Minimum spreading <u>Spreading</u> factor	256	
	DPCCH	Number of TFCI bits/slot	<u>02</u>
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	<u>84</u>
	DPDCH	Number of data bits/slot	<u>1012</u>
Number of data bits/frame		<u>450180</u>	

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

6.10.2.4.2.2.1 Uplink

See 6.10.2.4.1.24.1.

6.10.2.4.2.2.2 Downlink

6.10.2.4.2.2.2.1 Transport channel parameters

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

Higher layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	AM	
	Payload sizes, bit	320	
	Max data rate, bps	384000	
	RLC header/AMD PDU header, bit	16	
MAC	MAC header, bit	18	
	MAC multiplexing	Logical channel multiplexing on a frame by frame basis	
Layer 1	TrCH type	DSCH	
	TB sizes, bit	354	
	TFS	TF0, bits	0x354
		TF1, bits	1x354
		TF2, bits	2x354
		TF3, bits	4 x354
		TF4, bits	8 x354
		TF5, bits	12 x354
		TF6, bits	N/A (alt. 16x354)
		TF7, bits	N/A (alt. 20x354)
	TF8, bits	N/A (alt. 24x354)	
	TTI, ms	10(alt. 20)	
	Coding type	TC	
	CRC, bit	16	
Max number of bits/TTI after channel coding	13332(alt. 26664)		
RM attribute	110-150		

See 6.10.2.4.1.32.2.1.1

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.2.2.2.1.3 TFCS

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

6.10.2.4.2.2.2 Physical channel parameters

PDSCH	RAB or SRB, TrCh		Interactive or background / 384 kbps / PS RAB, DSCH
	DTX position		N/A (SingleTrCH)
	Minimum Spreading spreading factor		8
DPCH Downlink associated with PDSCH	RAB or SRB, TrCh		3.4 kbps SRB for DCCH, DCH
	DTX position		N/A (SingleTrCH)
	Minimum spreading Spreading factor		256
	DPCCH	Number of TFCI bits/slot	<u>92</u>
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	<u>84</u>
	DPDCH	Number of data bits/slot	<u>4012</u>
Number of data bits/frame		<u>450180</u>	

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

6.10.2.4.2.3.1 Uplink

See 6.10.2.4.1.24.1.

6.10.2.4.2.3.2 Downlink

6.10.2.4.2.3.2.1 Transport channel parameters

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

<u>Higher layer</u>	<u>RAB/Signalling RB</u>	<u>RAB</u>	
<u>RLC</u>	<u>Logical channel type</u>	<u>DTCH</u>	
	<u>RLC mode</u>	<u>AM</u>	
	<u>Payload sizes, bit</u>	<u>640</u>	
	<u>Max data rate, bps</u>	<u>2048000</u>	
	<u>RLC header</u> AMD PDU header, bit	<u>16</u>	
<u>MAC</u>	<u>MAC header, bit</u>	<u>18</u>	
	<u>MAC multiplexing</u>	<u>Logical channel multiplexing on a frame by frame basis</u>	
<u>Layer 1</u>	<u>TrCH type</u>	<u>DSCH</u>	
	<u>TB sizes, bit</u>	<u>674</u>	
	<u>TFS</u>	<u>TF0, bits</u>	<u>0x674</u>
		<u>TF1, bits</u>	<u>1x674</u>
		<u>TF2, bits</u>	<u>2x674</u>
		<u>TF3, bits</u>	<u>4 x674</u>
		<u>TF4, bits</u>	<u>8 x674</u>
		<u>TF5, bits</u>	<u>12x674</u>
		<u>TF6, bits</u>	<u>16x674</u>
		<u>TF7, bits</u>	<u>20x674</u>
		<u>TF8, bits</u>	<u>24x674</u>
		<u>TF9, bits</u>	<u>28x674</u>
		<u>TF10, bits</u>	<u>32x674</u>
		<u>TF11, bits</u>	<u>N/A (alt. 36x674)</u>
		<u>TF12, bits</u>	<u>N/A (alt. 40x674)</u>
		<u>TF13, bits</u>	<u>N/A (alt. 44x674)</u>
		<u>TF14, bits</u>	<u>N/A (alt. 48x674)</u>
		<u>TF15, bits</u>	<u>N/A (alt. 52x674)</u>
		<u>TF16, bits</u>	<u>N/A (alt. 56x674)</u>
<u>TF17, bits</u>		<u>N/A (alt. 60x674)</u>	
<u>TF18, bits</u>	<u>N/A (alt. 64x674)</u>		

<u>TTI, ms</u>	<u>10(alt. 20)</u>
<u>Coding type</u>	<u>TC</u>
<u>CRC, bit</u>	<u>16</u>
<u>Max number of bits/TTI after channel coding</u>	<u>66300 (alt. 132588)</u>
<u>RM attribute</u>	<u>130-170</u>

See 6.10.2.4.1.35.2.1.1

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.2.3.2.1.3 TFCS

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

6.10.2.4.2.3.2.2 Physical channel parameters

PDSCH	RAB or SRB, TrCh		Interactive or background / 2048 kbps / PS RAB, DSCH
	DTX position		N/A (SingleTrCH)
	Minimum Spreading spreading factor		4
DPCH Downlink associated with PDSCH	RAB or SRB, TrCh		3.4 kbps SRB for DCCH, DCH
	DTX position		N/A (SingleTrCH)
	Minimum spreading Spreading factor		256
	DPCCH	Number of TFCI bits/slot	<u>02</u>
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	<u>84</u>
	DPDCH	Number of data bits/slot	<u>4012</u>
Number of data bits/frame		<u>450180</u>	

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

6.10.2.4.2.4.1 Uplink

See 6.10.2.4.1.40.1

6.10.2.4.2.4.2 Downlink

6.10.2.4.2.4.2.1 Transport channel parameters

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

See 6.10.2.4.1.4.2.1.1

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

See 6.10.2.4.2.1.2.1.16-10.2.4.1.31.2.1.1

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.2.4.2.1.4 TFCS

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

6.10.2.4.2.4.2.4 Physical channel parameters

PDSCH	RAB or SRB, TrCh		Interactive or background / 256 kbps / PS RAB, DSCH
	DTX position		N/A (SingleTrCh)
	Minimum Spreading spreading factor		4
DPCH Downlink associated with PDSCH	RAB or SRB, TrCh		Conversational / speech / 12.2 kbps / CS RAB, DCH + 3.4 kbps SRBs for DCCH. DCH
	DTX position		Fixed
	Spreading factor		128
	DPCCH	Number of TF0 bits/slot	92
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	4
	DPDCH	Number of data bits/slot	3432
Number of data bits/frame		510480	

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

6.10.2.4.2.5.1 Uplink

See 6.10.2.4.1.40.1.

6.10.2.4.2.5.2 Downlink

6.10.2.4.2.5.2.1 Transport channel parameters

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

See 6.10.2.4.1.4.2.1.1

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

See [6.10.2.4.2.2.1.16](#)-[6.10.2.4.1.32](#)-[2.1.4](#)

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.2.5.2.1.4 TFCS

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

6.10.2.4.2. 5.2.2 Physical channel parameters

PDSCH	RAB or SRB, TrCh		Interactive or background / 384 kbps / PS RAB, DSCH	
	DTX position		N/A (SingleTrCH)	
	Minimum Spreading spreading factor		8	
DPCH Downlink <u>associated with PDSCH</u>	RAB or SRB, TrCh		Conversational / speech / 12.2 kbps / CS RAB, DCH + 3.4 kbps SRBs for DCCH. DCH	
	DTX position		Fixed	
	Spreading factor		128	
	DPCCH	Number of TFCI bits/slot		02
		Number of TPC bits/slot		2
		Number of Pilot bits/slot		4
	DPDCH	Number of data bits/slot		3432
Number of data bits/frame		510480		

6.10.2.4.2.6 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.2.6.1 Uplink

See 6.10.2.4.1.40.1.

6.10.2.4.2.6.2 Downlink

6.10.2.4.2.6.2.1 Transport channel parameters

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

See 6.10.2.4.1.4.2.1.1

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

See ~~6.10.2.4.2.3.2.1.16.10.2.4.1.35.2.1.1~~

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.2.6.2.1.4 TFCS

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

6.10.2.4.2.6.2.2 Physical channel parameters

PDSCH	RAB or SRB, TrCh		Interactive or background / 2048 kbps / PS RAB, DSCH
	DTX position		N/A (SingleTrCH)
	Minimum Spreading spreading factor		4
DPCH Downlink associated with PDSCH	RAB or SRB, TrCh		Conversational / speech / 12.2 kbps / CS RAB, DCH + 3.4 kbps SRBs for DCCH. DCH
	DTX position		Fixed
	Spreading factor		128
	DPCCH	Number of TFCI bits/slot	0 2
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	4
	DPDCH	Number of data bits/slot	3432
Number of data bits/frame		540480	

6.10.2.4.3 Combinations on SCCPCH

6.10.2.4.3.1 Stand-alone signalling RB for PCCH

6.10.2.4.3.1.1 Transport channel parameters

6.10.2.4.3.1.1.1 Transport channel parameter of SRB for PCCH

Higher layer	RAB/signalling RB		SRB
	User of Radio Bearer		RRC
RLC	Logical channel type		PCCH
	RLC mode		TM
	Payload sizes, bit		240 (alt. 80)
	Max data rate, bps		24000 (alt. 8000)
	RLC headerTrD 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, bits	0x240 (alt. 0x80)
		TF1, bits	1x240 (alt. 1x80)
	TTI, ms		10
	Coding type		CC 1/2
	CRC, bit		16
	Max number of bits/TTI before rate matching		528 (alt. 208)
	RM attribute		210-250

6.10.2.4.3.1.1.2 TFCS

TFCS size	2
TFCS	SRBs for PCCH = TF0, TF1

6.10.2.4.3.1.2 Physical channel parameters

SCCPCH	TFCS size		2
	DTX position		N/A (SingleTrCH)
	Spreading factor		128(alt. 256)
	DPCCH	Number of TFCI bits/slot	0
		Number of Pilot bits/slot	0
	DPDCH	Number of data bits/slot	40(alt. 20)
Number of data bits/frame		600(alt. 300)	

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

6.10.2.4.3.2.1 Transport channel parameters

6.10.2.4.3.2.1.1 Transport channel parameters for Interactive/Background 32 kbps PS RAB

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

6.10.2.4.3.2.1.2 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	152	136 or 120*	128	128	128	166	
	Max data rate, bps	30400 (alt. 45600)	27200 or 2400 (alt. 40800 or 36000)	25600 (alt. 38400)	25600 (alt. 38400)	25600 (alt. 38400)	33200 (alt. 49800)	
	AMD/UMD/TrD PDU headerRLC header, bit	8	8	16	16	16	0	
MAC	MAC header, bit	8	24 or 40	24	24	24	2	
	MAC multiplexing	6 logical channel multiplexing						
Layer 1	TrCH type	FACH						
	TB sizes, bit	168						
	TFS	TF0, bits	0x168					
		TF1, bits	1x168					
		TF2, bits	2x168					
		TF3, bits	N/A (alt. 3x168)					
	TTI, ms	10						
	Coding type	CC 1/2						
	CRC, bit	16						
Max number of bits/TTI before rate matching	752 (alt. 1136)							
RM attribute	200-240							

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

6.10.2.4.3.2.1.3 TFCS

TFCS size	4, 5, or 6
TFCS	(32kbps RAB, SRBs for CCCH/DCCH/BCCH) = (TF0, TF0), (TF0, TF1), (TF0, TF2), [TF0, TF3]*, (TF1, TF0), [TF1, TF1]*

* These TFCs are available only if SCCPCH can be allocated bigger Tx power than required Tx power for TFC of ~~1x360 + 0x168~~(TF0, TF2).

6.10.2.4.3.2.2 Physical channel parameters

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

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

6.10.2.4.3.3.1 Transport channel parameters

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

See 6.10.2.4.3.2.1

6.10.2.4.3.3.1.2 Transport channel parameters of SRB for PCCH

See 6.10.2.4.3.1.1

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

See 6.10.2.4.3.2.1.2

6.10.2.4.3.3.1.4 TFCS

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

* These TFCs are available only if SCCPCH can be allocated bigger Tx power than required Tx power for TFC of ~~1x360 + 0x168~~(TF0, TF2).

6.10.2.4.3.3.2 Physical channel parameters

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

6.10.2.4.4 Combinations on PRACH

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

6.10.2.4.4.1.1 Transport channel parameters

6.10.2.4.4.1.1.1 Transport channel parameter for Interactive/Background 32 kbps PS RAB, SRB for CCCH, SRB for DCCH

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

6.10.2.4.4.1.1.2 TFCS

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

6.10.2.4.4.1.2 Physical channel parameters

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

3GPP TSG-T1 Meeting #11
Melbourne, Australia, 17 – 18 May 2001

Tdoc T1-010206

3GPP TSG-T1 SWG SIG Meeting #17
Melbourne, 14th-16th May 2001

T1S-010085

CR-Form-v3

CHANGE REQUEST

⌘ **TS 34.108** **CR 041** ⌘ rev **-** ⌘ Current version: **3.3.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title: ⌘ CR for 6.10(34.108) "Reference Radio Bearer configurations" TDD parameters

Source: ⌘ Siemens AG; DoCoMo

Work item code: ⌘ Conformance testing for UE (TDD)

Date: ⌘ 14.May.2001

Category: ⌘ **F**

Release: ⌘ R99

Use one of the following categories:

- F** (essential 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)

Reason for change: ⌘ TDD Radio Bearers are needed according with RAN specifications. Document Typical Radio Parameter sets (TDD) v1.0.0. of ISG

Summary of change: ⌘ New section in 6.10 is included:

- 6.10.3 RAB and Signalling RBs (TDD)
 - 6.10.3.1 RABs and Signalling RBs
 - 6.10.3.2 Combinations of RABs and Signalling RBs
 - 6.10.3.3 Example of linkage between RABs and services.
 - 6.10.3.4 Typical Radio Parameter sets.
 - 6.10.3.4.1 Combinations on DPCH
 - Different physical channel parameters for FDD and TDD
 - Puncturing limit needed in DL for TDD mode
 - 6.10.3.4.2 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
 - 6.10.3.4.3 Combinations on PDSCH, SCCPCH, DPCH, PUSCH and PRACH
 - 1) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ 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) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + 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) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + 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

6.10.3.4.4 Combinations on SCCPCH
 - Different physical and transport channel parameters for FDD and TDD

6.10.3.4.5 Combinations on PRACH
 1) SRB for CCCH + SRBs for DCCH

Consequences if not approved:

⌘

Clauses affected:

⌘

6.10.

Other specs affected:

⌘

Other core specifications

⌘

Test specifications

O&M Specifications

Other comments:

⌘

This document is based on T1S-010029r2 Typical Radio Parameter sets (TDD) (Siemens)
 Also refer to harmonised document Typical Radio Parameter sets (TDD), (DoCoMo) for ISG

6.10.3 RAB and signalling RB for TDD

6.10.3.1 RABs and signalling RBs

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

NOTE: The granularity for each RAB needs to be clarified.

Table 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
2	Conversational	Speech	UL:10.2 DL:10.2	CS
3	Conversational	Speech	UL:7.95 DL:7.95	CS
4	Conversational	Speech	UL:7.4 DL:7.4	CS
5	Conversational	Speech	UL:6.7 DL:6.7	CS
6	Conversational	Speech	UL:5.9 DL:5.9	CS
7	Conversational	Speech	UL:5.15 DL:5.15	CS
8	Conversational	Speech	UL:4.75 DL:4.75	CS
9	Conversational	Unknown	UL:28.8 DL:28.8	CS
10	Conversational	Unknown	UL:64 DL:64	CS
11	Conversational	Unknown	UL:32 DL:32	CS
12	Streaming	Unknown	UL:14.4 DL:14.4	CS
13	Streaming	Unknown	UL:28.8 DL:28.8	CS
14	Streaming	Unknown	UL:57.6 DL:57.6	CS
15	Streaming	Unknown	UL:0 DL:64	CS
16	Streaming	Unknown	UL:64 DL:0	CS
17	Streaming	Unknown	UL:0 DL:128	CS
18	Streaming	Unknown	UL:128 DL:0	CS
19	Streaming	Unknown	UL:0 DL:384	CS
20	Interactive or Background	N/A	UL:32 DL:8	PS
21	Interactive or Background	N/A	UL:64 DL:8	PS
22	Interactive or Background	N/A	UL:32 DL:64	PS
23	Interactive or Background	N/A	UL:64 DL:64	PS
24	Interactive or Background	N/A	UL:64 DL:128	PS
25	Interactive or Background	N/A	UL:128 DL:128	PS
26	Interactive or Background	N/A	UL:64 DL:384	PS
27	Interactive or Background	N/A	UL:128 DL:384	PS
28	Interactive or Background	N/A	UL:384 DL:384	PS
29	Interactive or Background	N/A	UL:64 DL:2048	PS
30	Interactive or Background	N/A	UL:128 DL:2048	PS
31	Interactive or Background	N/A	UL:384 DL:2048	PS
32	Interactive or Background	N/A	UL:64 DL:256	PS

Table 6.10.3.1.2: Signalling RBs

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

6.10.3.2 Combinations of RABs and Signalling RBs

In this document, physical channel parameters for following combinations of RABs and signalling RBs on a CCTrCH are described.

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

Combinations on DPCH

- 1) Stand-alone UL:1.7 DL:1.7 kbps SRBs for DCCH
- 2) Stand-alone UL:3.4 DL:3.4 kbps SRBs for DCCH
- 3) Stand-alone UL:13.6 DL:13.6 kbps SRBs for DCCH
- 4) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 5) Conversational / speech / UL:10.2 DL:10.2 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 6) Conversational / speech / UL:7.95 DL:7.95 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 7) Conversational / speech / UL:7.4 DL:7.4 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 8) Conversational / speech / UL:6.7 DL:6.7 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 9) Conversational / speech / UL:5.9 DL:5.9 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 10) Conversational / speech / UL:5.15 DL:5.15 kbps / CS RAB
+ UL:1.7 DL:1.7 kbps SRBs for DCCH
- 11) Conversational / speech / UL:4.75 DL:4.75 kbps / CS RAB
+ UL:1.7 DL:1.7 kbps SRBs for DCCH
- 12) Conversational / unknown / UL:28.8 DL:28.8 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 13) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 14) Conversational / unknown / UL:32 DL:32 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 15) Streaming / unknown / UL:14.4/DL:14.4 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 16) Streaming / unknown / UL:28.8/DL:28.8 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 17) Streaming / unknown / UL:57.6/DL:57.6 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
- 18) Streaming / unknown / UL:0 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

19)	Streaming	/	unknown	/	UL:64	DL:0	kbps	/	CS	RAB	
	<u>+ UL:3.4 DL:3.4 kbps SRBs for DCCH</u>										
20)	Streaming	/	unknown	/	UL:0	DL:128	kbps	/	CS	RAB	
	<u>+ UL:3.4 DL:3.4 kbps SRBs for DCCH</u>										
21)	Streaming	/	unknown	/	UL:128	DL:0	kbps	/	CS	RAB	
	<u>+ UL:3.4 DL:3.4 kbps SRBs for DCCH</u>										
22)	Streaming	/	unknown	/	UL:0	DL:384	kbps	/	CS	RAB	
	<u>+ UL:3.4 DL:3.4 kbps SRBs for DCCH</u>										
23)	Interactive	or	background	/	UL:32	DL:8	kbps	/	PS	RAB	
	<u>+ UL:3.4 DL:3.4 kbps SRBs for DCCH</u>										
24)	Interactive	or	background	/	UL:64	DL:8	kbps	/	PS	RAB	
	<u>+ UL:3.4 DL:3.4 kbps SRBs for DCCH</u>										
25)	Interactive	or	background	/	UL:32	DL: 64	kbps	/	PS	RAB	
	<u>+ UL:3.4 DL:3.4 kbps SRBs for DCCH</u>										
26)	Interactive	or	background	/	UL:64	DL: 64	kbps	/	PS	RAB	
	<u>+ UL:3.4 DL:3.4 kbps SRBs for DCCH</u>										
27)	Interactive	or	background	/	UL:64	DL:128	kbps	/	PS	RAB	
	<u>+ UL:3.4 DL:3.4 kbps SRBs for DCCH</u>										
28)	Interactive	or	background	/	UL:128	DL:128	kbps	/	PS	RAB	
	<u>+ UL:3.4 DL:3.4 kbps SRBs for DCCH</u>										
29)	Interactive	or	background	/	UL:64	DL:144	kbps	/	PS	RAB	
	<u>+ UL:3.4 DL:3.4 kbps SRBs for DCCH</u>										
30)	Interactive	or	background	/	UL:144	DL:144	kbps	/	PS	RAB	
	<u>+ UL:3.4 DL:3.4 kbps SRBs for DCCH</u>										
31)	Interactive	or	background	/	UL:64	DL:256	kbps	/	PS	RAB	
	<u>+ UL:3.4 DL: 3.4 kbps SRBs for DCCH</u>										
32)	Interactive	or	background	/	UL:64	DL:384	kbps	/	PS	RAB	
	<u>+ UL:3.4 DL: 3.4 kbps SRBs for DCCH</u>										
33)	Interactive	or	background	/	UL:128	DL:384	kbps	/	PS	RAB	
	<u>+ UL:3.4 DL:3.4 kbps SRBs for DCCH</u>										
34)	Interactive	or	background	/	UL:384	DL:384	kbps	/	PS	RAB	
	<u>+ UL:3.4 DL:3.4 kbps SRBs for DCCH</u>										
35)	Interactive	or	background	/	UL:64	DL:2048	kbps	/	PS	RAB	
	<u>+ UL:3.4 DL:3.4 kbps SRBs for DCCH</u>										
36)	Interactive	or	background	/	UL:128	DL:2048	kbps	/	PS	RAB	
	<u>+ UL:3.4 DL:3.4 kbps SRBs for DCCH</u>										
37)	Interactive	or	background	/	UL:384	DL:2048	kbps	/	PS	RAB	
	<u>+ UL:3.4 DL:3.4 kbps SRBs for DCCH</u>										
38)	Conversational	/	speech	/	UL:12.2	DL:12.2	kbps	/	CS	RAB	
	<u>+ Interactive or background / UL:32 DL:8 kbps / PS RAB</u>										
	<u>+ UL:3.4 DL:3.4 kbps SRBs for DCCH</u>										
39)	Conversational	/	speech	/	UL:12.2	DL:12.2	kbps	/	CS	RAB	
	<u>+ Interactive or background / UL:32 DL:64 kbps / PS RAB</u>										
	<u>+ UL:3.4 DL:3.4 kbps SRBs for DCCH</u>										
40)	Conversational	/	speech	/	UL:12.2	DL:12.2	kbps	/	CS	RAB	
	<u>+ Interactive or background / UL:64 DL:64 kbps / PS RAB</u>										
	<u>+ UL:3.4 DL: 3.4 kbps SRBs for DCCH</u>										
41)	Conversational	/	speech	/	UL:12.2	DL:12.2	kbps	/	CS	RAB	
	<u>+ Interactive or background / UL:64 DL:128 kbps / PS RAB</u>										
	<u>+ UL:3.4 DL:3.4 kbps SRBs for DCCH</u>										
42)	Conversational	/	speech	/	UL:12.2	DL:12.2	kbps	/	CS	RAB	
	<u>+ Interactive or background / UL:64 DL:256 kbps / PS RAB</u>										
	<u>+ UL:3.4 DL:3.4 kbps SRBs for DCCH</u>										
43)	Conversational	/	speech	/	UL:12.2	DL:12.2	kbps	/	CS	RAB	
	<u>+ Interactive or background / UL:64 DL:384 kbps / PS RAB</u>										
	<u>+ UL:3.4 DL:3.4 kbps SRBs for DCCH</u>										
44)	Conversational	/	speech	/	UL:12.2	DL:12.2	kbps	/	CS	RAB	
	<u>+ Interactive or background / UL:128 DL:2048 kbps / PS RAB</u>										
	<u>+ UL:3.4 DL:3.4 kbps SRBs for DCCH</u>										

45)	Conversational / speech /	UL:12.2	DL:12.2	kbps /	CS	RAB
	+ Streaming / unknown /	UL:57.6	DL:57.6	kbps /	CS	RAB
	+ UL:3.4 DL:3.4 kbps SRBs for DCCH					
46)	Conversational / speech /	UL:12.2	DL:12.2	kbps /	CS	RAB
	+ Streaming / unknown /	UL:0	DL:64	kbps /	CS	RAB
	+ UL:3.4 DL:3.4 kbps SRBs for DCCH					
47)	Conversational / speech /	UL:12.2	DL:12.2	kbps /	CS	RAB
	+ Streaming / unknown /	UL:0	DL:128	kbps /	CS	RAB
	+ UL:3.4 DL:3.4 kbps SRBs for DCCH					
48)	Conversational / speech /	UL:12.2	DL:12.2	kbps /	CS	RAB
	+ Streaming / unknown /	UL:0	DL:384	kbps /	CS	RAB
	+ UL:3.4 DL:3.4 kbps SRBs for DCCH					
49)	Conversational / speech /	UL:12.2	DL:12.2	kbps /	CS	RAB
	+ Conversational / unknown /	UL:64	DL:64	kbps /	CS	RAB
	+ UL:3.4 DL:3.4 kbps SRBs for DCCH					
50)	Conversational / unknown /	UL:64	DL:64	kbps /	CS	RAB
	+ Conversational / unknown /	UL:64	DL:64	kbps /	CS	RAB
	+ UL:3.4 DL:3.4 kbps SRBs for DCCH					
51)	Conversational / unknown /	UL:64	DL:64	kbps /	CS	RAB
	+ Interactive or background /	UL:64	DL:64	kbps /	PS	RAB
	+ UL:3.4 DL:3.4 kbps SRBs for DCCH					
52)	Conversational / unknown /	UL:64	DL:64	kbps /	CS	RAB
	+ Interactive or background /	UL:64	DL:128	kbps /	PS	RAB
	+ UL:3.4 DL:3.4 kbps SRBs for DCCH					
53)	Conversational / unknown /	UL:64	DL:64	kbps /	CS	RAB
	+ Interactive or background /	UL:128	DL:128	kbps /	PS	RAB
	+ UL:3.4 DL:3.4 kbps SRBs for DCCH					
54)	Interactive or /background /	UL:64	kbps	DL:128	kbps /	PS
	+ Streaming / unknown /	UL:0	DL:64	kbps /	CS	RAB
	+ UL:3.4 DL:3.4 kbps SRBs for DCCH					
55)	Interactive or /background /	UL:64	kbps	DL:128	kbps /	PS
	+ Streaming / unknown /	UL:0	DL:128	kbps /	CS	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
	+ 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)	Conversational / speech /	UL:12.2	DL:12.2	kbps /	CS	RAB
	+ 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)	Conversational / speech /	UL:12.2	DL:12.2	kbps /	CS	RAB
	+ 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					

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

6.10.3.3 Example of linkage between RABs and services

RABs, which are included in this 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 this document, is shown in Table 6.10.3.3.1.

Table 6.10.3.3.1: Example of linkage between RABs and services

Traffic class ^[3]	RAB			Residual BER ^[3]	Services
	SSD ^[3]	Max. rate, kbps	CS/PS		
Conversational	Speech	UL:4.75-12.2 DL:4.75-12.2	CS	5×10^{-4} 1×10^{-3} 5×10^{-3}	AMR speech
Conversational	Unknown	UL:64 DL:64	CS	1×10^{-4} or 1×10^{-6}	UDI 1B, 64k 3G-324M ^[4]
Conversational	Unknown	UL:32 DL:32	CS	1×10^{-4} or 1×10^{-6}	32k 3G-324M ^[4]
Conversational	Unknown	UL:28.8 DL:28.8	CS	1×10^{-3}	Transparent modem
Streaming	Unknown	UL:14.4 DL:14.4	CS	1×10^{-3}	FAX ^[6]
Streaming	Unknown	UL:28.8 DL:28.8	CS	1×10^{-3}	FAX ^[6]
Streaming	Unknown	UL:57.6 DL:57.6	CS	1×10^{-3}	PIAFS 32 kbps Modem ^[6] , FTM ^[5] PIAFS 64 kbps
Streaming	Unknown	UL:64-128 or DL:64-384	CS	1×10^{-3} or 1×10^{-4}	Streaming video, uni-directional
Interactive or Background	N/A	UL:32-384 DL:8-2048	PS	1×10^{-3} or 1×10^{-4}	Packet

Note: SMS can be provided via the signalling RB (DCCH) on DPCH or SCCPCH.

Note: CBS can be provided via the signalling RB (CTCH) on SCCPCH

Note: UDI n B can be provided via n RABs of conversational 64 kbps.

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

6.10.3.4.1.1.1.1.2 TFCS

TFCS size	2
TFCS	SRBs for DCCH = TF0, TF1

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
	TFCI code word	4 bit
	TPC	2 bit
	Puncturing Limit	1

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 prio	NAS DT Low prio
RLC	Logical channel type	DCCH	DCCH	DCCH	DCCH
	RLC mode	UM	AM	AM	AM
	Payload sizes, bit	136	128	128	128
	Max data rate, bps	1700	1600	1600	1600
	RLC header, bit	8	16	16	16
MAC	MAC header, bit	4	4	4	4
	MAC multiplexing	4 logical channel multiplexing			
Layer 1	TrCH type	DCH			
	TB sizes, bit	148			
	TFS	TF0, bits	0 x148		
		TF1, bits	1x148		
	TTI, ms	80			
	Coding type	CC 1/3			
	CRC, bit	16			
	Max number of bits/TTI before rate matching	516			

6.10.3.4.1.1.2.1.2 TFCS

TFCS size	2
TFCS	SRBs for DCCH = TF0, TF1

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 bits
	TFCI code word	4 bits
	Puncturing limit	1

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

[6.10.3.4.1.2.1.1.2 TFCS](#)

TFCS size	2
TFCS	SRBs for DCCH = TF0, TF1

[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 bits
	TFCI code word	4 bits
	TPC	2 bit
	Puncturing Limit	1

[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 prio	NAS DT Low prio
RLC	Logical channel type	DCCH	DCCH	DCCH	DCCH
	RLC mode	UM	AM	AM	AM
	Payload sizes, bit	136	128	128	128
	Max data rate, bps	3400	3200	3200	3200
	RLC header, bit	8	16	16	16
MAC	MAC header, bit	4	4	4	4
	MAC multiplexing	4 logical channel multiplexing			
Layer 1	TrCH type	DCH			
	TB sizes, bit	148			
	TFS	TF0, bits	0x148		
		TF1, bits	1x148		
	TTI, ms	40			
	Coding type	CC 1/3			
	CRC, bit	16			
	Max number of bits/TTI before rate matching	516			
	RM attribute	155-165			

6.10.3.4.1.2.2.1.2 TFCS

TFCS size	2
TFCS	SRBs for DCCH = TF0, TF1

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
	TFCI code word	4 bits
	Puncturing limit	1

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 prio	NAS DT Low prio
RLC	Logical channel type	DCCH	DCCH	DCCH	DCCH
	RLC mode	UM	AM	AM	AM
	Payload sizes, bit	136	128	128	128
	Max data rate, bps	13600	12800	12800	12800
	RLC header, bit	8	16	16	16
MAC	MAC header, bit	4	4	4	4
	MAC multiplexing	4 logical channel multiplexing			
Layer 1	TrCH type	DCH			
	TB sizes, bit	148			
	TFS	TF0, bits	0x148		

	<u>TF1, bits</u>	<u>1x148</u>
<u>TTI, ms</u>		<u>10</u>
<u>Coding type</u>		<u>CC 1/3</u>
<u>CRC, bit</u>		<u>16</u>
<u>Max number of bits/TTI before rate matching</u>		<u>516</u>
<u>Uplink: Max number of bits/radio frame before rate matching</u>		<u>516</u>

6.10.3.4.1.3.1.1.2 TFCS

<u>TFCS size</u>	<u>2</u>
<u>TFCS</u>	<u>SRBs for DCCH = TF0, TF1</u>

6.10.3.4.1.3.1.2 Physical channel parameters

<u>DPCH Uplink</u>	<u>Midamble</u>	<u>512 chips</u>
	<u>Codes and time slots</u>	<u>SF8 x 1 code x 1 time slot</u>
	<u>Max. Number of data bits/radio frame</u>	<u>476 bits</u>
	<u>TFCI code word</u>	<u>4 bits</u>
	<u>TPC</u>	<u>2 bits</u>
	<u>Puncturing Limit</u>	<u>0.92</u>

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

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

6.10.3.4.1.3.2.1.2 TFCS

<u>TFCS size</u>	<u>2</u>
<u>TFCS</u>	<u>SRBs for DCCH = TF0, TF1</u>

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 bits
	TFCI code word	4 bits
	Puncturing limit	0.92

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			
	RLC header, bit	0			
MAC	MAC header, bit	0			
	MAC multiplexing	N/A			
Layer 1	TrCH type	DCH	DCH	DCH	
	TB sizes, bit	39, 81 (alt. 0, 39, 81)	103	60	
	TFS	TF0, bits	0x81(alt. 1x0 ^{*1})	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	
	Uplink: Max number of bits/radio frame before rate matching	152	167	68	
	RM attribute	180-220	170-210	215-256	

*1: 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 TS25.212.).

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

See 6.10.3.4.1.2.1.1.

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)

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	0.88

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	0, 39, 81	103	60	
	Max data rate, bps	12200			
	RLC header, bit	0			
MAC	MAC header, bit	0			
	MAC multiplexing	N/A			
Layer 1	TrCH type	DCH	DCH	DCH	
	TB sizes, bit	0	103	60	
		39			
		81			
	TFS*1	TF0, bits	1x0 ^{*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		
RM attribute	180-220	170-210	215-256		

*1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212).

*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 TS25.212).

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

See 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)

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	0.92

[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			
	RLC header, bit	0			
MAC	MAC header, bit	0			
	MAC multiplexing	N/A			
Layer 1	TrCH type	DCH	DCH	DCH	
	TB sizes, bit	39, 65 (alt. 0, 39, 65)	99	40	
	TFS	TF0, bits	0x65 (alt. 1x0*)	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	
	Uplink: Max number of bits/radio frame before rate matching	128	161	48	
RM attribute	180-220	170-210	215-256		

*1: 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 TS25.212.).

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

See [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)

[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	0.48

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	0, 39, 65	99	40	
	Max data rate, bps	10200			
	RLC header, bit	0			
MAC	MAC header, bit	0			
	MAC multiplexing	N/A			
Layer 1	TrCH type	DCH	DCH	DCH	
	TB sizes, bit	0	99	40	
		39			
		65			
	TFS	TF0, bits	1x0 ^{*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	
RM attribute	180-220	170-210	215-256		

*1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212).

*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 TS25.212.).

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

See 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)

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

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		
	RLC header, bit	0		
MAC	MAC header, bit	0		
	MAC multiplexing	N/A		
Layer 1	TrCH type	DCH	DCH	
	TB sizes, bit	39, 75 (alt. 0, 39, 75)	84	
	TFS	TF0, bits	0x75 (alt. 1x0 ^{*1})	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	
	Uplink: Max number of bits/radio frame before rate matching	143	138	
RM attribute	180-220	170-210		

*1: In case of using this alternative, CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBIs are 1 even if there is no data on RAB subflow#1 (see clauses 4.2.1.1 in TS25.212.).

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

See 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)

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

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

Higher Layer	RAB/Signalling RB	RAB subflow #1	RAB subflow #2	
RLC	Logical channel type	DTCH		
	RLC mode	TM	TM	
	Payload sizes, bit	0, 39, 75	84	
	Max data rate, bps	7950		
	RLC header, bit	0		
MAC	MAC header, bit	0		
	MAC multiplexing	N/A		
Layer 1	TrCH type	DCH	DCH	
	TB sizes, bit	0, 39, 75	84	
	TFS* ¹	TF0, bits	1x0* 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	
RM attribute	180-220	170-210		

*1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212).

*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 TS25.212.).

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

See 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)

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	0,56

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		
	RLC header, bit	0		
MAC	MAC header, bit	0		
	MAC multiplexing	N/A		
Layer 1	TrCH type	DCH	DCH	
	TB sizes, bit	39, 61 (alt. 0, 39, 61)	87	
	TFS	TF0, bits	0x61 (alt. 1x0 ^{*1})	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	
	Uplink: Max number of bits/radio frame before rate matching	122	143	
RM attribute	180-220	170-210		

*1: 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 TS25.212.).

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

See 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)

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

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

Higher Layer	RAB/Signalling RB	RAB subflow #1	RAB subflow #2	
RLC	Logical channel type	DTCH		
	RLC mode	TM	TM	
	Payload sizes, bit	0, 39, 61	87	
	Max data rate, bps	7400		
	RLC header, bit	0		
MAC	MAC header, bit	0		
	MAC multiplexing	N/A		
Layer 1	TrCH type	DCH	DCH	
	TB sizes, bit	0, 39, 61	87	
	TFS* ¹	TF0, bits	1x0* 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	
	RM attribute	180-220	170-210	

*1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212).

*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 TS25.212).

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

See 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)

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

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		
	RLC header, bit	0		
MAC	MAC header, bit	0		
	MAC multiplexing	N/A		
Layer 1	TrCH type	DCH	DCH	
	TB sizes, bit	39, 58 (alt. 0, 39, 58)	76	
	TFS	TF0, bits	0x58 (alt. 1x0 ^{*1})	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	
	Uplink: Max number of bits/radio frame before rate matching	117	126	
RM attribute	180-220	170-210		

*1: 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 TS25.212.).

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

See 6.10.3.4.1.2.1.1.1

6.10.3.4.8.1.1.3 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)

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
	TFCl code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.60

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

Higher Layer	RAB/Signalling RB	RAB subflow #1	RAB subflow #2	
RLC	Logical channel type	DTCH		
	RLC mode	TM	TM	
	Payload sizes, bit	0, 39, 58	76	
	Max data rate, bps	6700		
	RLC header, bit	0		
MAC	MAC header, bit	0		
	MAC multiplexing	N/A		
Layer 1	TrCH type	DCH	DCH	
	TB sizes, bit	0	76	
		39		
		58		
	TFS*1	TF0, bits	1x0*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		
RM attribute	180-220	170-210		

*1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212).

*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 TS25.212.).

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

See 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)

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	0.6

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		
	RLC header, bit	0		
MAC	MAC header, bit	0		
	MAC multiplexing	N/A		
Layer 1	TrCH type	DCH	DCH	
	TB sizes, bit	39, 55 (alt. 0, 39, 55)	63	
	TFS	TF0, bits	0x55 (alt. 1x0 ^{*1})	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	
	Uplink: Max number of bits/radio frame before rate matching	113	107	
RM attribute	180-220	170-210		

*1: 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 TS25.212.).

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

See 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)

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	0.64

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	0, 39, 55	63	
	Max data rate, bps	5900		
	RLC header, bit	0		
MAC	MAC header, bit	0		
	MAC multiplexing	N/A		
Layer 1	TrCH type	DCH	DCH	
	TB sizes, bit	0, 39, 55	63	
	TFS* ¹	TF0, bits	1x0* 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	
RM attribute	180-220	170-210		

*1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212).

*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 TS25.212.).

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

See 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)

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
	TFCl code word	16 bits
	Puncturing limit	0,64

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 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		
	RLC header, bit	0		
MAC	MAC header, bit	0		
	MAC multiplexing	N/A		
Layer 1	TrCH type	DCH	DCH	
	TB sizes, bit	39, 49 (alt. 0, 39, 49)	54	
	TFS	TF0, bits	0x49 (alt. 1x0 ^{*1})	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	
	Uplink: Max number of bits/radio frame before rate matching	104	93	
RM attribute	180-220	170-210		

*1: : 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 TS25.212.).

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

See 6.10.3.4.1.2.1.1.1

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)

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
	TFCl code word	16 bits
	TPC	2 bits
	Puncturing Limit	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

Higher Layer	RAB/Signalling RB	RAB subflow #1	RAB subflow #2	
RLC	Logical channel type	DTCH		
	RLC mode	TM	TM	
	Payload sizes, bit	0, 39, 49	54	
	Max data rate, bps	5150		
	RLC header, bit	0		
MAC	MAC header, bit	0		
	MAC multiplexing	N/A		
Layer 1	TrCH type	DCH	DCH	
	TB sizes, bit	0, 39, 49	54	
	TFS* ¹	TF0, bits	1x0	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	
RM attribute	180-220	170-210		

*1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212).

*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 TS25.212.).

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

See 6.10.3.4.1.2.2.1.1

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)

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	0,7

[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		
	RLC header, bit	0		
MAC	MAC header, bit	0		
	MAC multiplexing	N/A		
Layer 1	TrCH type	DCH	DCH	
	TB sizes, bit	39, 42 (alt. 0, 39, 42)	53	
	TFS	TF0, bits	0x42 (alt. 1x0 ^{*1})	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	
	Uplink: Max number of bits/radio frame before rate matching	93	92	
RM attribute	180-220	170-210		

*1: 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 TS25.212.).

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

See [6.10.3.4.1.2.1.1.1](#)

[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)

[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	0.72

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

Higher Layer	RAB/Signalling RB	RAB subflow #1	RAB subflow #2	
RLC	Logical channel type	DTCH		
	RLC mode	TM	TM	
	Payload sizes, bit	0, 39, 42	53	
	Max data rate, bps	4750		
	RLC header, bit	0		
MAC	MAC header, bit	0		
	MAC multiplexing	N/A		
Layer 1	TrCH type	DCH	DCH	
	TB sizes, bit	0, 39, 42	53	
	TFS* ¹	TF0, bits	1x0* 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	
	RM attribute	180-220	170-210	

*1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see section 4.3 in TS25.212).

*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 TS25.212).

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

See 6.10.3.4.1.2.2.1.1

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)

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	0.72

[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	
	RLC header, bit	0	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	576	
	TFS	TF0, bits	0x576
		TF1, bits	1x576
		TF2, bits	2x576
	TTI, ms	40	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	3564	
	Uplink: Max number of bits/radio frame before rate matching	891	
RM attribute	160-200		

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

[See 6.10.3.4.1.2.1.1.1](#)

[6.10.3.4.1.12.1.1.3](#) [TFCS](#)

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

[6.10.3.4.1.12.1.2](#) [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

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

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

See 6.10.3.4.1.2.2.1.1

6.10.3.4.1.12.2.1.3 TFCS

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

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

[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	
	RLC header, bit	0	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	640	
	TFS	TF0, bits	0x640
		TF1, bits	2x640(alt. 4x640)
	TTI, ms	20(alt. 40)	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	3948(alt. 7884)	
	Uplink: Max number of bits/radio frame before rate matching	1974(alt. 1971)	
	RM attribute	150-195	

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

See [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)

[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
	Max. Number of data	1210 bits
	TFCI code word	8 bits
	TPC	2 bits
	Puncturing Limit	0.56

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

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

See 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)

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 bits
	TFCI code word	8 bits
	Puncturing limit	0,56

[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	
	RLC header, bit	0	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	640	
	TFS	TF0, bits	0x640
		TF1, bits	1x640(alt. 2x640)
	TTI, ms	20(alt. 40)	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	1980(alt. 3948)	
	Uplink: Max number of bits/radio frame before rate matching	990(alt. 987)	
	RM attribute	165-210	

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

See [6.10.3.4.1.2.1.1.1](#)

[6.10.3.4.1.13.1.1.3](#) [TFCS](#)

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

[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 bits
	TFCI code word	8 bits
	TPC	2 bits
	Puncturing Limit	0.80

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

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

See 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)

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 bits
	TFCl code word	8 bits
	Puncturing limit	0,64

[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	
	RLC header, bit	0	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	576	
	TFS	TF0, bits	0x576
		TF1, bits	1x576
	TTI, ms	40	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	1788	
	Uplink: Max number of bits/radio frame before rate matching	447	
	RM attribute	145-185	

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

[See 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)

[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 bits
	TFCI code word	8 bits
	TPC	2 bits
	Puncturing Limit	0.80

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

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

See 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)

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 bits
	TFCl code word	8 bits
	Puncturing limit	0.8

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](#)

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

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

See 6.10.3.4.1.2.1.1.1

6.10.3.4.1.16.1.1.3 [TFCS](#)

<u>TFCS size</u>	<u>6</u>
<u>TFCS</u>	<u>(28.8kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1)</u>

6.10.3.4.1.16.1.2 [Physical channel parameters](#)

<u>DPCH Uplink</u>	<u>Midamble</u>	<u>512 chips</u>
	<u>Codes and time slots</u>	<u>SF8 x 1 code x 1 time slot</u>
	<u>Max. Number of data bits/radio frame</u>	<u>452 bits</u>
	<u>TFCI code word</u>	<u>16 bits</u>
	<u>TPC</u>	<u>2 bits</u>
	<u>Puncturing Limit</u>	<u>0.44</u>

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

[6.10.3.4.1.16.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH](#)

[See 6.10.3.4.1.2.2.1.1](#)

[6.10.3.4.1.16.2.1.3 TFCS](#)

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

[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

[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	
	RLC header, bit	0	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	576	
	TFS	TF0, bits	0x576
		TF1, bits	1x576
		TF2, bits	2x576
		TF3, bits	3x576
		TF4, bits	4x576
	TTI, ms	40	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	7116	
	Uplink: Max number of bits/radio frame before rate matching	1779	
RM attribute	125-165		

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

See [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)

[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	0.48

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	
	RLC header, bit	0	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	576	
	TFS	TF0, bits	0x576
		TF1, bits	1x576
		TF2, bits	2x576
		TF3, bits	3x576
		TF4, bits	4x576
	TTI, ms	40	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	7116	
RM attribute	125-165		

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

See 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)

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 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 6.10.3.4.1.2.1.1.1

[6.10.3.4.1.18.1.1.3 TFCS](#)[See 6.10.3.4.1.2.1.1.2](#)[6.10.3.4.1.18.1.2 Physical channel parameters](#)[See 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	
	RLC header, bit	0	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	320	
	TFS	TF0, bits	0x320
		TF1, bits	1x320
		TF2, bits	2x320
		TF3, bits	4x320
		TF4, bits	8x320
	TTI, ms	40	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	8076	
	RM attribute	125-165	

[6.10.3.4.1.18.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH](#)[See 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](#)

<u>Higher Layer</u>	<u>RAB/Signalling RB</u>	<u>RAB</u>	
<u>RLC</u>	<u>Logical channel type</u>	<u>DTCH</u>	
	<u>RLC mode</u>	<u>TM</u>	
	<u>Payload sizes, bit</u>	<u>320</u>	
	<u>Max data rate, bps</u>	<u>64000</u>	
	<u>RLC header, bit</u>	<u>0</u>	
<u>MAC</u>	<u>MAC header, bit</u>	<u>0</u>	
	<u>MAC multiplexing</u>	<u>N/A</u>	
<u>Layer 1</u>	<u>TrCH type</u>	<u>DCH</u>	
	<u>TB sizes, bit</u>	<u>320</u>	
	<u>TFS</u>	<u>TF0, bits</u>	<u>0x320</u>
		<u>TF1, bits</u>	<u>1x320</u>
		<u>TF2, bits</u>	<u>2x320</u>
		<u>TF3, bits</u>	<u>4x320</u>
		<u>TF4, bits</u>	<u>8x320</u>
	<u>TTI, ms</u>	<u>40</u>	
	<u>Coding type</u>	<u>TC</u>	
	<u>CRC, bit</u>	<u>16</u>	
	<u>Max number of bits/TTI after channel coding</u>	<u>8076</u>	
<u>Uplink: Max number of bits/radio frame before rate matching</u>	<u>2019</u>		
<u>RM attribute</u>	<u>125-165</u>		

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

[See 6.10.3.4.1.2.1.1.1](#)

[6.10.3.4.1.19.1.1.3 TFCS](#)

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

[6.10.3.4.1.19.1.2 Physical channel parameters](#)

<u>DPCH Uplink</u>	<u>Midamble</u>	<u>512 chips</u>
	<u>Codes and time slots</u>	<u>{SF16 x 1 code + SF4 x 1 code} x 1 time slot</u>
	<u>Max. Number of data bits/radio frame</u>	<u>1202 bits</u>
	<u>TFCI code word</u>	<u>16 bits</u>
	<u>TPC</u>	<u>2 bits</u>
	<u>Puncturing Limit</u>	<u>0.56</u>

[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 6.10.3.4.1.2.2.1.1](#)

[6.10.3.4.1.19.2.1.3](#) TFCS

[See 6.10.3.4.1.2.2.1.2](#)

[6.10.3.4.1.19.2.2](#) Physical channel parameters

[See 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 6.10.3.4.1.2.1.1.1](#)

[6.10.3.4.1.20.1.1.3](#) TFCS

[See 6.10.3.4.1.2.1.1.2](#)

[6.10.3.4.1.20.1.2](#) Physical channel parameters

[See 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	
	RLC header, bit	0	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	320	
	TFS	TF0, bits	0x320
		TF1, bits	1x320
		TF2, bits	2x320
		TF3, bits	4x320
		TF4, bits	8x320
	TF5, bits	16x320	
	TTI, ms	40	
	Coding type	TC	
	CRC, bit	16	
Max number of bits/TTI after channel coding	16152		
RM attribute	125-165		

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

See 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	
	RLC header, bit	0	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	320	
	TFS	TF0, bits	0x320
		TF1, bits	1x320
		TF2, bits	2x320
		TF3, bits	4x320
		TF4, bits	8x320
	TF5, bits	16x320	
	TTI, ms	40	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	16152	
	Uplink: Max number of bits/radio frame before rate matching	4038	
	RM attribute	125-165	

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

See 6.10.3.4.1.2.1.1.1

6.10.3.4.1.21.1.1.3 TFCS

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

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	0.52

6.10.3.4.1.21.2 Downlink6.10.3.4.1.21.2.1 Transport channel parameters6.10.3.4.1.21.2.1.1 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 6.10.3.4.1.2.2.1.1

6.10.3.4.1.21.2.1.3 TFCS

See 6.10.3.4.1.2.2.1.1

6.10.3.4.1.21.2.2 Physical channel parameters

See 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 DCCH6.10.3.4.1.22.1 Uplink6.10.3.4.1.22.1.1 Transport channel parameters6.10.3.4.1.22.1.1.1 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 6.10.3.4.1.2.1.1.1

6.10.3.4.1.22.1.1.3 TFCS

See 6.10.3.4.1.2.1.1.2

6.10.3.4.1.22.1.2 Physical channel parameters

See 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	
	RLC header, bit	0	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	320	
	TFS	TF0, bits	0x320
		TF1, bits	1x320
		TF2, bits	2x320
		TF3, bits	4x320
		TF4, bits	8x320
		TF5, bits	16x320
		TF6, bits	32x320
	TF7, bits	48x320	
	TTI, ms	40	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	48432	
RM attribute	110-150		

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

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

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

See [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))

[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	0.76

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

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

See 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)

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 bits
	TFCl code word	8 bits
	Puncturing limit	0,56

[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	
	RLC header, bit	16	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	336	
	TFS	TF0, bits	0x336
		TF1, bits	1x336
		TF2, bits	2x336
		TF3, bits	3x336
		TF4, bits	4x336
	TTI, ms	20	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	4236	
	Uplink: Max number of bits/radio frame before rate matching	2118	
RM attribute	130-170		

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

See [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 [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 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	
	RLC header, bit	16	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	336	
	TFS	TF0, bits	0x336
		TF1, bits	1x336
		TF2, bits	2x336
		TF3, bits	3x336
		TF4, bits	4x336
	TTI, ms	20	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	4236	
RM attribute	130-170		

[6.10.3.4.1.25.2.1.2](#) [Transport channel parameters for DL:3.4 kbps SRBs for DCCH](#)

[See 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)

[6.10.3.4.1.25.2.2](#) [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	0,52

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 6.10.3.4.1.24.1](#)

6.10.3.4.1.26.2 [Downlink](#)

[See 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 6.10.3.4.1.24.1](#)

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	
	RLC header, bit	16	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	336	
	TFS	TF0, bits	0x336
		TF1, bits	1x336
		TF2, bits	2x336
		TF3, bits	4 x336
		TF4, bits	8 x336
	TTI, ms	20	
	Coding type	TC	
	CRC, bit	16	
Max number of bits/TTI after channel coding	8460		
RM attribute	120-160		

6.10.3.4.1.27.2.1.2 [Transport channel parameters for DL:3.4 kbps SRBs for DCCH](#)

[See 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)

6.10.3.4.1.27.2.2 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

6.10.3.4.1.28 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	
	Max data rate, bps	128000	
	RLC header, bit	16	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	336	
	TFS	TF0, bits	0x336
		TF1, bits	1x336
		TF2, bits	2x336
		TF3, bits	4 x336
		TF4, bits	8 x336
	TTI, ms	20	
	Coding type	TC	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	8460	
	Uplink: Max number of bits/radio frame before rate matching	4230	
RM attribute	120-160		

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

See 6.10.3.4.1.2.1.1.1

6.10.3.4.1.28.1.1.3 TFCS

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

6.10.3.4.1.28.1.2 Physical channel parameters

DPCCH 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	0.48

6.10.3.4.1.28.2 Downlink

See 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 6.10.3.4.1.24.1.

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	
	RLC header, bit	16	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	336	
	TFS	TF0, bits	0x336
		TF1, bits	1x336
		TF2, bits	2x336
		TF3, bits	4 x336
		TF4, bits	8 x336
	TF5, bits	9x336	
	TTI, ms	20	
	Coding type	TC	
	CRC, bit	16	
Max number of bits/TTI after channel coding	9516		
RM attribute	140-180		

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

See 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)

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

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

See 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)

6.10.3.4.1.30.1.2 Physical channel parameters

DPCH Uplink	Midamble	256 chips
	Codes and time slots	{SF16 x 1 code + SF2 x 1 code} x 1 time slot
	Max. Number of data bits/radio frame	2466 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.52

6.10.3.4.1.30.2 Downlink

See 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 6.10.3.4.1.24.1

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	
	RLC header, bit	16	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	336	
	TFS	TF0, bits	0x336
		TF1, bits	1x336
		TF2, bits	2x336
		TF3, bits	4 x336
		TF4, bits	8 x336
		TF5, bits	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)		
RM attribute	135-175		

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

See 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))

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 6.10.3.4.1.24.1.

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	
	RLC header, bit	16	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	336	
	TFS	TF0, bits	0x336
		TF1, bits	1x336
		TF2, bits	2x336
		TF3, bits	4 x336
		TF4, bits	8 x336
		TF5, bits	12x336
		TF6, bits	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)		
RM attribute	110-150		

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

See 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))

6.10.3.4.1.32.2.2 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

6.10.3.4.1.33 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 6.10.3.4.1.28.1.

6.10.3.4.1.33.2 Downlink

See 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	
	RLC header, bit	16	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	336	
	TFS	TF0, bits	0x336
		TF1, bits	1x336
		TF2, bits	2x336
		TF3, bits	4 x336
		TF4, bits	8 x336
		TF5, bits	12x336
		TF6, bits	16x336(alt. N/A)
		TF7, bits	20x336(alt. N/A)
	TF8, bits	24 x336 (alt. N/A)	
	TTI, ms	20 (alt. 10)	
	Coding type	TC	
CRC, bit	16		
Max number of bits/TTI after channel coding	25368		

<u>Uplink: Max number of bits/radio frame before rate matching</u>	<u>12684</u>
<u>RM attribute</u>	<u>110-150</u>

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

See 6.10.3.4.1.2.1.1.1

6.10.3.4.1.34.1.1.3 TFCS

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

6.10.3.4.1.34.1.2 Physical channel parameters

<u>DPCH Uplink</u>	<u>Midamble</u>	<u>256 chips</u>
	<u>Codes and time slots</u>	<u>SF2 x 1 code x 3 time slots</u>
	<u>Max. Number of data bits/radio frame</u>	<u>6480 bits</u>
	<u>TFCI code word</u>	<u>16 bits</u>
	<u>TPC</u>	<u>2 bits</u>
	<u>Puncturing Limit</u>	<u>0.48</u>

6.10.3.4.1.34.2 Downlink

See 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

See 6.10.3.4.1.24.1.

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

Higher Layer	RAB/Signalling RB	RAB	
RLC	Logical channel type	DTCH	
	RLC mode	AM	
	Payload sizes, bit	640	
	Max data rate, bps	2048000	
	RLC header, bit	16	
MAC	MAC header, bit	0	
	MAC multiplexing	N/A	
Layer 1	TrCH type	DCH	
	TB sizes, bit	656	
	TFS	TF0, bits	0x656
		TF1, bits	1x656
		TF2, bits	2x656
		TF3, bits	4 x656
		TF4, bits	8 x656
		TF5, bits	12x656
		TF6, bits	16x656
		TF7, bits	20x656
		TF8, bits	24x656
		TF9, bits	28x656
		TF10, bits	32x656
		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	64572 (alt. 129132)		
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 6.10.3.4.1.2.2.1.1

6.10.3.4.1.35.2.1.3 TFCS

TFCS size	22 (alt.38)
TFCS	(2048 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0), (TF7, TF0), (TF8, TF0), (TF9, TF0), (TF10, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF1), (TF8, TF1), (TF9, TF1), (TF10, TF1) (alt. TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0), (TF7, TF0), (TF8, TF0), (TF9, TF0), (TF10, TF0), (TF11, TF0), (TF12, TF0), (TF13, TF0), (TF14, TF0), (TF15, TF0), (TF16, TF0), (TF17, TF0), (TF18, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF1), (TF8, TF1), (TF9, TF1), (TF10, TF1), (TF11, TF0), (TF12, TF0), (TF13, TF0), (TF14, TF0), (TF15, TF0), (TF16, TF0), (TF17, TF0), (TF18, TF0))

6.10.3.4.1.35.2.2 Physical channel parameters

DPCH Downlink	<u>Midamble</u>	<u>256 chips</u>
	<u>Codes and time slots</u>	<u>SF1 x 1 code x 12 time slot</u>
	<u>Max. Number of data bits/radio frame</u>	<u>52976 bits</u>
	<u>TFCI code word</u>	<u>16 bits</u>
	<u>Puncturing limit</u>	<u>0,86</u>

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 6.10.3.4.1.28.1.

6.10.3.4.1.36.2 Downlink

See 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 6.10.3.4.1.34.1.

6.10.3.4.1.37.2 Downlink

See 6.10.3.4.1.35.2.

6.10.2.4.1.38 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 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 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 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))

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	0.56

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 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 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 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)

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	0.48

[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 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 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 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 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)

[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 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 6.10.3.4.1.24.1.1.1](#)

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

See 6.10.3.4.1.2.1.1.1

6.10.3.4.1.40.1.1.4 TFCS

<u>TFCS size</u>	<u>30</u>
<u>TFCS</u>	<u>(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)</u>

6.10.3.4.1.40.1.2 Physical channel parameters

<u>DPCCH Uplink</u>	<u>Midamble</u>	<u>512 chips</u>
	<u>Codes and time slots</u>	<u>SF2 x 1 code x 1 time slot</u>
	<u>Max. Number of data bits/radio frame</u>	<u>1808 bits</u>
	<u>TFCI code word</u>	<u>16 bit</u>
	<u>TPC</u>	<u>2 bits</u>
	<u>Puncturing Limit</u>	<u>0.68</u>

6.10.3.4.1.40.2 Downlink

See 6.10.3.4.1.39.2.

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 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 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 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 6.10.3.4.1.2.2.1.1

6.10.3.4.1.41.2.1.4 TFCS

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

6.10.3.4.1.41.2.2 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	2744 bits
	TFCI code word	16 bits
	Puncturing limit	0,56

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 6.10.3.4.1.40.1

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 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 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 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	<p>(RAB subflow#1, RAB subflow#2, RAB subflow#3, 256 kbps RAB, DCCH)=</p> <p>(TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0),</p> <p>(TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0),</p> <p>(TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0),</p> <p>(TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0),</p> <p>(TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0),</p> <p>(TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1),</p> <p>(TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1),</p> <p>(TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1),</p> <p>(TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1),</p> <p>(TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1)</p> <p>(alt. (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0),</p> <p>(TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0),</p> <p>(TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0),</p> <p>(TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0),</p> <p>(TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0),</p> <p>(TF0, TF0, TF0, TF5, TF0), (TF1, TF0, TF0, TF5, TF0), (TF2, TF1, TF1, TF5, TF0),</p> <p>(TF0, TF0, TF0, TF6, TF0), (TF1, TF0, TF0, TF6, TF0), (TF2, TF1, TF1, TF6, TF0),</p> <p>(TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1),</p> <p>(TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1),</p> <p>(TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1),</p> <p>(TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1),</p> <p>(TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1)</p> <p>(TF0, TF0, TF0, TF5, TF1), (TF1, TF0, TF0, TF5, TF1), (TF2, TF1, TF1, TF5, TF1),</p> <p>(TF0, TF0, TF0, TF6, TF1), (TF1, TF0, TF0, TF6, TF1), (TF2, TF1, TF1, TF6, TF1))</p>

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
	Max. Number of data bits/radio frame	5504 bits
	TFCI code word	16 bits
	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 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 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 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 6.10.3.4.1.2.2.1.1

6.10.3.4.1.43.2.1.4 TFCS

TFCS size	36 (alt. 54)
TFCS	<p>(RAB subflow#1, RAB subflow#2, RAB subflow#3, 384 kbps RAB, DCCH)=</p> <p>(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))</p>

6.10.3.4.1.43.2.2 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	6592 bits
	TFCI code word	32 bits
	Puncturing limit	0.48

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 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 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 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)

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	2724 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.56

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 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 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 6.10.3.4.1.2.2.1.1

6.10.3.4.1.44.2.2 Physical channel parameters

DPCH Downlink	Midamble	256 chips
	Codes and time slots	SF1 x 1 code x 12 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 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 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 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)

6.10.3.4.1.45.1.2 Physical channel parameters

DPCH Uplink	Midamble	512 chips
	Codes and time slots	{SF8 x 1 code + SF4 x 1 code} x 1 time slot
	Max. Number of data bits/radio frame	1428 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.60

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 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 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 6.10.3.4.1.2.2.11](#)

[6.10.3.4.1.45.2.1.4](#) TFCS

<u>TFCS size</u>	30
<u>TFCS</u>	(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)

[6.10.3.4.1.45.2.2](#) Physical channel parameters

<u>DPCH Downlink</u>	<u>Midamble</u>	512 chips
	<u>Codes and time slots</u>	SF16 x 6 codes x 1 time slot
	<u>Max. Number of data bits/radio frame</u>	1448 bits
	<u>TFCI code word</u>	16 bits
	<u>Puncturing limit</u>	0,6

[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 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 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 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 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 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 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 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 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 [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 [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 [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 [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, 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 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 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 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)

[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 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 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 6.10.3.4.1.2.2.11](#)

[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)

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

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 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 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)

6.10.3.4.1.50.1.2 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	0.56

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 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 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)

6.10.3.4.1.50.2.2 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

6.10.3.4.1.51 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 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 6.10.3.4.1.24.1.1.1

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

See 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)

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

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 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 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 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)

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

6.10.3.4.1.52 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 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 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 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 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)

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 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 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 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)

[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 time slot} + {SF16 x 1 code + SF4 x 1 code} x 1 time slot
	Max. Number of data bits/radio frame	3154 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.48

[6.10.3.4.1.53.2](#) [Downlink](#)

[See 6.10.3.4.1.52.2.](#)

[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 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 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 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 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 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 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 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 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

6.10.3.4.2 Combinations on PDSCH, SCCPCH, PUSCH and PRACH

6.10.3.4.2.1 Interactive or background / UL: 64 DL: 256 kbps / PS RAB
 + UL: 16.8 DL: 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

<u>Higher Layer</u>	<u>RAB/Signalling RB</u>	<u>RAB</u>	<u>SRB#5</u>	
<u>RLC</u>	<u>Logical channel type</u>	<u>DTCH</u>	<u>SHCCH</u>	
	<u>RLC mode</u>	<u>AM</u>	<u>TM</u>	
	<u>Payload sizes, bit</u>	<u>320</u>	<u>168</u>	
	<u>Max data rate, bps</u>	<u>64000</u>	<u>16800</u>	
	<u>RLC header, bit</u>	<u>16</u>	<u>0</u>	
<u>MAC</u>	<u>MAC header, bit</u>	<u>0</u>	<u>0</u>	
	<u>MAC multiplexing</u>	<u>N/A</u>	<u>N/A</u>	
<u>Layer 1</u>	<u>TrCH type</u>	<u>USCH</u>	<u>USCH</u>	
	<u>TB sizes, bit</u>	<u>336</u>	<u>168</u>	
	<u>TFS</u>	<u>TF0, bits</u>	<u>0x336</u>	<u>0x168</u>
		<u>TF1, bits</u>	<u>1x336</u>	<u>1x168</u>
		<u>TF2, bits</u>	<u>2x336</u>	<u>N/A</u>
		<u>TF3, bits</u>	<u>3x336</u>	<u>N/A</u>
		<u>TF4, bits</u>	<u>4x336</u>	<u>N/A</u>
	<u>TTI, ms</u>	<u>20</u>	<u>10</u>	
	<u>Coding type</u>	<u>TC</u>	<u>CC 1/2</u>	
	<u>CRC, bit</u>	<u>16</u>	<u>16</u>	
	<u>Max number of bits/TTI after channel coding</u>	<u>4236</u>	<u>384</u>	
	<u>Uplink: Max number of bits/radio frame before rate matching</u>	<u>2118</u>	<u>384</u>	
	<u>RM attribute</u>	<u>135-175</u>	<u>180-220</u>	

6.10.3.4.2.1.1.1.2 TFCS for USCH

<u>TFCS size</u>	<u>10</u>
<u>TFCS</u>	<u>(64 kbps RAB, SHCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1)</u>

6.10.3.4.2.1.1.1.3 Transport channel parameters for SRB for CCCH and UL SRBs for DCCH and UL SRB for SHCCH mapped on RACH

<u>Higher layer</u>	<u>RAB/signalling RB</u>	<u>SRB#0</u>	<u>SRB#1</u>	<u>SRB#2</u>	<u>SRB#3</u>	<u>SRB#4</u>	<u>SRB#5</u>
	<u>User of Radio Bearer</u>	<u>RRC</u>	<u>RRC</u>	<u>RRC</u>	<u>NAS DT High prio</u>	<u>NAS DT Low prio</u>	<u>RRC</u>
<u>RLC</u>	<u>Logical channel type</u>	<u>CCCH</u>	<u>DCCH</u>	<u>DCCH</u>	<u>DCCH</u>	<u>DCCH</u>	<u>SHCCH</u>
	<u>RLC mode</u>	<u>TM</u>	<u>UM</u>	<u>AM</u>	<u>AM</u>	<u>AM</u>	<u>TM</u>
	<u>Payload sizes, bit</u>	<u>168</u>	<u>136</u>	<u>128</u>	<u>128</u>	<u>128</u>	<u>168</u>
	<u>Max data rate, bps</u>	<u>16800</u>	<u>13600</u>	<u>12800</u>	<u>12800</u>	<u>12800</u>	<u>16800</u>
	<u>RLC header, bit</u>	<u>0</u>	<u>8</u>	<u>16</u>	<u>16</u>	<u>16</u>	<u>0</u>
<u>MAC</u>	<u>MAC header, bit</u>	<u>2</u>	<u>26</u>	<u>26</u>	<u>26</u>	<u>26</u>	<u>2</u>

	MAC multiplexing	6 logical channel multiplexing					
Layer 1	TrCH type	RACH					
	TB sizes, bit	170	170	170	170	170	170
	TFS	1x170					
	TF0, bits						
	TTI, ms	10					
	Coding type	CC 1/2					
	CRC, bit	16					
Max number of bits/TTI after channel coding	388	388	388	388	388	388	

6.10.3.4.2.1.1.2 Physical channel parameters

PUSCH	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
	TFCl code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.48

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	
	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	336	168	
	TFS	TF0, bits	0x336	0x168
		TF1, bits	1x336	1x168
		TF2, bits	2x336	N/A
		TF3, bits	4x336	N/A
		TF4, bits	8x336	N/A
		TF5, bits	N/A (alt. 12x336)	N/A
		TF6, bits	N/A (alt. 16x336)	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 (alt. 16908)	384	
Downlink: Max number of bits/radio frame before rate matching	8460 (alt. 8454)	384		
RM attribute	135-175	180-220		

6.10.3.4.2.1.2.1.2 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), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1))

6.10.3.4.2.1.2.1.3 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 User of Radio Bearer	SRB#0 RRC	SRB#1 RRC	SRB#2 RRC	SRB#3 NAS DT High prio	SRB#4 NAS DT Low prio	SRB#5 RRC	SRB#6 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 (alt. 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	N/A (alt. 3x171)						
	TTI, ms	10							
	Coding type	CC 1/2							
	CRC, bit	16							
	Max number of bits/TTI after channel coding	764 (alt. 1138)	764 (alt. 1138)	764 (alt. 1138)	764 (alt. 1138)	764 (alt. 1138)	764 (alt. 1138)	764 (alt. 1138)	764 (alt. 1138)

* 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 TFCS for FACH

TFCS size	3 (alt. 4)
TFCS	FACH = TF0, TF1, TF2 (alt. FACH = TF0, TF1, TF2, TF3)

6.10.3.4.2.1.2.2 Physical channel parameters

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

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

6.10.3.4.2.2 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

6.10.3.4.2.2.1 Uplink

See 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	
	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	336	168	
	TFS	TF0, bits	0x336	0x168
		TF1, bits	1x336	1x168
		TF2, bits	2x336	N/A
		TF3, bits	4x336	N/A
		TF4, bits	8x336	N/A
		TF5, bits	12x336	N/A
		TF6, bits	N/A (alt. 16x336)	N/A
		TF7, bits	N/A (alt. 20x336)	N/A
	TF8, bits	N/A (alt. 24x336)	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 (alt. 25356)	384		
Downlink: Max number of bits/radio frame before rate matching	12684 (alt. 12678)	384		
RM attribute	135-175	180-220		

6.10.3.4.2.2.1.2 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), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF0), (TF8, TF0))

6.10.3.4.2.2.1.3 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 6.10.3.4.2.1.2.1.3

6.10.3.4.2.2.1.4 TFCS for FACH

See 6.10.3.4.2.1.2.1.4

6.10.3.4.2.2.2 Physical channel parameters

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

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: 16.8 DL: 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 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	
	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	656	168	
	TFS	TF0, bits	0x656	0x168
		TF1, bits	1x656	1x168
		TF2, bits	2x656	N/A
		TF3, bits	4x656	N/A
		TF4, bits	8x656	N/A
		TF5, bits	12x656	N/A
		TF6, bits	16x656	N/A
		TF7, bits	20x656	N/A
		TF8, bits	24x656	N/A
		TF9, bits	28x656	N/A
		TF10, bits	32x656	N/A
		TF11, bits	N/A (alt. 36x656)	N/A
		TF12, bits	N/A (alt. 40x656)	N/A
		TF13, bits	N/A (alt. 44x656)	N/A
		TF14, bits	N/A (alt. 48x656)	N/A
		TF15, bits	N/A (alt. 52x656)	N/A
		TF16, bits	N/A (alt. 56x656)	N/A
		TF17, bits	N/A (alt. 60x656)	N/A
	TF18, bits	N/A (alt. 64x656)	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 (alt. 129036)	384		
Downlink: Max number of bits/radio frame before rate matching	64524 (alt. 64518)	384		
RM attribute	135-175	180-220		

6.10.3.4.2.3.2.1.2 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), (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, TF1), (TF12, TF1), (TF13, TF1), (TF14, TF1), (TF15, TF1), (TF16, TF1), (TF17, TF1), (TF18, TF1))

6.10.3.4.2.3.2.1.3 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 6.10.3.4.2.1.2.1.3

6.10.3.4.2.3.2.1.4 TFCS for FACH

See 6.10.3.4.2.1.2.1.4

6.10.3.4.2.3.2.2 Physical channel parameters

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

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

6.10.3.4.3 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
+ 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

6.10.3.4.3.1.1 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 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 6.10.3.4.1.2.1.1.1

6.10.3.4.3.1.1.1.3 TFCS for DCH

See 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 6.10.3.4.2.1.1.1.1

6.10.3.4.3.1.1.1.5 TFCS for USCH

See 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
	RLC 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	
	TTI, ms	10	
	Coding type	CC 1/2	
	CRC, bit	16	
	Max number of bits/TTI after channel coding	388	

6.10.3.4.3.1.1.2 Physical channel parameters

Physical channel parameters for uplink DPCH see 6.10.3.4.1.4.1.2

Physical channel parameters for PUSCH see 6.10.3.4.2.1.1.2

Physical channel parameters for PRACH see 6.10.3.4.2.1.1.2

6.10.3.4.3.1.2 Downlink6.10.3.4.3.1.2.1 Transport channel parameters6.10.3.4.3.1.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RABSee 6.10.3.4.1.4.2.1.16.10.3.4.3.1.2.1.2 Transport channel parameters for DL SRBs for DCCHSee 6.10.3.4.1.2.2.1.16.10.3.4.3.1.2.1.3 TFCS for DCHSee 6.10.3.4.1.4.2.1.36.10.3.4.3.1.2.1.4 Transport channel parameters for Interactive or background / DL: 256 kbps / PS RAB and DL SRB for SHCCH mapped on DSCHSee 6.10.3.4.2.1.2.1.16.10.3.4.3.1.2.1.5 TFCS for DSCHSee 6.10.3.4.2.1.2.1.26.10.3.4.3.1.2.1.6 Transport channel parameters for SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

<u>Higher layer</u>	<u>RAB/Signalling RB</u> <u>User of Radio Bearer</u>	<u>SRB#0</u> <u>RRC</u>	<u>SRB#5</u> <u>RRC</u>	<u>SRB#6</u> <u>RRC</u>	
<u>RLC</u>	<u>Logical channel type</u>	<u>CCCH</u>	<u>SHCCH</u>	<u>BCCH</u>	
	<u>RLC mode</u>	<u>UM</u>	<u>UM</u>	<u>TM</u>	
	<u>Payload sizes, bit</u>	<u>160</u>	<u>160</u>	<u>168</u>	
	<u>Max data rate, bps</u>	<u>32000 (alt. 48000)</u>	<u>32000 (alt. 48000)</u>	<u>33600 (alt. 50400)</u>	
	<u>RLC header, bit</u>	<u>8</u>	<u>8</u>	<u>0</u>	
<u>MAC</u>	<u>MAC header, bit</u>	<u>3</u>			
	<u>MAC multiplexing</u>	<u>3 logical channel multiplexing</u>			
<u>Layer 1</u>	<u>TrCH type</u>	<u>FACH</u>			
	<u>TB sizes, bit</u>	<u>171</u>			
	<u>TFS*1</u>	<u>TF0, bits</u>	<u>0x171</u>		
		<u>TF1, bits</u>	<u>1x171</u>		
	<u>TTI, ms</u>	<u>10</u>			
	<u>Coding type</u>	<u>CC 1/2</u>			
	<u>CRC, bit</u>	<u>16</u>			
<u>Max number of bits/TTI after channel coding</u>	<u>390</u>				

6.10.3.4.3.1.2.1.7 TFCS for FACH

<u>TFCS size</u>	<u>2</u>
<u>TFCS</u>	<u>FACH = TF0, TF1</u>

6.10.3.4.3.1.2.2 Physical channel parametersPhysical channel parameters for downlink DPCH see 6.10.3.4.1.4.2.2

<u>PDSCH</u>	<u>Midamble</u>	<u>512 chips</u>
	<u>Codes and time slots</u>	<u>SF16 x 5 codes x 1 time slot</u>
	<u>Max. Number of data bits/radio frame</u>	<u>1204 bits</u>
	<u>TFCI code word</u>	<u>16 bits</u>
	<u>Puncturing Limit</u>	<u>0.48</u>

Physical channel parameters for SCCPCH see 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
+ 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](#)

[6.10.3.4.3.2.1](#) [Uplink](#)

[See 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 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 6.10.3.4.1.2.2.1.1](#)

[6.10.3.4.3.2.2.1.3](#) [TFCS for DCH](#)

[See 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 6.10.3.4.2.2.2.1.1](#)

[6.10.3.4.3.2.2.1.5](#) [TFCS for DSCH](#)

[See 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 6.10.3.4.3.1.2.1.6](#)

[6.10.3.4.3.2.2.1.7](#) [TFCS for FACH](#)

[See 6.10.3.4.3.1.2.1.7](#)

[6.10.3.4.3.2.2.2](#) [Physical channel parameters](#)

[Physical channel parameters for downlink DPCH see 6.10.3.4.1.4.2.2](#)

[Physical channel parameters for PDSCH see 6.10.3.4.2.2.2.2](#)

[Physical channel parameters for SCCPCH see 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
+ 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](#)

[6.10.3.4.3.3.1](#) [Uplink](#)

[See 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 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 6.10.3.4.1.2.2.1.1](#)

[6.10.3.4.3.3.2.1.3](#) [TFCS for DCH](#)

[See 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 6.10.3.4.2.3.2.1.1](#)

[6.10.3.4.3.3.2.1.5](#) [TFCS for DSCH](#)

[See 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 6.10.3.4.3.1.2.1.6](#)

[6.10.3.4.3.3.2.1.7](#) [TFCS for FACH](#)

[See 6.10.3.4.3.1.2.1.7](#)

[6.10.3.4.3.3.2.2](#) [Physical channel parameters](#)

[Physical channel parameters for downlink DPCH see 6.10.3.4.1.4.2.2](#)

[Physical channel parameters for PDSCH see 6.10.3.4.2.3.2.2](#)

[Physical channel parameters for SCCPCH see 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 (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, bts	0x240 (alt. 0x80)
		TF1, bits	1x240 (alt. 1x80)
	TTI, ms	10 ¹	
	Coding type	CC 1/2	
	CRC, bit	16	
	Max number of bits/TTI before rate matching	528 (alt. 208)	
	RM attribute	210-250	

*1: This parameter will be changed to 20 ms.

6.10.3.4.4.1.1.2 TFCS

TFCS size	2
TFCS	SRBs for PCCH = TF0, TF1

6.10.3.4.2.1.2 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
	TFCl code word	16 bits
	Puncturing limit	0,88

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

6.10.3.4.3.2.1.1 Transport channel parameters for Interactive/Background 32 kbps PS RAB

<u>Higher layer</u>	<u>RAB/signalling RB</u>	<u>RAB</u>	
	<u>User of Radio Bearer</u>	<u>Interactive/ Background RAB</u>	
<u>RLC</u>	<u>Logical channel type</u>	<u>DTCH</u>	
	<u>RLC mode</u>	<u>AM</u>	
	<u>Payload sizes, bit</u>	<u>320</u>	
	<u>Max data rate, bps</u>	<u>32000</u>	
	<u>RLC header, bit</u>	<u>16</u>	
<u>MAC</u>	<u>MAC header, bit</u>	<u>27</u>	
	<u>MAC multiplexing</u>	<u>N/A</u>	
<u>Layer 1</u>	<u>TrCH type</u>	<u>FACH</u>	
	<u>TB sizes, bit</u>	<u>363</u>	
	<u>TFS</u>	<u>TF0, bits</u>	<u>0 x363</u>
		<u>TF1, bits</u>	<u>1x363</u>
	<u>TTI, ms</u>	<u>10</u>	
	<u>Coding type</u>	<u>TC</u>	
	<u>CRC, bit</u>	<u>16</u>	
	<u>Max number of bits/TTI before rate matching</u>	<u>1149</u>	
	<u>RM attribute</u>	<u>110-150</u>	

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

<u>Higher layer</u>	<u>RAB/signalling RB</u>	<u>SRB#1</u>	<u>SRB#2</u>	<u>SRB#3</u>	<u>SRB#4</u>	<u>SRB#5</u>	<u>SRB#6</u>	
	<u>User of Radio Bearer</u>	<u>RRC</u>	<u>RRC</u>	<u>RRC</u>	<u>NAS DT High prio</u>	<u>NAS DT Low prio</u>	<u>RRC</u>	
<u>RLC</u>	<u>Logical channel type</u>	<u>CCCH</u>	<u>DCCH</u>	<u>DCCH</u>	<u>DCCH</u>	<u>DCCH</u>	<u>BCCH</u>	
	<u>RLC mode</u>	<u>UM</u>	<u>UM</u>	<u>AM</u>	<u>AM</u>	<u>AM</u>	<u>TM</u>	
	<u>Payload sizes, bit</u>	<u>160</u>	<u>136 or 120</u>	<u>128</u>	<u>128</u>	<u>128</u>	<u>168</u>	
	<u>Max data rate, bps</u>	<u>32000 (alt. 48000)</u>	<u>27200 or 2400 (alt. 40800 or 36000)</u>	<u>25600 (alt. 38400)</u>	<u>25600 (alt. 38400)</u>	<u>25600 (alt. 38400)</u>	<u>33600 (alt. 50400)</u>	
	<u>RLC header, bit</u>	<u>8</u>	<u>8</u>	<u>16</u>	<u>16</u>	<u>16</u>	<u>0</u>	
<u>MAC</u>	<u>MAC header, bit</u>	<u>3</u>	<u>27 or 43</u>	<u>27</u>	<u>27</u>	<u>27</u>	<u>3</u>	
	<u>MAC multiplexing</u>	<u>6 logical channel multiplexing</u>						
<u>Layer 1</u>	<u>TrCH type</u>	<u>FACH</u>						
	<u>TB sizes, bit</u>	<u>171</u>						
	<u>TFS</u>	<u>TF0, bits</u>	<u>0x171</u>					
		<u>TF1, bits</u>	<u>1x171</u>					
		<u>TF2, bits</u>	<u>2x171</u>					
		<u>TF3, bits</u>	<u>N/A (alt. 3x171)</u>					
	<u>TTI, ms</u>	<u>10</u>						
	<u>Coding type</u>	<u>CC 1/2</u>						
	<u>CRC, bit</u>	<u>16</u>						
	<u>Max number of bits/TTI before rate matching</u>	<u>764 (alt.1154)</u>						
<u>RM attribute</u>	<u>200-240</u>							

* 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	4, 5, or 6
TFCS	(32kbps RAB, SRBs for CCCH/DCCH/BCCH) = (TF0, TF0), (TF0, TF1), (TF0, TF2), [TF0, TF3]*, (TF1, TF0), [TF1, TF1]*

* These TFCs are available only if SCCPCH can be allocated bigger Tx power than required Tx power for TFC of (TF0, TF2).

6.10.3.4.4.2.2 Physical channel parameters

(burst type 1):

S-CCPCH	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	0.6

(burst type 2):

S-CCPCH	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	0.68

6.10.3.4.4.3 Interactive/Background 32 kbps RAB + SRB for PCCH + SRB for CCCH + SRB for DCCH + SRB for BCCH6.10.3.4.4.3.1 Transport channel parameters6.10.3.4.4.3.1.1 Transport channel parameters of SRB for Interactive/Background 32 kbps RAB

See 6.10.3.4.4.2.1

6.10.3.4.4.3.1.2 Transport channel parameters of SRB for PCCH

See 6.10.3.4.4.1.1

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

See 6.10.3.4.4.2.1.2

6.10.3.4.4.3.1.4 TFCS

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

* These TFCs are available only if SCCPCH can be allocated bigger Tx power than required Tx power for TFC of (TF0, TF0, TF2).

6.10.3.4.4.3.2 Physical channel parameters

(burst type 1):

S-CCPCH	Midamble	512 chips
	Codes and time slots	SF16 x 5 codes x 1 time slot
	Max. Number of data bits/radio frame	1204 bits
	TFCl code word	16 bits
	Puncturing limit	0,6

(burst type 2):

S-CCPCH	Midamble	256 chips
	Codes and time slots	SF16 x 5 codes x 1 time slot
	Max. Number of data bits/radio frame	1364 bits
	TFCl code word	16 bits
	Puncturing limit	0,68

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#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				
	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	194 (alt. 388)	194 (alt. 388)	194 (alt. 388)	194 (alt. 388)	194 (alt. 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

<u>PRACH</u>	<u>Midamble</u>	<u>512 chips</u>
	<u>Codes and time slots</u>	<u>SF8 (alt. SF16) x 1 code x 1 time slot</u>
	<u>Max. Number of data bits/radio frame</u>	<u>488 bits (alt. 244 bits)</u>
	<u>Puncturing Limit</u>	<u>1.0 (alt. 0.75)</u>

CHANGE REQUEST

⌘ **34.108 CR 042** ⌘ rev **-** ⌘ Current version: **3.3.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Adding section for radio bearer configurations intended for functional testing		
Source:	⌘ Ericsson		
Work item code: ⌘	Date: ⌘ 2001-05-07		
Category: ⌘ D	Release: ⌘ R99		
	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <p><i>Use <u>one</u> of the following categories:</i></p> <p>F (essential correction)</p> <p>A (corresponds to a correction in an earlier release)</p> <p>B (Addition of feature),</p> <p>C (Functional modification of feature)</p> <p>D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p> </td> <td style="width: 50%; vertical-align: top;"> <p><i>Use <u>one</u> of the following releases:</i></p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>REL-4 (Release 4)</p> <p>REL-5 (Release 5)</p> </td> </tr> </table>	<p><i>Use <u>one</u> of the following categories:</i></p> <p>F (essential correction)</p> <p>A (corresponds to a correction in an earlier release)</p> <p>B (Addition of feature),</p> <p>C (Functional modification of feature)</p> <p>D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>	<p><i>Use <u>one</u> of the following releases:</i></p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>REL-4 (Release 4)</p> <p>REL-5 (Release 5)</p>
<p><i>Use <u>one</u> of the following categories:</i></p> <p>F (essential correction)</p> <p>A (corresponds to a correction in an earlier release)</p> <p>B (Addition of feature),</p> <p>C (Functional modification of feature)</p> <p>D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>	<p><i>Use <u>one</u> of the following releases:</i></p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>REL-4 (Release 4)</p> <p>REL-5 (Release 5)</p>		

Reason for change: ⌘	⌘ At T1/SIG#16 meeting in Singapore a decision was made to clarify that the current clause in TS 34.108 defining the reference radio bearer configurations are intended for interoperability testing. It was also agreed that a new section should be created where the common radio bearer configurations intended for functional testing are defined.
Summary of change: ⌘	<ul style="list-style-type: none"> Modified title of clause 6.10 to "Reference Radio Bearer configurations used in Radio Bearer interoperability testing" Added descriptive text describing the purpose of reference radio bearer configurations to clause 6.10. Added new clause 6.11 for Common Radio Bearer configurations for other test purposesfunctional testing
Consequences if not approved: ⌘	⌘ No section available where common radio bearer configuration for functional tests can be defined.

Clauses affected: ⌘	⌘ 6.10 + new clause 6.11	
Other specs affected: ⌘	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘
Other comments: ⌘	⌘	

How to create CRs using this form:

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

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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.

<Start of modified section>

6.10 Reference Radio Bearer configurations used in Radio Bearer interoperability testing

The reference radio bearer configurations are representative configurations that will be used in real network implementations. 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 [1] TS 34.123-1. 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.

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.

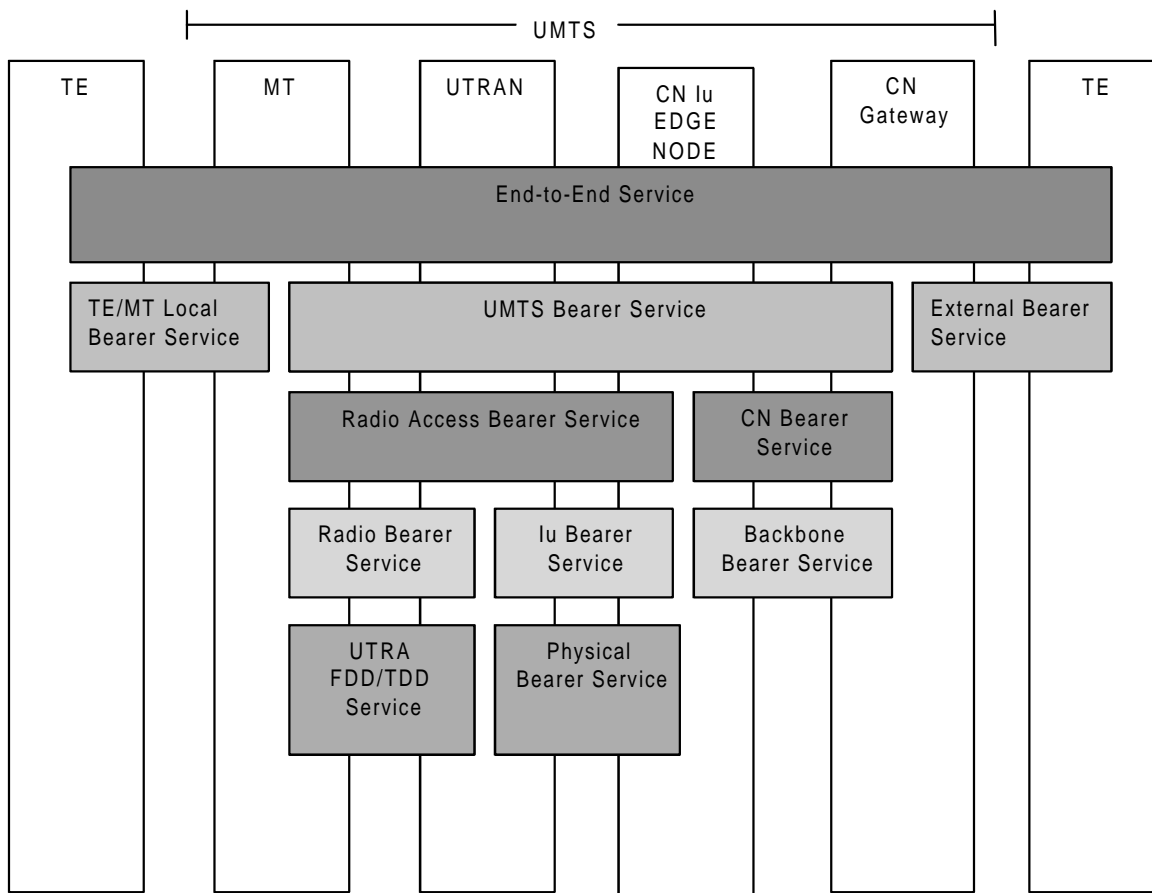


Figure 6.10.1.1: UMTS QoS Architecture

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:

- 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.

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

<End of modified section>

<Start of modified section>

6.11 Common Radio Bearer configurations for other test purposes

The common radio bearer configurations are used for functional testing of various UE functions. Only common configurations that are used by multiple test cases and are not covered by the reference radio bearer configurations in clause 6.10 are specified in the present clause. Radio bearer configurations only used by a single test case are specified in the actual test case itself.

<End of modified section>

CHANGE REQUEST

⌘ **34.108 CR 043** ⌘ rev **-** ⌘ Current version: **3.3.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Update of list of abbreviations ⌘		
Source:	⌘ Ericsson ⌘		
Work item code:	⌘	Date:	⌘ 2001-05-07 ⌘
Category:	⌘ D ⌘	Release:	⌘ R99 ⌘
<p>Use <u>one</u> of the following categories:</p> <p>F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		<p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)</p>	

Reason for change:	⌘ When TSG T3 reviewed the CR regarding authentication test algorithm they identified that SS (System Simulator) was missing in the list of abbreviations. See LS from T3 in T1-010121 (T3-010246). ⌘		
Summary of change:	⌘ Adding SS to the list of abbreviations ⌘		
Consequences if not approved:	⌘		

Clauses affected:	⌘ 3.3 ⌘		
Other specs affected:	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> 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.

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in [9], [10] and the following apply:

Maximum average power	The average transmitter output power obtained over any specified time interval, including periods with no transmission, when the transmit time slots are at the maximum power setting.
-----------------------	--

3.2 Symbols

For the purposes of the present document, the following symbols apply:

Symbol	Definition
--------	------------

3.3 Abbreviations

For the purposes of the present document, the abbreviations given in [9], [10] and the following apply:

AFC	Automatic Frequency Control
ATT	Attenuator
HYB	Hybrid
I_{oc}	The power spectral density of a band limited white noise source (simulating interference from other cells) as measured at the UE antenna connector.
OBW	Occupied Bandwidth
OCNS	Orthogonal Channel Noise Simulator, a mechanism used to simulate the users or control signals on the other orthogonal channels of a downlink.
RRC	Radio Resource Control (for sub-Layer of layer 3) but also Root-Raised Cosine (for Filter shape)
AM	Acknowledgement mode
BCCH	Broadcast Control Channel
CBS	Cell Broadcast Service
CC	Convolutional coding
CCCH	Common Control Channel
CCTrCH	Coded Composite Transport Channel
CS	Circuit switching
DCCH	Dedicated Control Channel
DL	Downlink
DPCH	Dedicated Physical Channel
DT	Direct transfer
DTCH	Dedicated Traffic Channel
FTM	File tunnelling mode

NAS	Non-access stratum
PRACH	Physical Random Access Channel
PS	Packet switching
RAB	Radio Access Bearer
RB	Radio Bearer
SCCPCH	Secondary Common Control Physical Channel
SMS	Short Message Service
SRB	Signalling RB
<u>SS</u>	<u>System Simulator</u>
SSD	Source statistics descriptor
TC	Turbo coding
TM	Transparent mode
UL	Uplink
UM	Unacknowledgement mode

3GPP TSG-T1 Meeting #11
Melbourne, Australia, 17 – 18 May 2001

Tdoc T1-010212

3GPP TSG-T1/SIG Meeting #17
Melbourne, Australia, 14-16 May 2001

T1S-010097r2

CR-Form-v3	
CHANGE REQUEST	
⌘	34.108 CR 044
⌘	rev
⌘	Current version: 3.3.0

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Updates to clause 6.1 and 9 of TS34.108 v3.3.0		
Source:	⌘ Matsushita Communication Industries (MCI)		
Work item code:	⌘	Date:	⌘ 14 May 2001
Category:	⌘ F	Release:	⌘ R99
<i>Use <u>one</u> of the following categories:</i>		<i>Use <u>one</u> of the following releases:</i>	
F (essential correction)		2 (GSM Phase 2)	
A (corresponds to a correction in an earlier release)		R96 (Release 1996)	
B (Addition of feature),		R97 (Release 1997)	
C (Functional modification of feature)		R98 (Release 1998)	
D (Editorial modification)		R99 (Release 1999)	
Detailed explanations of the above categories can be found in 3GPP TR 21.900.		REL-4 (Release 4)	
		REL-5 (Release 5)	

Reason for change:	⌘ To update the clauses according to RAN2 change requests. To reduce duplication of messages in clause 9. To provide references for multiple cells testing.
Summary of change:	⌘ Technical corrections, <ol style="list-style-type: none">1. RADIO BEARER SETUP and RADIO BEARER RELEASE messages has been removed from clause 9 and merged into Annex A of TS34.123-12. This is proposed that in connected mode testing, AWGN and OCNS is not required, hence MCI has create a table for multiple cells testing in connected mode. In the table, only CPICH RSCP is provided and Ec/No is provided. This is to avoid the use of noise source in the SS.3. In SIB type 3 and 4, IE "Cell_selection_and_reselection_quality_measure" were change to "CPICH RSCP", so that cell selection and re-selection criteria is based on CPICH RSCP. Corrections due to RAN2 #19 change requests,

1. In CR689r1, the structure of IE “Downlink DPCH info common for all RL” has been change, hence messages that contain this IE has been revised.
2. In CR704r2, SIB type 18 has been introduced.
3. In CR712r1, minor changes in the structure of the message content of IE “ASC setting” and IE “PRACH partitioning”.
4. In CR715, the IE “DL Transport channel identity” has been split into IE “DL DCH Transport channel identity” and IE “DL DSCH Transport channel identity”.
5. In CR723r1, the concept of PU has been replaced by PDU. All text containing PU has been replace with PDU.
6. In CR724, structure of some of the downlink messages has been revised. In some uplink messages, IE “START list” has been included.
7. In CR-718, the range of IE “PC Preamble” found in “Uplink DPCH power control info IE was modified. At the same time, IE “SRB delay” was added to the same IE. Specific message contents for the affected clauses under 8.4.1.X are updated: “PC Preamble” is set to 1 frame (closest to the previous setting of 8 slots) and “SRB delay” is set to 7 frames (most relaxed required for COMPLETE message to be received by SS).
8. In CR-702, a series of changes are introduced:
 - (a) Reporting of cell identity was proposed to be disallowed in Release 99. Therefore, the “Cell identity” IE in all uplink MEASUREMENT REPORT messages shall be absent.
 - (b) IE “Read SFN indicator” is re-positioned within IE “Cell info”.
 - (c) IE “Cell for measurement” is added to IEs “Intra-frequency cell info list”, “Inter-frequency cell info list” or “Inter-RAT cell info list”. Affected specific message contents in SIB 11 and 12 are updated.
9. In CR675r1, IE “Power offset $P_{\text{Pilot-DPCH}}$ ” has been added to IE “Downlink DPCH info for each RL”. This parameter is currently set to TBD.

Consequences if not approved: ⌘ Test contents will not justified against the current TS25.331 v3.6.0.

Clauses affected:	⌘	6.1, 9	
Other specs affected:	⌘	<input type="checkbox"/> Other core specifications <input checked="" type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘ TS 34.108 version 3.3.0
Other comments:	⌘		

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6 Reference System Configurations

This clause defines a number of Reference System Configurations which can be used for different tests.

6.1 Simulated network environments

The UE will eventually have to operate in either single mode networks (FDD or TDD) and dual mode networks (FDD+TDD).

It is <ffs> whether a reference environment needs to be defined for multi-mode networks (eg: the environment could be created by combining two appropriate reference environments from the single mode cases).

The following tables list the default parameters for 1 to 8 cell environments for testing.

<Start of modification>

Contents of System Information Block type_1 (supported PLMN type is GSM-MAP)

- CN common GSM-MAP NAS system information	
- GSM-MAP NAS system information	Contains the PLMN Identity and Location Area Code
- MCC digit	Set to the same Mobile Country Code stored in test USIM card.
- MNC digit	Set to the same Mobile Network Code stored in test USIM card.
- Location area code	0001H
- CN domain system information	
- CN domain identity	PS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	T.B.D
- CN domain specific DRX cycle length coefficient	7
- CN domain identity	CS
- CHOICE CN Type	GSM-MAP
- CN domain specific NAS system information	
- GSM-MAP NAS system information	T.B.D
- CN domain specific DRX cycle length coefficient	7
- UE Timers and constants in idle mode	
-T300	400 milliseconds
-N300	7
-T312	10 seconds
- N312	200
- UE Timers and constants in connected mode	
- T301	2000 milliseconds
- N301	2
- T302	4000 milliseconds
- N302	3
- T304	1000 milliseconds
- N304	3
- T305	60 minutes
- T307	50 seconds
- T308	320 milliseconds
- T309	8 seconds
- T310	320 milliseconds
- N310	5
- T311	500 milliseconds
- T312	5 seconds
- N312	200
- T313	10 seconds
- N313	20
- T314	20 seconds
- T315	30 seconds
- N315	200
- T316	50 seconds
- T317	1800 seconds

Contents of System Information Block type_2

- URA identity list	<i>Only 1 URA identity broadcasted</i>
- URA identity	0000 0000 0000 0001B

Contents of System Information Block type_3 (FDD)

- SIB4 indicator	TRUE
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping info	
- Mapping List	
- RAT	UTRA FDD
- Mapping Function Parameter List	1
- Function type	Linear
- Map_parameter_1	1
- Map_parameter_2	1
- Upper_limit	1
- Cell selection_and_reselection_quality_- measure	CPICH Ec/N0
- CHOICE mode	FDD
- Sintrasearch	16 dB
- Sintersearch	16 dB
- SsearchHCS	10 dB
- RAT List	For conformance testing in Japan, this IE is omitted. For conformance testing in European countries, this IE is present with the following values.
- RAT identifier	GSM
- Ssearch,RAT	-105 dB
- SHCS,RAT	Not Present
- Slimit,SsearchRAT	Not Present
- Qhyst1s	0 dB
- Qhyst2s	0 dB
- Treselections	0 seconds
- HCS Serving cell information	
- HCS_PRIO	0
- QHCS	0
- TCR _{MAX}	Not used
- NCR	Not Present
- TC _{MAX} Hyst	Not Present
- Maximum allowed UL TX power	33dBm
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Cell Access Restriction	
- Cell barred	Not barred
- Cell Reserved for operator use	Not reserved
- Cell Reserved for SoLSA exclusive use	Not reserved
- Access Class Barred0	Not barred
- Access Class Barred1	Not barred
- Access Class Barred2	Not barred
- Access Class Barred3	Not barred
- Access Class Barred4	Not barred
- Access Class Barred5	Not barred
- Access Class Barred6	Not barred
- Access Class Barred7	Not barred
- Access Class Barred8	Not barred
- Access Class Barred9	Not barred
- Access Class Barred10	Not barred
- Access Class Barred11	Not barred
- Access Class Barred12	Not barred
- Access Class Barred13	Not barred
- Access Class Barred14	Not barred
- Access Class Barred15	Not barred

<Next modification>

Contents of System Information Block type_4 in connected mode (FDD)

- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping Info	
- Mapping List	
- RAT	UTRA FDD
- Mapping Function Parameter List	
- Function type	Linear
- Map_parameter_1	1
- Map_parameter_2	1
- Upper_limit	1
- Cell_selection_and_reselection_quality_measure	CPICH RSCP _{E_c/N₀}
- CHOICE mode	FDD
- Sintrasearch	16 dB
- Sintersearch	16 dB
- SsearchHCS	10 dB
- RAT List	For conformance testing in Japan, this IE is omitted. For conformance testing in European countries, this IE is present with the following values.
- RAT identifier	GSM
- Ssearch,RAT	-105 dB
- SHCS,RAT	Not Present
- Slimit,SsearchRAT	Not Present
- Qhyst1s	0 dB
- Qhyst2s	0 dB
- Treselections	0 seconds
- HCS Serving cell information	
- HCS_PRIO	0
- QHCS	0
- TCRMAX	Not used
- NCR	Not Present
- TCMAXHyst	Not Present
- Maximum allowed UL TX power	33dBm
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Cell Access Restriction	
- Cell barred	Not barred
- Access Class Barred	Not barred
- Cell Reserved for operator use	Not reserved
- Cell Reserved for SoLSA exclusive use	Not reserved
- Access Class Barred0	Not barred
- Access Class Barred1	Not barred
- Access Class Barred2	Not barred
- Access Class Barred3	Not barred
- Access Class Barred4	Not barred
- Access Class Barred5	Not barred
- Access Class Barred6	Not barred
- Access Class Barred7	Not barred
- Access Class Barred8	Not barred
- Access Class Barred9	Not barred
- Access Class Barred10	Not barred
- Access Class Barred11	Not barred
- Access Class Barred12	Not barred
- Access Class Barred13	Not barred
- Access Class Barred14	Not barred
- Access Class Barred15	Not barred

<Next modification>

Contents of System Information Block type_5 (FDD)

- SIB6 indicator	TRUE
- PICH Power offset	-5 dB
- CHOICE Mode	FDD
- AICH Power offset	0dB
- Primary CCPCH info	
- TX Diversity indicator	FALSE
- PRACH system information list	
- PRACH system information	
- PRACH info	
- CHOICE mode	FDD
- Available Signature	'0000 0000 1111 1111'B
- Available SF	Reference to clause 6.10 Parameter Set
- Preamble scrambling code number	0
- Puncturing Limit	Reference to clause 6.10 Parameter Set
- Available Sub Channel number	'1111 1111 1111'B
- Transport Channel Identity	15
- RACH TFS	
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	(This IE is repeated for TFI number)
- RLC size	Reference to clause 6.10 Parameter Set
- Number of TB and TTI List	Reference to clause 6.10 Parameter Set
- Number of Transport blocks	Reference to clause 6.10 Parameter Set
- CHOICE Mode	FDD
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	
- Transmission time interval	Reference to clause 6.10 Parameter Set
- Type of channel coding	Reference to clause 6.10 Parameter Set
- Coding Rate	Reference to clause 6.10 Parameter Set
- Rate matching attribute	Reference to clause 6.10 Parameter Set
- CRC size	Reference to clause 6.10 Parameter Set
- RACH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information	
- CHOICE TFCS representation	Addition
- TFCS addition information	
- CHOICE CTFC Size	Number of bits used must be enough to cover all combinations of CTFC from clause 6.10. Refer to clause 6.10 Parameter Set
- CTFC information	
- Power offset information	
- CHOICE Gain Factors	Signalled Gain Factor
- Gain factor βc	0
- Gain factor βd	0
- Reference TFC ID	Not Present
- Power offset Pp-m	0dB
- PRACH partitioning	
- Access Service Class	
- ASC Settings	
- CHOICE mode	FDD
- Available signature Start Index	0 (ASC#0)
- Available signature End Index	7 (ASC#0)
- Assigned Sub-channel Number	'1111'B
- ASC Setting	
- CHOICE mode	FDD
- Available signature Start Index	0 (ASC#1)
- Available signature End Index	7 (ASC#1)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#2)
- Available signature End Index	7 (ASC#2)

- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#3)
- Available signature End Index	7 (ASC#3)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#4)
- Available signature End Index	7 (ASC#4)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#5)
- Available signature End Index	7 (ASC#5)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#6)
- Available signature End Index	7 (ASC#6)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#7)
- Available signature End Index	7 (ASC#7)
- Assigned Sub-channel Number	'1111'B
- Persistence scaling factor	
- Persistence scaling factor	0.9 (for ASC#2)
- Persistence scaling factor	0.9 (for ASC#3)
- Persistence scaling factor	0.9 (for ASC#4)
- Persistence scaling factor	0.9 (for ASC#5)
- Persistence scaling factor	0.9 (for ASC#6)
- Persistence scaling factor	0.9 (for ASC#7)
- AC-to-ASC mapping table	
- AC-to-ASC mapping	6 (AC0-9)
- AC-to-ASC mapping	5 (AC10)
- AC-to-ASC mapping	4 (AC11)
- AC-to-ASC mapping	3 (AC12)
- AC-to-ASC mapping	2 (AC13)
- AC-to-ASC mapping	1 (AC14)
- AC-to-ASC mapping	0 (AC15)
- Primary CPICH DL TX power	Reference to clause 6.10 Parameter Set
- Constant value	Reference to clause 6.10 Parameter Set
- PRACH power offset	
- Power Ramp Step	3dB
- Preamble Retrans Max	2
- RACH transmission parameters	
- Mmax	2
- NB01min	3 slot
- NB01max	10 slot
- AICH info	
- Channelisation code	SF-1(SF is reference to clause 6.10 Parameter Set)
- STTD indicator	FALSE
- AICH transmission timing	0
- Secondary CCPCH system info	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	Not Present
- STTD indicator	FALSE
- Spreading factor	Reference to clause 6.10 Parameter Set
- Code number	SF-1(SF is reference to clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible position	Flexible
- Timing offset	0
- TFCS	(This IE is repeated for TFC number for PCH and FACH.)
- Normal	
- TFCI Field 1 information	
- CHOICE TFCS representation	Addition
- TFCS addition information	
- CHOICE CTFC Size	Number of bits used must be enough to cover all

<ul style="list-style-type: none"> - CTFC information - Power offset information - FACH/PCH information - Transport Channel Identity - TFS - CHOICE Transport channel type - Dynamic Transport format information - RLC Size - Number of TB and TTI List - Number of Transport blocks - CHOICE Mode - CHOICE Logical Channel List - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - Transport Channel Identity - TFS - CHOICE Transport channel type - Dynamic Transport format information - RLC Size - Number of TB and TTI List - Number of Transport blocks - CHOICE Mode - CHOICE Logical Channel List - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - CTCH indicator - PICH info - Channelisation code - Number of PI per frame - STTD indicator - CBS DRX Level 1 information 	<p>combinations of CTFC from clause 6.10. Refer to clause 6.10 Parameter Set Not Present</p> <p>12 (for PCH) (PCH) Common transport channels (This IE is repeated for TFI number.) Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set FDD ALL</p> <p>Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set 13 (for FACH) (FACH) Common transport channels (This IE is repeated for TFI number.) Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set FDD ALL</p> <p>Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set FALSE</p> <p>SF-1(SF is reference to clause 6.10 Parameter Set) 18 FALSE Not Present</p>
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<Next modification>

Contents of System Information Block type_6 in connected mode (FDD)

<ul style="list-style-type: none"> - PICH power offset - CHOICE Mode - AICH power offset - CSICH Power offset - Primary CCPCH info - TX Diversity indicator - PRACH system information list - PRACH system information - PRACH info - CHOICE mode - Available Signature - Available SF - Preamble scrambling code number - Puncturing Limit - Available Sub Channel number - Transport Channel Identity - RACH TFS 	<p>-5 dB FDD 0 dB Not Present</p> <p>FALSE</p> <p>FDD '0000 0000 1111 1111'B Reference to clause 6.10 Parameter Set 0 Reference to clause 6.10 Parameter Set '1111 1111 1111'B 15</p>
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- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	(This IE is repeated for TFI number)
- RLC size	Reference to clause 6.10 Parameter Set
- Number of TB and TTI List	Reference to clause 6.10 Parameter Set
- Number of Transport blocks	Reference to clause 6.10 Parameter Set
- CHOICE Mode	FDD
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	Reference to clause 6.10 Parameter Set
- Transmission time interval	Reference to clause 6.10 Parameter Set
- Type of channel coding	Reference to clause 6.10 Parameter Set
- Coding Rate	Reference to clause 6.10 Parameter Set
- Rate matching attribute	Reference to clause 6.10 Parameter Set
- CRC size	Reference to clause 6.10 Parameter Set
- RACH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information	Addition
- CHOICE TFCS representation	
- TFCS addition information	Number of bits used must be enough to cover all combinations of CTFC from clause 6.10. Refer to clause 6.10 Parameter Set
- CHOICE CTFC Size	
- CTFC information	Signalled Gain Factor
- Power offset information	0
- CHOICE Gain Factors	0
- Gain factor β_c	Not Present
- Gain factor β_d	0dB
- Reference TFC ID	
- Power offset Pp-m	
- PRACH partitioning	
- Access Service Class	
- ASC Settings	
- CHOICE mode	<u>FDD</u>
- Available signature Start Index	0 (ASC#0)
- Available signature End Index	7 (ASC#0)
- Assigned Sub-channel Number	'1111'B
- ASC Setting	
- CHOICE mode	<u>FDD</u>
- Available signature Start Index	0 (ASC#1)
- Available signature End Index	7 (ASC#1)
- Assigned Sub-channel Number	'1111'B
- ASC Setting	
- CHOICE mode	<u>FDD</u>
- Available signature Start Index	0 (ASC#2)
- Available signature End Index	7 (ASC#2)
- Assigned Sub-channel Number	'1111'B
- ASC Setting	
- CHOICE mode	<u>FDD</u>
- Available signature Start Index	0 (ASC#3)
- Available signature End Index	7 (ASC#3)
- Assigned Sub-channel Number	'1111'B
- ASC Setting	
- CHOICE mode	<u>FDD</u>
- Available signature Start Index	0 (ASC#4)
- Available signature End Index	7 (ASC#4)
- Assigned Sub-channel Number	'1111'B
- ASC Setting	
- CHOICE mode	<u>FDD</u>
- Available signature Start Index	0 (ASC#5)
- Available signature End Index	7 (ASC#5)
- Assigned Sub-channel Number	'1111'B
- ASC Setting	
- CHOICE mode	<u>FDD</u>
- Available signature Start Index	0 (ASC#6)

- Available signature End Index	7 (ASC#6)
- Assigned Sub-channel Number	'1111'B
- <u>ASC Setting</u>	
- <u>CHOICE mode</u>	<u>FDD</u>
- Available signature Start Index	0 (ASC#7)
- Available signature End Index	7 (ASC#7)
- Assigned Sub-channel Number	'1111'B
- Persistence scaling factor	
- Persistence scaling factor	0.9 (for ASC#2)
- Persistence scaling factor	0.9 (for ASC#3)
- Persistence scaling factor	0.9 (for ASC#4)
- Persistence scaling factor	0.9 (for ASC#5)
- Persistence scaling factor	0.9 (for ASC#6)
- Persistence scaling factor	0.9 (for ASC#7)
- AC-to-ASC mapping	Not Present
- Primary CPICH DL TX power	Reference to clause 6.10 Parameter Set
- Constant value	Reference to clause 6.10 Parameter Set
- PRACH power offset	
- Power Ramp Step	3dB
- Preamble Retrans Max	2
- RACH transmission parameters	
- Mmax	2
- NB01min	3 slot
- NB01max	10 slot
- AICH info	
- Channelisation code	SF-1(SF is reference to clause 6.10 Parameter Set)
- STTD indicator	FALSE
- AICH transmission timing	0
- Secondary CCPCH system info	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	Not Present
- STTD indicator	FALSE
- Spreading factor	Reference to clause 6.10 Parameter Set
- Code number	Reference to clause 6.10 Parameter Set
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible position	Flexible
- Timing offset	0
- TFCS	(This IE is repeated for TFC number for PCH and FACH.)
- Normal	
- TFCI Field 1 information	
- CHOICE TFCS representation	Addition
- TFCS addition information	
- CHOICE CTFC Size	
- CTFC information	Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.
- Power offset information	Refer to clause 6.10 Parameter Set
- FACH/PCH information	Not Present
- Transport Channel Identity	12 (for PCH)
- TFS	(PCH)
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	(This IE is repeated for TFI number.)
- RLC Size	Reference to clause 6.10 Parameter Set
- Number of TB and TTI List	Reference to clause 6.10 Parameter Set
- Number of Transport blocks	Reference to clause 6.10 Parameter Set
- CHOICE Mode	FDD
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	
- Transmission time interval	Reference to clause 6.10 Parameter Set
- Type of channel coding	Reference to clause 6.10 Parameter Set

- Coding Rate	Reference to clause 6.10 Parameter Set
- Rate matching attribute	Reference to clause 6.10 Parameter Set
- CRC size	Reference to clause 6.10 Parameter Set
- Transport Channel Identity	13 (for FACH)
- TFS	(FACH)
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	(This IE is repeated for TFI number.)
- RLC Size	Reference to clause 6.10 Parameter Set
- Number of TB and TTI List	Reference to clause 6.10 Parameter Set
- Number of Transport blocks	Reference to clause 6.10 Parameter Set
- CHOICE Mode	FDD
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	
- Transmission time interval	Reference to clause 6.10 Parameter Set
- Type of channel coding	Reference to clause 6.10 Parameter Set
- Coding Rate	Reference to clause 6.10 Parameter Set
- Rate matching attribute	Reference to clause 6.10 Parameter Set
- CRC size	Reference to clause 6.10 Parameter Set
- CTCH indicator	FALSE
- PICH info	
- Channelisation code	SF-1(SF is reference to clause 6.10 Parameter Set)
- Number of PI per frame	18
- STTD indicator	FALSE
- CBS DRX Level 1 information	Not Present

<Next modification>

Contents of System Information Block type_7 (FDD)

CHOICE Mode	FDD
- UL interference	-100dBm
- PRACHs listed in system information block type5	
- Dynamic persistence level	2
- PRACHs listed in system information block type6	
- Dynamic persistence level	2
- Expiration Time Factor	Not Present – use default value of 1

<Next modification>

Contents of System Information Block type_8,9 (only for FDD)

This information is used for static CPCH in the cell, so this is not present.

Contents of System Information Block type_10 (only for FDD)

This information is used for DRAC, so this is not present.

Contents of System Information Block type_11 (FDD)

- SIB12 indicator	TRUE
- FACH measurement occasion info	Not Present
- Measurement control system information	
- Use of HCS	Not used
- Cell_selection_and_reselection_quality_measure	CPICH Ec/N0/RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	0
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	0
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	The current value plus 50(When the current cell is cell No.8 then minus 50)
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1s,n	0 dB
- Qoffset2s,n	0 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Not Present
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Cell measurement	
- Intra-frequency cell id	See test content
- Intra-frequency measurement quantity	
- Filter coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity for RACH Reporting	
- SFN-SFN observed time difference	No report
- Reporting quantity	No report
- Maximum number of reported cells on RACH	No report
- Maximum number of reported cells	No report
- Reporting information for state CELL_DCH	
- Measurement Report Transfer	Acknowledged mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event trigger
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CHOICE mode	FDD
- CPICH Ec/N0 reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	

- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CHOICE mode	FDD
- CPICH Ec/N0 reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected set cells	Not Present
- <u>Measurement reporting mode</u>	
- <u>Measurement Report Transfer Mode</u>	<u>Acknowledged mode RLC</u>
- <u>Periodic Reporting/Event Trigger Reporting Mode</u>	<u>Event trigger</u>
- <u>CHOICE report criteria</u>	<u>Intra-frequency measurement reporting criteria</u>
- Intra-frequency measurement reporting criteria	
- <u>P</u> arameters required for each event	1a
- <u>I</u> ntra-frequency event identity	<u>Not Present</u>
- <u>Triggering condition 1</u>	<u>Active set cells and</u> monitored set cells
- <u>Triggering condition 2</u>	5dB
- Reporting Range	Not Present
- <u>C</u> ells forbidden to affect <u>R</u> eporting range	
- Primary CPICH info	
- Primary scrambling code	
- W	1.0
- Hysteresis	0.0
- Threshold used frequency	T.B.D(-125..165) Not Present
- Reporting deactivation threshold	1
- Replacement activation threshold	Not Present
- Time to trigger	640
- Amount of reporting	Infinity
- Reporting interval	0
- Reporting cell status	
- CHOICE reporting cell	Report cell within active set and/or monitored <u>set</u> cells on used frequency
- Maximum number of reported cells	2
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

<Next modification>

Contents of System Information Block type12 in connected mode (FDD)

- FACH measurement occasion info	Not Present
- Measurement control system information	
- Use of HCS	Not used
- Cell_selection_and_reselection_quality_measure	CPICH Ec/N0 RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	0
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	0
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	The current value plus 50(When the current cell is cell No.8 then minus 50)
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	0 dB
- Qoffset2 _{s,n}	0 dB
- Maximum allowed UL TX power	33dBm
- HCS neighbouring cell information	Not Present
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Cell measurement	
- Intra-frequency cell id	See test contact
- Intra-frequency measurement quantity	
- Filter coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity for RACH Reporting	
-SFN-SFN observed time difference	No report
- Reporting quantity	No report
- Maximum number of reported cells on RACH	No report
- Maximum number of reported cells	No report
- Reporting information for state CELL_DCH	
- Measurement Report Transfer	Acknowledged mode-RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event trigger
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CHOICE mode	FDD
- CPICH Ec/N0 reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report

- Cell identity reporting indicator	TRUE
- CHOICE mode	FDD
- CPICH Ec/N0 reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected set cells	Not Present
- <u>Measurement reporting mode</u>	
- <u>Measurement Report Transfer Mode</u>	<u>Acknowledged mode RLC</u>
- <u>Periodic Reporting/Event Trigger Reporting Mode</u>	<u>Event trigger</u>
- <u>CHOICE report criteria</u>	<u>Intra-frequency measurement reporting criteria</u>
- Intra-frequency measurement reporting criteria	
- Parameters required for each event	
- Intra-frequency event identity	1a
- <u>Triggering condition 1</u>	<u>Not Present</u>
- <u>Triggering condition 2</u>	<u>Active set cells and</u> monitored set cells
- Reporting Range	5dB
- Cells forbidden to affect reporting range	Not Present
- Primary CPICH info	
- Primary scrambling code	
- W	1.0
- Hysteresis	0.0
- Threshold used frequency	T.B.D(-125..165) Not Present
- Reporting deactivation threshold	1
- Replacement activation threshold	Not Present
- Time to trigger	0
- Amount of reporting	Infinity
- Reporting interval	0
- Reporting cell status	
- CHOICE reporting cell	Report cell Within active set and/or monitored <u>set</u> cells on used frequency
- Maximum number of reported cells	2
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

<Next modification>

Contents of System Information Block type 13 (used when supported PLMN type is ANSI-41)

- CN Domain system information list	
- CN Domain system information	<i>For Packet-Switched domain</i>
- CN domain identity	PS
- CHOICE CN Type	ANSI-41
- CN domain specific NAS system information	
- NAS (ANSI-41) system information	T.B.D
- CN domain specific DRX cycle length coefficient	7
- CN Domain system information	<i>For Circuit-Switched domain</i>
- CN domain identity	CS
- CHOICE CN Type	ANSI-41
- CN domain specific NAS system information	
- NAS (ANSI-41) system information	T.B.D
- CN domain specific DRX cycle length coefficient	7
- UE timers and constants in idle mode	
- T300	400 milliseconds
- N300	7
- T312	10 seconds
- N312	200
- 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	Not Present

Contents of System Information Block type 16

- Re-establishment timer	[FFS]
- Predefined RB configuration	[FFS]
- Predefined TrCh configuration	[FFS]
- Predefined Phy configuration	[FFS]

Contents of System Information Block type 18

- <u>Idle mode PLMN identities</u>	
- <u>PLMNs of intra-frequency cells list</u>	
- <u>PLMN identity</u>	<u>Set to the same value as indicated in MIB</u>
- <u>PLMNs of inter-frequency cells list</u>	<u>Not present</u>
- <u>PLMNs of inter-RAT cells list</u>	<u>Not present</u>
- <u>Connected mode PLMN identities</u>	<u>Not present</u>

<Next modification>

Default Radio Conditions for Multi-Cell Environment (FDD)

In the event that a multi-cell environment is applied by the System Simulator for idle mode test cases, the following transmission parameters shall be used unless otherwise stated in the description of individual test case.

Table 6.1.1 Default radio conditions dependent on Number of cells (for idle mode test cases)

Number of cells	Parameter	Unit	Cell 1	Cell 2	Cell 3	Cell 4	Cell 5	Cell 6
	UTRA RF Channel Number		Ch. 1	Ch. 1	Ch. 1	Ch. 2	Ch. 2	Ch. 2
1	\hat{I}_{or}/I_{oc}	dB	8					
	CPICH_Ec/Io	dB	-10.6					
	CPICH RSCP	dBm	-72					
2	\hat{I}_{or}/I_{oc}	dB	8	8				
	CPICH_Ec/Io	dB	-13.3	-13.3				
	CPICH RSCP	dBm	-72	-72				
3	\hat{I}_{or}/I_{oc}	dB	8	8	8			
	CPICH_Ec/Io	dB	-15	-15	-15			
	CPICH RSCP	dBm	-72	-72	-72			
4	\hat{I}_{or}/I_{oc}	dB	8	8	8	8		
	CPICH_Ec/Io	dB	-15	-15	-15	-10.6		
	CPICH RSCP	dBm	-72	-72	-72	-72		
5	\hat{I}_{or}/I_{oc}	dB	8	8	8	8	8	
	CPICH_Ec/Io	dB	-15	-15	-15	-13.3	-13.3	
	CPICH RSCP	dBm	-72	-72	-72	-72	-72	
6	\hat{I}_{or}/I_{oc}	dB	8	8	8	8	8	8
	CPICH_Ec/Io	dB	-15	-15	-15	-15	-15	-15
	CPICH RSCP	dBm	-72	-72	-72	-72	-72	-72

Table 6.1.2 Default radio conditions in Idle mode

Parameter	Unit	Cell 1	Cell 2	Cell 3	Cell 4	Cell 5	Cell 6
CPICH_Ec/Ior	dB	-10	-10	-10	-10	-10	-10
PCCPCH_Ec/Ior	dB	-12	-12	-12	-12	-12	-12
SCCPCH_Ec/Ior	dB	-12	-12	-12	-12	-12	-12
AICH_Ec/Ior	dB	-15	-15	-15	-15	-15	-15
SCH_Ec/Ior	dB	-12	-12	-12	-12	-12	-12
PICH_Ec/Ior	dB	-15	-15	-15	-15	-15	-15
DPCH_Ec/Ior	dB	-∞	-∞	-∞	-∞	-∞	-∞
OCNS_Ec/Ior	dB	-1.888	-1.888	-1.888	-1.888	-1.888	-1.888
I_{oc}	dBm/ 3.84 MHz	-70					
Propagation Condition		AWGN					
UE_TXPWR_MAX_RACH	dBm	Max. RF Output of UE	Max. RF Output of UE	Max. RF Output of UE	Max. RF Output of UE	Max. RF Output of UE	Max. RF Output of UE

In the event that a multi-cell environment is applied by the System Simulator for connected mode test cases, the following transmission parameters shall be used unless otherwise stated in the description of individual test case. The AWGN noise source and OCNS simulator will be not applied for connected mode test cases.

Table 6.1.3 Default radio conditions dependent on Number of cells
(for connected mode test cases)

Number of cells	Parameter	Unit	Cell 1	Cell 2	Cell 3	Cell 4	Cell 5	Cell 6
	<u>UTRA RF Channel Number</u>		<u>Ch. 1</u>	<u>Ch. 1</u>	<u>Ch. 1</u>	<u>Ch. 2</u>	<u>Ch. 2</u>	<u>Ch. 2</u>
<u>1</u>	<u>CPICH RSCP</u>	<u>dBm</u>	<u>-72</u>					
<u>2</u>	<u>CPICH RSCP</u>	<u>dBm</u>	<u>-72</u>	<u>-72</u>				
<u>3</u>	<u>CPICH RSCP</u>	<u>dBm</u>	<u>-72</u>	<u>-72</u>	<u>-72</u>			
<u>4</u>	<u>CPICH RSCP</u>	<u>dBm</u>	<u>-72</u>	<u>-72</u>	<u>-72</u>	<u>-72</u>		
<u>5</u>	<u>CPICH RSCP</u>	<u>dBm</u>	<u>-72</u>	<u>-72</u>	<u>-72</u>	<u>-72</u>	<u>-72</u>	
<u>6</u>	<u>CPICH RSCP</u>	<u>dBm</u>	<u>-72</u>	<u>-72</u>	<u>-72</u>	<u>-72</u>	<u>-72</u>	<u>-72</u>

Table 6.1.43 Default radio conditions in Connected mode

Parameter	Unit	Cell 1	Cell 2	Cell 3	Cell 4	Cell 5	Cell 6
CPICH_Ec/Ior	dB	-10	-10	-10	-10	-10	-10
PCCPCH_Ec/Ior	dB	-12	-12	-12	-12	-12	-12
SCCPCH_Ec/Ior	dB	-12	-12	-12	-12	-12	-12
AICH_Ec/Ior	dB	-15	-15	-15	-15	-15	-15
SCH_Ec/Ior	dB	-12	-12	-12	-12	-12	-12
PICH_Ec/Ior	dB	-15	-15	-15	-15	-15	-15
DPCH ₁ _Ec/Ior (Note1)	dB	-15	-15	-15	-15	-15	-15
DPCH ₂ _Ec/Ior (Note1)	dB	<u>-2.106</u>	<u>-2.106</u>	<u>-2.106</u>	<u>-2.106</u>	<u>-2.106</u>	<u>-2.106</u>
OCNS_Ec/Ior	dB	-2.106	-2.106	-2.106	-2.106	-2.106	-2.106
I_{oc}	dBm/ 3.84 MHz	-70					
Propagation Condition		AWGN					
UE_TXPWR_MAX_RACH	dBm	Max. RF Output of UE	Max. RF Output of UE	Max. RF Output of UE	Max. RF Output of UE	Max. RF Output of UE	Max. RF Output of UE

Note1: In all test case executions, both DPCH₁ and DPCH₂ will be transmitted by SS in the downlink direction. However, only DPCH₁ will be signalled to the UE (i.e. using messages like RRC CONNECTION SETUP, PHYSICAL CHANNEL RECONFIGURATION etc.). The presence of DPCH₂ will not be signalled to the UE, it should act as dummy channel for absorbing the unused power of each cell.

Default Radio Conditions for Multi-Cell Environment (TDD)
<FFS>

<Next modification>

9 Default Message Contents

This clause contains the default values of common messages, which unless indicated otherwise in specific clauses of TS34.123-1, shall be transmitted and checked by the system simulator.

Contents of DOWNLINK DIRECT TRANSFER message: AM

Information Element	Value/remark
Message Type RRC transaction identifier Integrity check info - Message authentication code - RRC Message sequence number CN domain identity NAS message	0 The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted. SS calculates the value of MAC-I for this message and writes to this IE. SS provides the value of this IE, from its internal counter. CS domain See Specific Message Content for each test case

Contents of INITIAL DIRECT TRANSFER message: AM

Information Element	Value/remark
Message Type Integrity check info - Message authentication code - RRC Message sequence number CN domain identity Intra Domain NAS Node Selector NAS message Measured results on RACH	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent. This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value. Not checked Not checked Not checked Not checked

Contents of PAGING TYPE_1 message: TM (Speech in CS)

Information Element	Value/remark
Message Type Paging record - CHOICE Used paging identity - Paging cause - CN domain identity - CHOICE UE identity - IMSI (GSM-MAP) BCCH modification info	CN identity Terminating Conversational Call CS domain Set to the same octet string as in the IMSI stored in the USIM card Not Present

Contents of PAGING TYPE_1 message: TM (The others of speech in CS)

Information Element	Value/remark
Message Type Paging record <ul style="list-style-type: none"> - CHOICE Used paging identity - Paging cause - CN domain identity - CHOICE UE identity - IMSI (GSM-MAP) 	CN identity Terminating Streaming Call CS domain 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 (Packet in PS)

Information Element	Value/remark
Message Type Paging record <ul style="list-style-type: none"> - CHOICE Used paging identity - Paging cause - CN domain identity - CHOICE UE identity - IMSI (GSM-MAP) 	CN identity Terminating Interactive Call PS domain 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 (Speech in CS)

Information Element	Value/remark
Message Type	Arbitrarily selects an integer between 0 and 3
RRC transaction identifier	The presence of this IE is dependent on IXT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub IEs are omitted.
Integrity check info	SS calculates the value of MAC-I for this message and writes to this IE.
— message authentication code	SS provides the value of this IE, from its internal counter.
— RRC message sequence number	Not Present
Integrity protection mode info	
— Integrity protection mode command	
— Downlink integrity protection activation info	
— RRC message sequence number	
— RRC message sequence number	
— Integrity protection algorithm	
— Integrity protection initialisation number	
Ciphering mode info	This presence of this IE is dependent on IXT 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
— Ciphering algorithm	Use one of the supported ciphering algorithms.
— Ciphering activation time for DPCH	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
— Radio bearer downlink ciphering activation time info	Not Present
Activation time	$(256 + CFN - (CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$
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
— PLMN identity	
— CN common GSM-MAP-NAS system information	
— CN domain identity	
— CN domain specific GSM-MAP-NAS system information	
URA identity	Not Present
Signalling RB information to setup	Not Present
RAB information for setup	
— RAB info	
— RAB identity	0000-0004B
— CN domain identity	CS domain
— NAS Synchronisation Indicator	Not Present
— Re-establishment timer	
— T314	20 seconds
— 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	TRUE
— CHOICE Downlink RLC mode	TM RLC
— Segmentation indication	TRUE
— RB mapping info	
— Information for each multiplexing option	
— Number of RLC logical channels	1
— Uplink transport channel type	DCH
— Transport channel identity	1

- Logical channel identity	7
- CHOICE RLC size list	All
- MAC logical channel priority	1
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	6
- Logical channel identity	7
- RB information to setup	
- 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	TRUE
- CHOICE Downlink RLC mode	TM RLC
- Segmentation indication	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	8
- CHOICE RLC size list	All
- MAC logical channel priority	1
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	7
- Logical channel identity	8
- RB information to setup	(This IE is needed for 12.2 kbps and 10.2 kbps)
- 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	TRUE
- CHOICE Downlink RLC mode	TM RLC
- Segmentation indication	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	9
- CHOICE RLC size list	All
- MAC logical channel priority	1
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	8
- Logical channel identity	9
RB information to be affected	(UM-DGCH for RRC)
- RB identity	1
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	5
- Logical channel identity	1
- CHOICE RLC size list	All
- MAC logical channel priority	1

Downlink RLC logical channel info	1
Number of RLC logical channels	DCH
Downlink transport channel type	10
Transport channel identity	1
Logical channel identity	1
RB information to be affected	(AM-DCCH for RRC)
RB identity	2
RB mapping info	
Information for each multiplexing option	
Number of RLC logical channels	1
Uplink transport channel type	DCH
Transport channel identity	5
Logical channel identity	2
CHOICE RLC size list	All
MAC logical channel priority	2
Downlink RLC logical channel info	
Number of RLC logical channels	1
Downlink transport channel type	DCH
Transport channel identity	10
Logical channel identity	2
RB information to be affected	(AM-DCCH for NAS_DT High priority)
RB identity	3
RB mapping info	
Information for each multiplexing option	
Number of RLC logical channels	1
Uplink transport channel type	DCH
Transport channel identity	5
Logical channel identity	3
CHOICE RLC size list	All
MAC logical channel priority	3
Downlink RLC logical channel info	
Number of RLC logical channels	1
Downlink transport channel type	DCH
Transport channel identity	10
Logical channel identity	3
RB information to be affected	(AM-DCCH for NAS_DT Low priority)
RB identity	4
RB mapping info	
Information for each multiplexing option	
Number of RLC logical channels	1
Uplink transport channel type	DCH
Transport channel identity	5
Logical channel identity	4
CHOICE RLC size list	All
MAC logical channel priority	4
Downlink RLC logical channel info	
Number of RLC logical channels	1
Downlink transport channel type	DCH
Transport channel identity	10
Logical channel identity	4
RB with PDCP information list	Not Present
UL Transport channel information for all transport channels	
TFC subset	(This IE is repeated for TFC number.)
Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to clause 6.10 Parameter Set.)
PRACH TFCS	Not Present
CHOICE Mode	FDD
UL DCH TFCS	(This IE is repeated for TFC number.)
Normal	
TFCS Field 1 information	
CHOICE TFCS representation	Addition

<ul style="list-style-type: none"> — - TFCS addition information — - CHOICE CTFC Size 	<p>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10. Refer to clause 6.10 Parameter Set</p>
<ul style="list-style-type: none"> — - CTFC information — - Power offset information — - CHOICE Gain Factors — - Gain factor β_e — - Gain factor β_d — - Reference TFC ID — - Power offset Pp-m 	<p>Signalled Gain Factor 0 0 Not Present 0dB</p>
<p>Added or Reconfigured UL TrCH information</p> <ul style="list-style-type: none"> — - Transport channel identity — - TFS — - CHOICE Transport channel type — - 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 — - CRC size 	<p>4 Dedicated transport channels (This IE is repeated for TFI number) Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set Not Present Reference to clause 6.10 Parameter Set All Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set</p>
<p>Added or Reconfigured UL TrCH information</p> <ul style="list-style-type: none"> — - Transport channel identity — - TFS — - CHOICE Transport channel type — - 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 — - CRC size 	<p>2 Dedicated transport channels (This IE is repeated for TFI number) Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set Not Present Reference to clause 6.10 Parameter Set All Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set</p>
<p>Added or Reconfigured UL TrCH information</p> <ul style="list-style-type: none"> — - Transport channel identity — - TFS — - CHOICE Transport channel type — - 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 — - CRC size 	<p>3 (This IE is repeated for TFI number) Dedicated transport channels Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set Not Present Reference to clause 6.10 Parameter Set All Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set</p>
<p>Added or Reconfigured UL TrCH information</p> <ul style="list-style-type: none"> — - Transport channel identity — - TFS 	<p>If TrCH reconfiguration is executed then this is needed (e.g The rate of SRB for DCCH is changed.) 5</p>

- CHOICE Transport channel type	Dedicated transport channels
- Dynamic Transport format information	(This IE is repeated for TFI number)
- RLC size	Reference to clause 6.10 Parameter Set
- Number of TBs and TTI List	Reference to clause 6.10 Parameter Set
- Transmission Time Interval	Not Present
- Number of transport blocks	Reference to clause 6.10 Parameter Set
- CHOICE Logical Channel List	All
- Semi-static Transport Format information	Reference to clause 6.10 Parameter Set
- Transmission time interval	Reference to clause 6.10 Parameter Set
- Type of channel coding	Reference to clause 6.10 Parameter Set
- Coding Rate	Reference to clause 6.10 Parameter Set
- Rate matching attribute	Reference to clause 6.10 Parameter Set
- CRC size	Reference to clause 6.10 Parameter Set
DRAC static information	Not Present
DL Transport channel information common for all transport channel	Independent
- SCCPCH TFCS	(This IE is repeated for TFC number.)
- CHOICE DL parameters	
- DL DCH TFCS	
- Normal	
- TFCl Field 1 information	
- CHOICE TFCS representation	Addition
- TFCS addition information	
- CHOICE CTFC Size	Number of bits used must be enough to cover all combinations of CTFC from clause 6.10. Refer to clause 6.10 Parameter Set
- CTFC information	
- Power offset information	
- CHOICE Gain Factors	Signalled Gain Factor
- Gain factor β_c	0
- Gain factor β_d	0
- Reference TFC ID	Not Present
- Power offset P_{p-m}	0dB
Added or Reconfigured DL TrCH information	
- Transport channel identity	6
- CHOICE DL parameters	SameAsUL
- UL TrCH Identity	4
- DCH quality target	
- BLER Quality value	-6.3
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	7
- CHOICE DL parameters	SameAsUL
- UL TrCH identity	2
Added or Reconfigured DL TrCH information	(This IE is needed for 12.2 kbps and 10.2 kbps)
- Transport channel identity	8
- CHOICE DL parameters	SameAsUL
- UL TrCH identity	3
- DCH quality target	
- BLER Quality value	-6.3
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	If TrCH reconfiguration is executed then this is needed(e.g The rate of SRB for DCCH is changed.)-
- Transport channel identity	5
- CHOICE DL parameters	Independent
- UL TrCH Identity	10
- TFS	
- Dynamic Transport format information	(This IE is repeated for TFI number)
- Number of Transport blocks	Reference to clause 6.10 Parameter Set
- RLC size	Reference to clause 6.10 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to clause 6.10 Parameter Set
- Type of channel coding	Reference to clause 6.10 Parameter Set

- Coding Rate	Reference to clause 6.10 Parameter Set
- Rate matching attribute	Reference to clause 6.10 Parameter Set
- CRC size	Reference to clause 6.10 Parameter Set
- DCH quality target	
- BLER Quality value	-6.3
- Transparent mode signalling info	Not Present
Frequency info	
- UARFCN uplink(Nu)	Reference to clause 6.10 Parameter Set
- UARFCN downlink(Nd)	Reference to clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm
CHOICE channel requirement	Uplink DPCH info
- Uplink DPCH power control info	
- DPCH power offset	-6dB
- PC Preamble	15 slots
- 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	SF is reference to clause 6.10 Parameter Set
- TFCI existence	TRUE
- Number of FBI bit	Not Present(0)
- Puncturing Limit	Reference to clause 6.10 Parameter Set
CHOICE Mode	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indication	Maintain
- CFN target CFN frame offset	Not Present
- CHOICE mode	FDD
- Downlink DPCH power control information	
- DPC mode	0 (single)
- DL rate matching restriction information	Not Present
- Spreading factor	Reference to clause 6.10 Parameter Set
- Fixed or Flexible Position	Fixed
- TFCI existence	FALSE
- Number of bits for Pilot bits(SF=128,256)	4 bits
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Inactive
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	62
- TGCFN	(Current CFN + (256 - TTI/10msec)) mod 256
- TGSN	8
- TGL1	10
- TGL2	5
- TGD	15
- TGPL1	35
- TGPL2	35
- RPP	Mode 1
- ITP	Mode 1
- UL/DL Mode	DL
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	Not Present
- Downlink frame type	A
- DeltaSIR1	2.0
- DeltaSIRafter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRafter2	Not Present
- TX Diversity mode	None

SSDT information	Not Present
S field	
Code Word Set	
Default DPCH Offset Value	0
Downlink information for each radio links	
Primary CPICH info	
Primary scrambling code	100
PDSCH with SHO DCH info	Not Present
DSCH radio link identifier	
TFCI Combining set	
Radio link identifier	
Primary CPICH info	
Primary scrambling code	
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	0 chips
Secondary CPICH info	Not Present
Secondary scrambling code	
channelisation code	
DL channelisation code	
Secondary scrambling code	4
Spreading factor	Reference to clause 6.10 Parameter Set
Code number	SF-1 (SF is reference to clause 6.10 Parameter Set)
Scrambling code change	No change
TPC combination index	0
SSDT Cell Identity	-a
Closed loop timing adjustment mode	Not Present
Secondary CCPCH info	Not Present
Selection Indicator	
Primary CPICH usage for channel estimation	
Secondary CPICH info	
Secondary scrambling code	
channelisation code	
Secondary scrambling code	
SSDT Indicator	
Spreading factor	
Code number	
Pilot symbol existence	
TFCI existence	
Fixed or Flexible Position	
Timing offset	
TFCI	Not Present
FACH/PCH information	Not Present
TFS	
Dynamic Transport format information	
Number of Transport blocks	
RLC Size	
Semi-static Transport Format information	
Transmission time interval	
Type of channel coding	
Coding Rate	
Rate matching attribute	
CRC size	
TFS	
Dynamic Transport format information	
Number of Transport blocks	
RLC Size	
Semi-static Transport Format information	
Transmission time interval	
Type of channel coding	
Coding Rate	

<ul style="list-style-type: none"> Rate matching attribute CRC size References to system information blocks Scheduling information 	Not Present
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Contents of RADIO BEARER SETUP COMPLETE message: AM

<p>Message Type</p> <p>RRC transaction identifier</p> <p>Integrity check info</p> <ul style="list-style-type: none"> - Message authentication code - RRC Message sequence number <p>Uplink integrity protection activation info</p> <p>CHOICE mode</p> <p>START</p> <p>COUNT-C activation time</p> <p>Radio bearer uplink ciphering activation time info</p> <p><u>Uplink counter synchronisation info</u>RB with PD information list</p>	<p>Checked to see if the value is identical to the same IE in the downlink RADIO BEARER SETUP message.</p> <p>The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.</p> <p>This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.</p> <p>This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.</p> <p>Not checked.</p> <p>FDD</p> <p>Not checked</p> <p>The presence of this IE depends on the following 2 factors: (a) There exists RB(s) mapped to RLC-TM and (b) UE is transiting to CELL_DCH state after the RB establishment procedure. Else, this IE is absent.</p> <p>If ciphering is not activated in RADIO BEARER SETUP message, this IE must be absent. Else, SS checks this IE for the presence of activation times of all ciphered uplink RLC-UM and RLC-AM RBs.</p> <p>Not checked</p>
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Contents of RADIO BEARER RELEASE message: AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	Arbitrarily selects an integer between 0 and 3
RRC transaction identifier	The presence of this IE is dependent on IXIT statements
Integrity check info	in TS 34.123-32. If integrity protection is indicated to be
	active, this IE is present with the values of the sub-IEs as
	stated below. 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.
RRC message sequence number	SS provides the value of this IE, from its internal counter.
Integrity protection mode info	Not Present
Integrity protection mode command	
Downlink integrity protection activation info	
RRC message sequence number	
RRC message sequence number	
Integrity protection algorithm	
Integrity protection initialisation number	
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
RRC State Indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
PLMN identity	
CN common GSM-MAP NAS system information	
CN domain identity	
CN domain specific GSM-MAP NAS system information	
Signalling Connection release indicator	Not present
URA identity	Not present
RAB information to reconfigure list	Not Present
RB information to release	
RB identity	40
RB information to release	
RB identity	41
RB information to release	
RB identity	42
RB information to be affected	(UM-DCCH for RRC)
RB identity	4
RB mapping info	
Information for each multiplexing option	
Number of RLC logical channels	1
Uplink transport channel type	DCH
Transport channel identity	5
Logical channel identity	4
CHOICE RLC size list	All
MAC logical channel priority	4
Downlink RLC logical channel info	
Number of RLC logical channels	1
Downlink transport channel type	DCH
Transport channel identity	40
Logical channel identity	4
RB information to be affected	(AM-DCCH for RRC)
RB identity	2
RB mapping info	
Information for each multiplexing option	
Number of RLC logical channels	1
Uplink transport channel type	DCH
Transport channel identity	5

- Logical channel identity	2
- CHOICE RLC size list	All
- MAC logical channel priority	2
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	10
- Logical channel identity	2
RB information to be affected	(AM-DCCH for NAS_DT High priority)
- RB identity	3
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	5
- Logical channel identity	3
- CHOICE RLC size list	All
- MAC logical channel priority	3
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	10
- Logical channel identity	3
RB information to be affected	(AM-DCCH for NAS_DT Low priority)
- RB identity	4
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	5
- Logical channel identity	4
- CHOICE RLC size list	All
- MAC logical channel priority	4
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	10
- Logical channel identity	4
RB with PDCP information list	Not Present
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to clause 6.10 Parameter Set.)
- PRACH TFCS	Not Present
- CHOICE Mode	FDD
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCS Field 1 information	
- CHOICE TFCS representation	Addition
- TFCS addition information	
- CHOICE CTFC Size	Number of bits used must be enough to cover all combinations of CTFC from clause 6.10. Refer to clause 6.10 Parameter Set
- CTFC information	
- Power offset information	
- CHOICE Gain Factors	Signalled Gain Factors
- Gain factor β_c	0
- Gain factor β_d	0
- Reference TFC ID	Not Present
- Power offset P_{p-m}	0dB
Deleted UL TrCH Information	
- Transport channel identity	1

Deleted UL TrCH Information	
— Transport channel identity	2
Deleted UL TrCH Information	
— Transport channel identity	3
Added or Reconfigured UL TrCH information	If TrCH reconfiguration is executed then this is needed (e.g The rate of SRB for DCCH is changed.)-
— Transport channel identity	4
— TFS	
— CHOICE Transport channel type	Dedicated transport channel
— Dynamic Transport format information	(This IE is repeated for TFI number)
— RLC size	Reference to clause 6.10 Parameter Set
— Number of TBs and TTI List	Reference to clause 6.10 Parameter Set
— Transmission Time Interval	Not Present
— Number of transport blocks	Reference to clause 6.10 Parameter Set
— CHOICE Logical Channel List	All
— Semi-static Transport Format information	
— Transmission time interval	Reference to clause 6.10 Parameter Set
— Type of channel coding	Reference to clause 6.10 Parameter Set
— Coding Rate	Reference to clause 6.10 Parameter Set
— Rate matching attribute	Reference to clause 6.10 Parameter Set
— CRC size	Reference to clause 6.10 Parameter Set
CPCCH set ID	Not Present
DRAC static information	Not Present
— Transmission Time Validity	
— Time duration before retry	
— DRAC Class Identity	
DL Transport channel information common for all transport channel	
— SCCPCH TFCS	Not Present
— CHOICE DL parameters	Independent
— DL DCH TFCS	(This IE is repeated for TFC number.)
— Normal	
— TFCI Field 1 information	
— CHOICE TFCS representation	Addition
— TFCS addition information	
— CHOICE CTFC Size	Number of bits used must be enough to cover all combinations of CTFC from clause 6.10. Refer to clause 6.10 Parameter Set
— CTFC information	
— Power offset information	
— CHOICE Gain Factors	Signalled Gain Factor
— Gain factor β_c	0
— Gain factor β_d	0
— Reference TFC ID	Not Present
— Power offset P_{p-m}	0dB
Deleted DL TrCH Information	
— Transport channel identity	6
Deleted DL TrCH Information	
— Transport channel identity	7
Deleted DL TrCH Information	
— Transport channel identity	8
Added or Reconfigured DL TrCH information	If TrCH reconfiguration is executed then this is needed (e.g The rate of SRB for DCCH is changed.)-
— Transport channel identity	10
— CHOICE DL parameters	SameAsUL
— UL TrCH Identity	5
— DCH quality target	
— BLER Quality value	-6.3
— Transparent mode signalling info	Not Present
Frequency info	
— UARFCN uplink (Nu)	Reference to clause 6.10 Parameter Set
— UARFCN downlink (Nd)	Reference to clause 6.10 Parameter Set
Maximum allowed UL TX power	33dBm

Uplink DPCH info	
Uplink DPCH power control info	-6dB
DPCH power offset	15 slots
PC Preamble	Algorithm1
Power Control Algorithm	1dB
TPC step size	Long
Scrambling code type	0 (0 to 16777215)
Scrambling code number	Not Present(1)
Number of DPDCH	SF is reference to clause 6.10 Parameter Set
spreading factor	TRUE
TFCH existence	Not Present(0)
Number of FBI bit	Reference to clause 6.10 Parameter Set
Puncturing Limit	FDD
CHOICE Mode	
Downlink PDSCH information	Not Present
Downlink information common for all radio links	
Downlink DPCH info common for all RL	
Timing Indication	Maintain
CFN target CFN frame offset	Not Present
CHOICE mode	FDD
Downlink DPCH power control information	
DPC mode	0 (single)
DL rate matching restriction information	Not Present
Spreading factor	Reference to clause 6.10 Parameter Set
Fixed or Flexible Position	N/A
TFCH existence	FALSE
Number of bits for Pilot bits(SF=128,256)	Reference to clause 6.10 Parameter Set
DPCH compressed mode info	
TGPSI	4
TGPS Status Flag	Inactive
Transmission gap pattern sequence configuration parameters	
TGMP	FDD Measurement
TGPRC	62
TGCFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \bmod 256$
TGSN	8
TGL1	10
TGL2	5
TGD	15
TGPL1	35
TGPL2	35
RPP	Mode 1
ITP	Mode 1
UL/DL Mode	DL
Downlink compressed mode method	SF/2
Uplink compressed mode method	Not Present
Downlink frame type	A
DeltaSIR1	2.0
DeltaSIRafter1	1.0
DeltaSIR2	Not Present
DeltaSIRafter2	Not Present
TX Diversity mode	None
SSDT information	Not Present
S field	
Code Word Set	
Default DPCH Offset Value	0
Downlink information for each radio links	
Primary CPICH info	
Primary scrambling code	100
PDSCH with SHO DCH info	Not Present
DSCH radio link identifier	
TFCH Combining set	

Radio link identifier	
Primary CPICH info	
Primary scrambling code	
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	0 chips
Secondary CPICH info	Not Present
Secondary scrambling code	
channelisation code	
DL channelisation code	
Secondary scrambling code	4
Spreading factor	Reference to clause 6.10 Parameter Set
Code number	SF-1 (SF is reference to clause 6.10 Parameter Set)
Scrambling code change	No change
TPC combination index	0
SSDT Cell Identity	-a
Closed loop timing adjustment mode	Not Present
Secondary CCPCH info	Not Present
Selection Indicator	
Primary CPICH usage for channel estimation	
Secondary CPICH info	
Secondary scrambling code	
channelisation code	
Secondary scrambling code	
SSDT Indicator	
Spreading factor	
Code number	
Pilot symbol existence	
TFCI existence	
Fixed or Flexible Position	
Timing offset	
TFCs	Not Present
FACH/PCH information	Not Present
TFS	
Dynamic Transport format information	
Number of Transport blocks	
RLC Size	
Semi-static Transport Format information	
Transmission time interval	
Type of channel coding	
Coding Rate	
Rate matching attribute	
CRC size	
TFS	
Dynamic Transport format information	
Number of Transport blocks	
RLC Size	
Semi-static Transport Format information	
Transmission time interval	
Type of channel coding	
Coding Rate	
Rate matching attribute	
CRC size	
References to system information blocks	Not Present
Scheduling information	

Contents of RADIO BEARER RELEASE COMPLETE message: AM

<p>Message Type RRC transaction identifier</p> <p>Integrity check info</p> <ul style="list-style-type: none"> - Message authentication code - RRC Message sequence number <p>Uplink integrity protection activation info CHOICE mode COUNT-C activation time</p> <p>Radio bearer uplink ciphering activation time info</p> <p><u>Uplink counter synchronisation info</u> RB with PDCP information list</p>	<p>Checked to see the value is identical to the same IE in the downlink RADIO BEARER RELEASE message.</p> <p>The presence of this IE is dependent on Ixit statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.</p> <p>This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.</p> <p>This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.</p> <p>Not checked.</p> <p>FDD</p> <p>The presence of this IE depends on the following 2 factors: (a) There exists RB(s) mapped to RLC-TM and (b) UE is transiting to CELL_DCH state after the RB release procedure. Else, this IE is absent.</p> <p>If ciphering is not activated in RADIO BEARER RELEASE message, this IE must be absent. Else, SS checks this IE for the presence of activation times of all ciphered uplink RLC-UM and RLC-AM RBs.</p> <p>Not checked</p>
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Contents of RRC CONNECTION REQUEST message: TM

Information Element	Value/remark
Message Type	
Initial UE identity	To be checked against requirement if specified
Establishment cause	To be checked against requirement if specified
Protocol error indicator	FALSE
Measured results on RACH	Not checked

Contents of RRC CONNECTION RELEASE message: UM

Information Element	Value/remark
Message Type U-RNTI - SRNC identity - S-RNTI RRC transaction identifier Integrity check info - Message authentication code - RRC Message sequence number N308 Release cause Rplmn information	This IE is set to the following value when the message is transmitted on the DCCH. When transmitted on CCCH, this is absent. 0000 0000 0001B 0000 0000 0000 0000 0001B 0 The presence of this IE depends on 2 factors: (a) IXIT statements in TS 34.123-2: If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted. (b) This IE is present when this message is transmitted on downlink DCCH. Else, this IE and the sub-IEs are omitted. SS calculates the value of MAC-I for this message and writes to this IE. SS provides the value of this IE, from its internal counter. 2 (for CELL_DCH state). Not Present (for UE in other connected mode states). Normal Not Present

Contents of RRC CONNECTION RELEASE COMPLETE message: AM or UM

Information Element	Semantics description
Message Type RRC transaction identifier Integrity check info - Message authentication code - RRC Message sequence number Error indication	The value of this IE is checked to see that it matches the value of the same IE transmitted in the downlink RRC CONNECTION RELEASE message. The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent. Checked to see if it's identical to the value of XMAC-I calculated by the SS Checked to see if it is present. This number is used by the SS to compute the XMAC-I Not checked

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

Information Element	Value/remark
Message Type	
Initial UE identity	Reference to clause 6.10 Parameter Set
RRC transaction identifier	0
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
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_DCH
UTRAN DRX cycle length coefficient	5 (2 to 12)
Capability update requirement	
- UE radio access capability update requirement	FALSE
- System specific capability update requirement	Not Present
Signalling RB information to setup	(UM DCCH for RRC)
- RB identity	1
- CHOICE RLC info type	
- RLC info	
- CHOICE Uplink RLC mode	UM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Timer_MRW	100
- MaxMRW	4
- CHOICE Downlink RLC mode	UM RLC
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	5
- Logical channel identity	1
- CHOICE RLC size list	All
- MAC logical channel priority	1
- Downlink RLC logical channel info	
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- <u>DL DCH</u> Transport channel identity	10
- Logical channel identity	1
Signalling RB information to setup	(AM DCCH for RRC)
- RB identity	2
- CHOICE RLC info type	
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Timer_MRW	100
- MaxMRW	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Windows	99
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE

- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PDU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	5
- Logical channel identity	2
- CHOICE RLC size list	All
- 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
- Logical channel identity	2
Signalling RB information to setup	(AM DCCH for NAS_DT High priority)
- RB identity	3
- CHOICE RLC info type	
- RLC info	
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Timer_MRW	100
- MaxMRW	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Windows	99
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PDU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	5
- Logical channel identity	3
- CHOICE RLC size list	All
- 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
- Logical channel identity	3
Signalling RB information to setup	(AM DCCH for NAS_DT Low priority)
- RB identity	4
- CHOICE RLC info type	
- RLC info	

- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- SDU discard mode	Max DAT retransmissions
- MAX_DAT	4
- Timer_MRW	100
- MaxMRW	4
- Transmission window size	8
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Windows	99
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	8
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	200
- Missing PDU indicator	TRUE
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	1
- Uplink transport channel type	DCH
- Transport channel identity	5
- Logical channel identity	4
- CHOICE RLC size list	All
- 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
- Logical channel identity	4
UL Transport channel information for all transport channels	
- TFC subset	(This IE is repeated for TFC number.)
- Allowed Transport Format combination	0 to MaxTFCValue-1 (MaxTFCValue is refer to clause 6.10 Parameter Set.)
- PRACH TFCS	Not Present
- CHOICE Mode	FDD
- UL DCH TFCS	(This IE is repeated for TFC number.)
- Normal CHOICE TFCI signalling	Normal
- TFCI Field 1 information	
- CHOICE TFCS representation	CompleteAddition
- TFCS complete reconfigure addition information	
- CHOICE CTFC Size	Number of bits used must be enough to cover all combinations of CTFC from clause 6.10. Refer to clause 6.10 Parameter Set
- CTFC information	
- Power offset information	
- CHOICE Gain Factors	Signalled Gain Factor
- Gain factor β_c	0
- Gain factor β_d	0
- Reference TFC ID	Not Present
- Power offset Pp-m	0dB
Added or Reconfigured UL TrCH information	
- Transport channel identity	5
- TFS	
- CHOICE Transport channel type	Dedicated transport channels

<ul style="list-style-type: none"> - Dynamic Transport format information - RLC size - Number of TBs and TTI lists - Transmission Time Interval - Number of Transport blocks - CHOICE Logical channel list <ul style="list-style-type: none"> - Explicit List <ul style="list-style-type: none"> - RB identity - Semi-static Transport Format information <ul style="list-style-type: none"> - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size 	<p>(This IE is repeated for TFI number)</p> <p>Reference to clause 6.10 Parameter Set</p> <p>(This IE is repeated for TFI number)</p> <p>Reference to TS34.108 clause 6.10 Parameter Set</p> <p>Reference to TS34.108 clause 6.10 Parameter Set</p>
<p>DL Transport channel information common for all transport channel</p> <ul style="list-style-type: none"> - SCCPCH TFCS - <u>CHOICE mode</u> - CHOICE DL parameters <ul style="list-style-type: none"> - DL DCH TFCS <ul style="list-style-type: none"> - <u>Normal CHOICE TFCI signalling</u> - TFCI Field 1 information - CHOICE TFCS representation - TFCS <u>addition complete reconfigure</u> 	<p>Reference to TS34.108 clause 6.10 Parameter Set</p> <p>Reference to TS34.108 clause 6.10 Parameter Set</p> <p>Reference to clause 6.10 Parameter Set</p> <p>Reference to clause 6.10 Parameter Set</p> <p>Reference to clause 6.10 Parameter Set</p> <p>Reference to clause 6.10 Parameter Set</p>
<p>information</p> <ul style="list-style-type: none"> - CHOICE CTFC Size <ul style="list-style-type: none"> - CTFC - Power offset information - CHOICE Gain Factor <ul style="list-style-type: none"> - Gain factor β_c - Gain factor β_d - Reference TFC ID - Power offset Pp-m 	<p>Not Present</p> <p><u>FDD</u></p> <p>Independent</p> <p>(This IE is repeated for TFC number.)</p> <p><u>Normal</u></p> <p><u>AdditionComplete</u></p>
<p>Added or Reconfigured DL TrCH information</p> <ul style="list-style-type: none"> - <u>Downlink transport channel type</u> - DL Transport channel identity - CHOICE DL parameters - <u>Uplink transport channel type</u> - UL TrCH Identity - DCH quality target - BLER Quality value - Transparent mode signalling info 	<p>Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.</p> <p>Refer to clause 6.10 Parameter Set</p> <p>Signalled Gain Factor</p> <p>0</p> <p>0</p> <p>Not Present</p> <p>0dB</p>
<p>Frequency info</p> <ul style="list-style-type: none"> - UARFCN uplink(Nu) - UARFCN downlink(Nd) 	<p><u>DCH</u></p> <p>10</p> <p>SameAsUL</p> <p><u>DCH</u></p> <p>5</p>
<p>Maximum allowed UL TX power</p> <p>Uplink DPCH info</p> <ul style="list-style-type: none"> - Uplink DPCH power control info - DPCC power offset - PC Preamble - <u>SRB delay</u> - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH 	<p>-6.3</p> <p>Not Present</p> <p>Reference to clause 6.10 Parameter Set</p> <p>Reference to clause 6.10 Parameter Set</p> <p>33dBm</p>
<p>spreading factor</p> <ul style="list-style-type: none"> - TFCI existence - Number of FBI bit - Puncturing Limit 	<p>-6dB</p> <p><u>15-slots1 frame</u></p> <p><u>7 frames</u></p> <p>Algorithm1</p> <p>1dB</p> <p>Long</p> <p>0 (0 to 16777215)</p> <p>Not Present(1)</p> <p>SF is reference to clause 6.10 Parameter Set</p> <p>TRUE</p> <p>Not Present(0)</p> <p>Reference to clause 6.10 Parameter Set</p>
<p>Downlink information common for all radio links</p>	

- Downlink DPCH info common for all RL	Maintain
- Timing Indication	Not Present
- CFN-targetCFN frame offset	FDD
- CHOICE mode	
- Downlink DPCH power control information	0 (single)
- DPC mode	FDD
- CHOICE mode	Not Present
- DL rate matching restriction information	Reference to clause 6.10 Parameter Set
- Spreading factor	Flexible
- Fixed or Flexible Position	TRUE
- TFCI existence	Not Present
- Number of bits for Pilot bits(SF=128,256)	1
- DPCH compressed mode info	Inactive
-TGPSI	
-TGPS Status Flag	
- Transmission gap pattern sequence configuration parameters	(Current CFN + (256 – TTI/10msec)) mod 256
- TGCFN	FDD Measurement
- TGMP	62
- TGPRC	8
- TGSN	10
- TGL1	5
- TGL2	15
- TGD	35
- TGPL1	35
- TGPL2	Mode 1
- RPP	Mode 1
- ITP	DL
- UL/DL Mode	SF/2
- Downlink compressed mode method	Not Present
- Uplink compressed mode method	A
- Downlink frame type	2.0
- DeltaSIR1	1.0
- DeltaSIRafter1	Not Present
- DeltaSIR2	Not Present
- DeltaSIRafter2	None
- TX Diversity mode	Not Present
- SSDT information	
- S field	
- Code Word Set	
- Default DPCH Offset Value	0
Downlink information for each radio links	
- Primary CPICH info	100
- Primary scrambling code	Not Present
- PDSCH with SHO DCH info	
- DSCH radio link identifier	
- TFCI Combining set	
- Radio link identifier	
- Primary CPICH info	
- Primary scrambling code	
- 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	0 chips
- Power offset $P_{Pilot-DPCH}$	TBD
- Secondary CPICH info	Not Present
- Secondary scrambling code	
- channelisation code	
- DL channelisation code	1
- Secondary scrambling code	Reference to clause 6.10 Parameter Set
- Spreading factor	SF-1(SF is reference to clause 6.10 Parameter Set)
- Code number	

<ul style="list-style-type: none"> - Scrambling code change - TPC combination index - SSDT Cell Identity - Closed loop timing adjustment mode - Secondary CCPCH info - Selection Indicator - Primary CPICH usage for channel estimation - Secondary CPICH info - Secondary scrambling code - channelisation code - Secondary scrambling code - SSDT Indicator - Spreading factor - Code number - Pilot symbol existence - TFCI existence - Fixed or Flexible Position - Timing offset - TFCS - FACH/PCH information - TFS - Dynamic Transport format information - RLC Size - Number of TBs and TTI lists - Transmission Time Interval - Number of Transport blocks - CHOICE Logical channel list - Explicit List - RB identity - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - TFS - Dynamic Transport format information - Number of Transport blocks - RLC Size - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - References to system information blocks - Scheduling information 	<p>No change 0 -a Not Present Not Present</p> <p>Not Present Not Present</p> <p>(This IE is repeated for TFI number) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set</p> <p>Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set</p> <p>Not Present</p>
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Contents of RRC CONNECTION SETUP COMPLETE message: AM

Information Element	Value/remark
Message Type	
RRC transaction identifier	The value of this IE is checked to see that it matches the value of the same IE transmitted in the downlink RRC CONNECTION SETUP message.
CN domain identity	Not checked
START	Not checked
UE radio access capability	Not checked
UE system specific capability	Not checked

Contents of SECURITY MODE COMMAND message: AM

Information Element	Value/remark
<p>Message Type</p> <p>RRC transaction identifier</p> <p>Integrity check info</p> <ul style="list-style-type: none"> - Message authentication code - RRC Message Sequence Number <p>Security capability</p> <ul style="list-style-type: none"> - Ciphering algorithm capability <ul style="list-style-type: none"> - Integrity protection algorithm capability <p>Ciphering mode info</p> <ul style="list-style-type: none"> - Ciphering mode command - Ciphering algorithm <ul style="list-style-type: none"> - Ciphering activation time for DPCH - Radio bearer downlink ciphering activation time info - Radio bearer activation time - RB identity - RLC sequence number - RB identity - RLC sequence number - RB identity - RLC sequence number - RB identity - RLC sequence number <p>Integrity protection mode info</p> <ul style="list-style-type: none"> - Integrity protection mode command - Downlink integrity protection activation info - Integrity protection algorithm - Integrity protection initialisation number <p>CN domain identity</p>	<p>Arbitrarily selects an integer between 0 and 3</p> <p>Set to an arbitrarily selected 32-bits integer</p> <p>Set to an arbitrarily selected integer between 0 and 15</p> <p>If ciphering is indicated to be active on IXIT statements in TS 34.123-2, use one of the supported ciphering algorithms. Else, set this IE to 0000000000000000B (UEA0)</p> <p>0000000000000010B (UIA1)</p> <p>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.</p> <p>Start</p> <p>Use the same ciphering algorithm specified in "ciphering algorithm capability" IE in this message.</p> <p>Not Present</p> <p>1</p> <p>Current RLC SN+2</p> <p>2</p> <p>Current RLC SN+2</p> <p>3</p> <p>Current RLC SN + 2</p> <p>4</p> <p>Current RLC SN + 2</p> <p>The presence of this IE is dependent on IXIT statements in TS 34.123-32. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted.</p> <p>Start</p> <p>Not Present</p> <p>UIA1</p> <p>SS selects an arbitrary 32 bits number for FRESH</p> <p>Supported domain</p>

Contents of SECURITY MODE COMPLETE message: AM

Information Element	Value/remark
Message Type RRC transaction identifier Integrity check info - Message authentication code - RRC Message sequence number Uplink integrity protection activation info Radio bearer uplink ciphering activation time info	The value of this IE is checked to see that it matches the value of the same IE transmitted in the downlink SECURITY MODE COMMAND message. The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent. This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value. Not checked. If ciphering is not activated in SECURITY MODE COMMAND message, this IE must be absent. Else, SS checks this IE for the presence of activation times for all ciphered uplink RLC-UM and RLC-AM RBs.

Contents of UPLINK DIRECT TRANSFER message: AM

Information Element	Value/remark
Message Type Integrity check info - Message authentication code - RRC Message sequence number CN domain identity NAS message Measured results on RACH	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent. This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value. Checked to see if set to supported CN domain as specified in the IXIT statements Set according to that indicated in specific message content clause Not checked

3GPP TSG-T1 Meeting #11
Melbourne, Australia, 17 – 18 May 2001

Tdoc T1-010213

3GPP TSG-T1/SIG Meeting #17
Melbourne, Australia, 14-16 May 2001

T1S-010098

CR-Form-v3	
<h1>CHANGE REQUEST</h1>	
⌘ 34.108 CR 045 ⌘ rev ⌘ Current version: 3.3.0 ⌘	

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Updates to clause 7.4 of TS34.108 v3.3.0		
Source:	⌘ Matsushita Communication Industries (MCI)		
Work item code:	⌘ 		
Date:	⌘ 14 May 2001		
Category:	⌘ F		
	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <p><i>Use one of the following categories:</i></p> <p>F (essential correction)</p> <p>A (corresponds to a correction in an earlier release)</p> <p>B (Addition of feature),</p> <p>C (Functional modification of feature)</p> <p>D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p> </td> <td style="width: 50%; vertical-align: top;"> <p><i>Use one of the following releases:</i></p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>REL-4 (Release 4)</p> <p>REL-5 (Release 5)</p> </td> </tr> </table>	<p><i>Use one of the following categories:</i></p> <p>F (essential correction)</p> <p>A (corresponds to a correction in an earlier release)</p> <p>B (Addition of feature),</p> <p>C (Functional modification of feature)</p> <p>D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>	<p><i>Use one of the following releases:</i></p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>REL-4 (Release 4)</p> <p>REL-5 (Release 5)</p>
<p><i>Use one of the following categories:</i></p> <p>F (essential correction)</p> <p>A (corresponds to a correction in an earlier release)</p> <p>B (Addition of feature),</p> <p>C (Functional modification of feature)</p> <p>D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>	<p><i>Use one of the following releases:</i></p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>REL-4 (Release 4)</p> <p>REL-5 (Release 5)</p>		

Reason for change:	⌘ Update the setup procedure according to TS25.331 v3.6.0.
Summary of change:	⌘ IE "DRX indicator" has been removed. IE "RRC state indicator" has been added to CELL UPDATE CONFIRM messages.
Consequences if not approved:	⌘ Setting up of initial conditions for testing will be incorrect.

Clauses affected:	⌘ 7.4.2.7		
Other specs affected:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications </td> <td style="width: 50%; vertical-align: top;">⌘ </td> </tr> </table>	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘
<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘ 		
Other comments:	⌘ 		

How to create CRs using this form:

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

- Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 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://www.3gpp.org/specs/>. For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.

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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.

7.4 Common generic procedures for AS testing

7.4.1 UE RRC Test States for common procedures

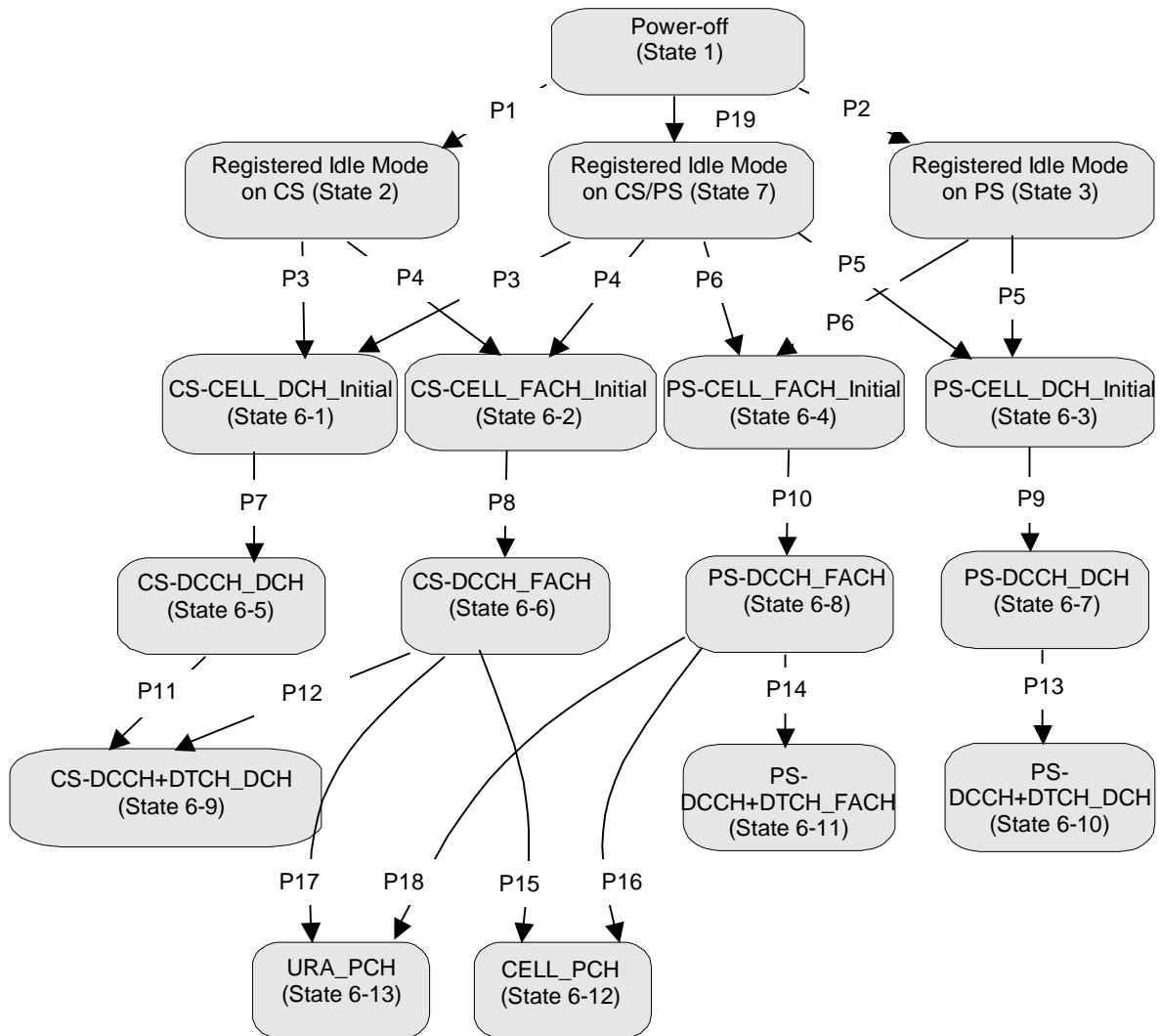


Figure 7.4.1.1: UE RRC test initial states and common procedures

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 above, the operating states for various protocols in the UE are given in Table 7.4.1.1 below.

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 1, state 2, state 3, P1, P2 and P19 are described in TS34.108 clause 7.2. States 6-X (for X=1 to 16) are described below.

7.4.2 Generic Setup Procedure for RRC test cases

7.4.2.1 RRC connection establishment procedure for circuit-switched calls (procedure P3 and P4)

7.4.2.1.1 Mobile terminating call

7.4.2.1.1.1 Initial conditions

System Simulator:

1 cell, default parameters

User Equipment:

- The UE shall be operated under normal test conditions as specified in TS 34.108.
- The Test USIM shall be inserted.

7.4.2.1.1.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1 of TS 34.108.

7.4.2.1.1.3 Procedure

The Call Set-up procedure shall be performed under ideal radio conditions as defined in clause 5 of TS 34.108.
Reference Test Conditions:

Step	Direction		Message	Comments
	UE	SS		
1	<--		PAGING TYPE 1 (PCCH)	RRC
2	-->		RRC CONNECTION REQUEST (CCCH)	RRC
3	<--		RRC CONNECTION SETUP (CCCH)	RRC
4	-->		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC

7.4.2.1.1.4 Specific message contents

To execute procedure P3, all specific message contents shall be referred to clause 9 of TS 34.108.

To execute procedure P4, all specific message contents with the exception of step 3 shall be referred to clause 9 of TS 34.108. For step 3, the message of the same type titled "Transition to CELL_FACH" in TS 34.123-1 Annex. A is used.

7.4.2.1.2 Mobile originating calls

7.4.2.1.2.1 Initial conditions

System Simulator:

1 cell, default parameters

User Equipment:

- The UE shall be operated under normal test conditions as specified in TS 34.108.
- The Test USIM shall be inserted.

7.4.2.1.2.2 Definition of system information messages

The default system information messages specified in clause 6.1 of TS 34.108 are used.

7.4.2.1.2.3 Procedure

The Call Set-up procedure shall be performed under ideal radio conditions as defined in clause 5 of TS 34.108.
Reference Test Conditions:

Step	Direction		Message	Comments
	UE	SS		
1	-->		RRC CONNECTION REQUEST (CCCH)	RRC
2	<--		RRC CONNECTION SETUP (CCCH)	RRC
3	-->		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC

7.4.2.1.2.4 Specific message contents

To execute procedure P3, all specific message contents shall be referred to clause 9 of TS 34.108.

To execute procedure P4, all specific message contents with the exception of step 2 shall be referred to clause 9 of TS 34.108. For step 2, the message of the same type titled "Transition to CELL_FACH" in TS 34.123-1 Annex. A is used.

7.4.2.2 RRC connection establishment procedure for packet switched sessions (procedure P5 and P6)

7.4.2.2.1 Mobile terminating session

7.4.2.2.1.1 Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions as specified in TS 34.108.
- The Test USIM shall be inserted.

7.4.2.2.1.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1 of TS 34.108.

7.4.2.2.1.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in clause 5 of TS 34.108.

Reference Test Conditions:

Step	Direction		Message	Comments
	UE	SS		
1	<--		PAGING TYPE1 (PCCH)	Paging
2	-->		RRC CONNECTION REQUEST (CCCH)	RRC
3	<--		RRC CONNECTION SETUP (CCCH)	RRC
4	-->		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC

7.4.2.2.1.4 Specific message contents

To execute procedure P5, all specific message contents shall be referred to clause 9 of TS 34.108.

To execute procedure P6, all specific message contents with the exception of step 3 shall be referred to clause 9 of TS 34.108. For step 3, the message of the same type titled "Transition to CELL_FACH" in TS 34.123-1 Annex. A is used.

7.4.2.2.2 Mobile originating sessions

7.4.2.2.2.1 Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions as specified in TS 34.108.
- The Test USIM shall be inserted.

7.4.2.2.2.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1 of TS 34.108.

7.4.2.2.2.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in clause 5 of TS 34.108. Reference Test Conditions:

Step	Direction		Message	Comments
	UE	SS		
1	-->		RRC CONNECTION REQUEST (CCCH)	RRC
2	<--		RRC CONNECTION SETUP (CCCH)	RRC
3	-->		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC

7.4.2.2.2.4 Specific message contents

To execute procedure P5, all specific message contents shall be referred to clause 9 of TS 34.108.

To execute procedure P6, all specific message contents with the exception of step 2 shall be referred to clause 9 of TS 34.108. For step 2, the message of the same type titled "Transition to CELL_FACH" in TS 34.123-1 Annex. A is used.

7.4.2.3 NAS call set up procedure for circuit switched calls (procedure P7 and P8)

7.4.2.3.1 Mobile terminating call

7.4.2.3.1.1 Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-1 or state 6-2.
- The Test USIM shall be inserted.

7.4.2.3.1.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1 of TS 34.108.

7.4.2.3.1.3 Procedure

The Call Set-up procedure shall be performed under Ideal radio conditions as defined in clause 5 of TS 34.108.

Reference Test Conditions:

Step	Direction		Message	Comments
	UE	SS		
1	-->		PAGING RESPONSE	RR
2	<--		AUTHENTICATION REQUEST	MM
3	-->		AUTHENTICATION RESPONSE	MM
4	<--		SECURITY MODE COMMAND	RRC
5	-->		SECURITY MODE COMPLETE	RRC
6	<--		SET UP	CC
7	-->		CALL CONFIRMED	CC

7.4.2.3.1.4 Specific message contents

All RRC specific message contents shall be referred to clause 9 of TS 34.108.

7.4.2.3.2 Mobile originating calls

7.4.2.3.2.1 Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-1 or state 6-2.
- The Test USIM shall be inserted.

7.4.2.3.2.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1 of TS 34.108.

7.4.2.3.2.3 Procedure

The Call Set-up procedure shall be performed under Ideal radio conditions as defined in clause 5 of TS 34.108.
Reference Test Conditions:

Step	Direction		Message	Comments
	UE	SS		
1	-->		CM SERVICE REQUEST	MM
2	<--		AUTHENTICATION REQUEST	MM
3	-->		AUTHENTICATION RESPONSE	MM
4	<--		SECURITY MODE COMMAND	RRC
5	-->		SECURITY MODE COMPLETE	RRC
6	-->		SET UP	CC
7	<--		CALL PROCEEDING	CC

7.4.2.3.2.4 Specific message contents

All RRC specific message contents shall be referred to clause 9 of TS 34.108.

7.4.2.4 NAS session activation procedure for packet switched sessions (procedure P9 and P10)

7.4.2.4.1 Mobile terminating session

7.4.2.4.1.1 Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-3 or state 6-4.
- The Test USIM shall be inserted.

7.4.2.4.1.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1 of TS 34.108.

7.4.2.4.1.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in clause 5 of TS 34.108.
Reference Test Conditions:

Step	Direction		Message	Comments
	UE	SS		
1	-->		SERVICE REQUEST	GMM
2	<--		AUTHENTICATION AND CIPHERING REQUEST	GMM
3	-->		AUTHENTICATION AND CIPHERING RESPONSE	GMM
4	<--		SECURITY MODE COMMAND	RRC
5	-->		SECURITY MODE COMPLETE	RRC
6	<--		REQUEST PDP CONTEXT ACTIVATION	SM
7	-->		ACTIVATE PDP CONTEXT REQUEST	SM

7.4.2.4.1.4 Specific message contents

All RRC specific message contents shall be referred to clause 9 of TS 34.108.

7.4.2.4.2 Mobile originating sessions

7.4.2.4.2.1 Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-3 or state 6-4.
- The Test USIM shall be inserted.

7.4.2.4.2.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1 of TS 34.108.

7.4.2.4.2.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in clause 5 of TS 34.108.
Reference Test Conditions:

Step	Direction		Message	Comments
	UE	SS		
1	-->		SERVICE REQUEST	GMM
2	<--		AUTHENTICATION AND CIPHERING REQUEST	GMM
3	-->		AUTHENTICATION AND CIPHERING RESPONSE	GMM
4	<--		SECURITY MODE COMMAND	RRC
5	-->		SECURITY MODE COMPLETE	RRC
6	-->		ACTIVATE PDP CONTEXT REQUEST	SM

7.4.2.4.2.4 Specific message contents

All RRC specific message contents shall be referred to clause 9 of TS34.108.

7.4.2.5 Radio access bearer establishment procedure for circuit switched calls (procedure P11 and P12)

7.4.2.5.1 Mobile terminating call

7.4.2.5.1.1 Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-5 or state 6-6.
- The Test USIM shall be inserted.

7.4.2.5.1.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1 of TS 34.108.

7.4.2.5.1.3 Procedure

The Call Set-up procedure shall be performed under Ideal radio conditions as defined in clause 5 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	-->		ALERTING	CC (This message is optional)
4	-->		CONNECT	CC
5	<--		CONNECT ACKNOWLEDGE	CC

7.4.2.5.1.4 Specific message contents

To execute procedure P11, use the message titled “CS speech” (defined in clause 9 of TS 34.108) for the message in step 1. To execute procedure 12, use the message “The others of speech in CS” (defined in Annex A of TS 34.123-1) for the message in step 1.

7.4.2.5.2 Mobile originating calls

7.4.2.5.2.1 Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-5 or state 6-6.
- The Test USIM shall be inserted.

7.4.2.5.2.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1 of TS 34.108.

7.4.2.5.2.3 Procedure

The Call Set-up procedure shall be performed under Ideal radio conditions as defined in clause 5 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	<--		ALERTING	CC
4	<--		CONNECT	CC
5	-->		CONNECT ACKNOWLEDGE	CC

7.4.2.5.2.4 Specific message contents

To execute procedure P11, use the message titled “CS speech” (defined in clause 9 of TS 34.108) for the message in step 1. To execute procedure 12, use the message “The others of speech in CS” (defined in Annex A of TS 34.123-1) for the message in step 1.

7.4.2.6 Radio access bearer establishment procedure for packet switched sessions (procedure P13 and P14)

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 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 Annex A of TS 34.123-1 are used. To execute procedure P13, use the message titled “Packet to CELL_DCH from CELL_DCH in PS”. To execute procedure 14, use the message titled “Packet to CELL_FACH from CELL_FACH 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 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 Annex A of TS 34.123-1 are used. To execute procedure P13, use the message titled "Packet to CELL_DCH from CELL_DCH in PS". To execute procedure 14, use the message titled "Packet to CELL_FACH from CELL_FACH in PS".

7.4.2.7 Procedure for transitions to CELL_PCH or URA_PCH state (procedure P15, P16, P17 and P18)

7.4.2.7.1 Transition from CELL_FACH to CELL_PCH (procedure P15 and P16)

7.4.2.7.1.1 Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-6 or state 6-8.
- The Test USIM shall be inserted.

7.4.2.7.1.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1 of TS 34.108.

7.4.2.7.1.3 Procedure

The Call Set-up procedure shall be performed under ideal radio conditions as defined in clause 5 of TS 34.108.
Reference Test Conditions:

Step	Direction		Message	Comments
	UE	SS		
1			SS waits for at least T305, to allow the UE to execute periodic cell update procedure	
2		-->	CELL UPDATE	RRC
3		<--	CELL UPDATE CONFIRM	RRC

7.4.2.7.1.4 Specific message contents

Contents of CELL UPDATE message: CCCH-TM (Step 2)

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	Checked if it is assigned value
- S-RNTI	Checked if it is assigned value

Contents of CELL UPDATE CONFIRM message: CCCH-UM (STEP 3)

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	Assigned value
- S-RNTI	Assigned value
Integrity check info	Not Present
- Message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
Ciphering mode info	Not Present (If ciphering is applied, this IE is needed)
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator RRC state indicator	DRX with cell updating CELL_PCH
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator (for C-plane)	FALSE
RLC reset indicator (for U-plane)	FALSE
CN information info	Not Present
URA identity	0000 0000 0000 0001B
RB with PDCP information	Not Present
Frequency info	Not Present
Maximum allowed UL TX power	33dBm
CHOICE channel requirement	Not Present
Downlink information common for one radio link	Not Present

7.4.2.7.2 Transition from CELL_FACH to URA_PCH (procedure P17 and P18)

7.4.2.7.2.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-6 or state 6-8.
- The Test USIM shall be inserted.

7.4.2.7.2.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1 of TS 34.108.

7.4.2.7.2.3 Procedure

The Call Set-up procedure shall be performed under ideal radio conditions as defined in clause 5 of TS 34.108.
Reference Test Conditions:

Step	Direction		Message	Comments
	UE	SS		
1			SS waits for at least T305, to allow the UE to execute periodic cell update procedure	
2		-->	CELL UPDATE	RRC
3		<--	CELL UPDATE CONFIRM	RRC

7.4.2.7.2.4 Specific message contents

Contents of CELL UPDATE message: CCCH-TM (Step 2)

Information Element	Value/remark
U-RNTI	
- SRNC identity	Checked if it is assigned value
- S-RNTI	Checked if it is assigned value

Contents of CELL UPDATE CONFIRM message: CCCH-UM (Step 3)

Information Element	Value/remark
Message Type	
U-RNTI	
- SRNC identity	Assigned value
- S-RNTI	Assigned value
Integrity check info	Not Present
- message authentication code	
- RRC message sequence number	
Integrity protection mode info	Not Present
Ciphering mode info	Not Present (if ciphering is applied, this IE is needed)
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	DRX with URA updating
RRC state indicator	URA_PCH
UTRAN DRX cycle length coefficient	Not Present
RLC reset indicator(for C-plane)	FALSE
RLC reset indicator(for U-plane)	FALSE
CN information info	Not Present
URA identity	0000 0000 0000 0001B
RB with PDCP information	Not Present
Frequency info	Not Present
Maximum allowed UL TX power	33dBm
CHOICE channel requirement	Not Present
Downlink information common for one radio link	Not Present

3GPP TSG-T1 Meeting #11
Melbourne, Australia, 17 – 18 May 2001

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3GPP TSG-T1 SWG SIG Meeting #17
Melbourne, Australia, 14th-16th May 2001

T1S-010117

<small>CR-Form-v3</small>	
CHANGE REQUEST	
⌘ 34.108 CR 046 ⌘ rev - ⌘ Current version: 3.3.0 ⌘	

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ System Information Blocks for TDD mode		
Source:	⌘ Siemens AG		
Work item code:	⌘ Conformance testing for UE (TDD)	Date:	⌘ 14.May.2001
Category:	⌘ F	Release:	⌘ R99
<i>Use <u>one</u> of the following categories:</i>		<i>Use <u>one</u> of the following releases:</i>	
F (essential correction)		2 (GSM Phase 2)	
A (corresponds to a correction in an earlier release)		R96 (Release 1996)	
B (Addition of feature),		R97 (Release 1997)	
C (Functional modification of feature)		R98 (Release 1998)	
D (Editorial modification)		R99 (Release 1999)	
Detailed explanations of the above categories can be found in 3GPP TR 21.900.		REL-4 (Release 4)	
		REL-5 (Release 5)	

Reason for change:	⌘ Different SIBs specified in TS 25.331 v3.6.0 for FDD and TDD
Summary of change:	⌘ System Information Blocks for TDD mode SIB 11, 12 are corrected. SB1, SIB 5, 6, 14, 17 are added for TDD mode Default settings for cells (TDD mode)
Consequences if not approved:	⌘ Simulated network environments for TDD are not completely described

Clauses affected:	⌘ Clause 6.1
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications ⌘ <input type="checkbox"/>
	<input type="checkbox"/> Test specifications
	<input type="checkbox"/> O&M Specifications
Other comments:	⌘

6.1 Simulated network environments

The UE will eventually have to operate in either single mode networks (FDD or TDD) and dual mode networks (FDD+TDD).

It is <ffs> whether a reference environment needs to be defined for multi-mode networks (eg: the environment could be created by combining two appropriate reference environments from the single mode cases).

The following tables list the default parameters for 1 to 8 cell environments for testing.

Contents of Master Information Block PLMN type is the case of GSM-MAP

- MIB value tag	1
- Supported PLMN types	GSM-MAP
- PLMN type	
- PLMN identity	Set to the same Mobile Country Codes stored in the test USIM card.
- MCC digit	Set to the same Mobile Network Codes stored in the test USIM card.
- MNC digit	Not Present
- ANSI-41 Core Network information	
- References to other system information blocks and scheduling blocks	
- References to other system information blocks	
- Scheduling information	
- CHOICE Value tag	1
- Cell Value tag	2
- Scheduling	16
- SEG_COUNT	2
- SIB_REP	2
- SIB_POS	Scheduling Block 1
- SIB_POS offset info	
- SIB_OFF	PLMN Value tag
- SIB type	1
- Scheduling information	2
- CHOICE Value tag	128
- PLMN Value tag	10
- SEG_COUNT	2
- SIB_REP	System Information Type 1
- SIB_POS	
- SIB_POS offset info	Cell Value tag
- SIB_OFF	1
- SIB type SIBs only	1
- Scheduling information	128
- CHOICE Value tag	14
- Cell Value tag	Not Present – use default
- SEG_COUNT	System Information Type 2
- SIB_REP	
- SIB_POS	Cell Value tag
- SIB_POS offset info	1
- SIB type SIBs only	1
- Scheduling information	64
- CHOICE Value tag	6
- Cell Value tag	Not Present – use default
- SEG_COUNT	System Information Type 3
- SIB_REP	
- SIB_POS	Cell Value tag
- SIB_POS offset info	1
- SIB type SIBs only	1
- Scheduling information	64
- CHOICE Value tag	38
- Cell Value tag	Not Present – use default
- SEG_COUNT	System Information Type 4
- SIB_REP	
- SIB_POS	
- SIB_POS offset info	
- SIB type SIBs only	

Contents of Scheduling Block 1 (FDD)

- References to other system information blocks	
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	3
- SIB_REP	128
- SIB_POS	26
- SIB_POS offset info	
- SIB_OFF	2
- SIB_OFF	2
- SIB type SIBs only	System Information Type 5
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	3
- SIB_REP	128
- SIB_POS	42
- SIB_POS offset info	
- SIB_OFF	2
- SIB_OFF	2
- SIB type SIBs only	System Information Type 6
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	1
- SIB_REP	128
- SIB_POS	22
- SIB_POS offset info	Not Present – use default
- SIB type SIBs only	System Information Type 7
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	2
- SIB_REP	128
- SIB_POS	58
- SIB_POS offset info	
- SIB_OFF	2
- SIB type SIBs only	System Information Type 11
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	2
- SIB_REP	128
- SIB_POS	106
- SIB_POS offset info	
- SIB_OFF	2
- SIB type SIBs only	System Information Type 12
- Scheduling information	
- CHOICE Value tag	PLMN Value tag
- PLMN Value tag	1
- SEG_COUNT	6
- SIB_REP	128
- SIB_POS	74
- SIB_POS offset info	
- SIB_OFF	2
- SIB_OFF	2
- SIB_OFF	8
- SIB_OFF	4
- SIB_OFF	2
- SIB type SIBs only	System Information Type 16

Contents of Scheduling Block 1 (TDD)

- References to other system information blocks	
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	<u>1</u>
- SEG_COUNT	<u>3</u>
- SIB_REP	<u>128</u>
- SIB_POS	<u>26</u>
- SIB_POS offset info	
- SIB_OFF	<u>2</u>
- SIB_OFF	<u>2</u>
- SIB type SIBs only	System Information Type 5
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	<u>1</u>
- SEG_COUNT	<u>3</u>
- SIB_REP	<u>128</u>
- SIB_POS	<u>42</u>
- SIB_POS offset info	
- SIB_OFF	<u>2</u>
- SIB_OFF	<u>2</u>
- SIB type SIBs only	System Information Type 6
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	<u>1</u>
- SEG_COUNT	<u>1</u>
- SIB_REP	<u>128</u>
- SIB_POS	<u>22</u>
- SIB_POS offset info	Not Present – use default
- SIB type SIBs only	System Information Type 7
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	<u>1</u>
- SEG_COUNT	<u>2</u>
- SIB_REP	<u>128</u>
- SIB_POS	<u>58</u>
- SIB_POS offset info	
- SIB_OFF	<u>2</u>
- SIB type SIBs only	System Information Type 11
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	<u>1</u>
- SEG_COUNT	<u>2</u>
- SIB_REP	<u>128</u>
- SIB_POS	<u>106</u>
- SIB_POS offset info	
- SIB_OFF	<u>2</u>
- SIB type SIBs only	System Information Type 12
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	<u>1</u>
- SEG_COUNT	<u>1</u>
- SIB_REP	<u>64</u>
- SIB_POS	<u>54</u>
- SIB_POS offset info	Not Present - use default
- SIB type SIBs only	System Information Type 14
- Scheduling information	
- CHOICE Value tag	PLMN Value tag
- PLMN Value tag	<u>1</u>
- SEG_COUNT	<u>6</u>
- SIB_REP	<u>128</u>
- SIB_POS	<u>74</u>
- SIB_POS offset info	
- SIB_OFF	<u>2</u>
- SIB_OFF	<u>2</u>
- SIB_OFF	<u>8</u>
- SIB_OFF	<u>4</u>
- SIB_OFF	<u>2</u>

- SIB type SIBs only

System Information Type 16

Contents of System Information Block type1 (supported PLMN type is GSM-MAP)

<ul style="list-style-type: none"> - CN common GSM-MAP NAS system information - GSM-MAP NAS system information <ul style="list-style-type: none"> - MCC digit - MNC digit - Location area code - CN domain system information - CN domain identity - CHOICE CN Type <ul style="list-style-type: none"> - CN domain specific NAS system information - GSM-MAP NAS system information - CN domain specific DRX cycle length coefficient - CN domain identity - CHOICE CN Type <ul style="list-style-type: none"> - CN domain specific NAS system information - GSM-MAP NAS system information - CN domain specific DRX cycle length coefficient - UE Timers and constants in idle mode <ul style="list-style-type: none"> -T300 -N300 -T312 - N312 - UE Timers and constants in connected mode <ul style="list-style-type: none"> - T301 - N301 - T302 - N302 - T304 - N304 - T305 - T307 - T308 - T309 - T310 - N310 - T311 - T312 - N312 - T313 - N313 - T314 - T315 - N315 - T316 - T317 	<p>Contains the PLMN Identity and Location Area Code Set to the same Mobile Country Code stored in test USIM card.</p> <p>Set to the same Mobile Network Code stored in test USIM card. 0001H</p> <p>PS GSM-MAP</p> <p>T.B.D 7</p> <p>CS GSM-MAP</p> <p>T.B.D 7</p> <p>400 milliseconds 7 10 seconds 200</p> <p>2000 milliseconds 2 4000 milliseconds 3 1000 milliseconds 3 60 minutes 50 seconds 320 milliseconds 8 seconds 320 milliseconds 5 500 milliseconds 5 seconds 200 10 seconds 20 20 seconds 30 seconds 200 50 seconds 1800 seconds</p>
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Contents of System Information Block type2

- URA identity list - URA identity	<i>Only 1 URA identity broadcasted</i> 0000 0000 0000 0001B
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Contents of System Information Block type3 (FDD)

- SIB4 indicator	TRUE
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping info	
- Mapping List	
- RAT	UTRA FDD
- Mapping Function Parameter List	1
- Function type	Linear
- Map_parameter_1	1
- Map_parameter_2	1
- Upper_limit	1
- Cell selection_and_reselection_quality_measure	CPICH Ec/NO
- CHOICE mode	FDD
- Sintrasearch	16 dB
- Sintersearch	16 dB
- SsearchHCS	10 dB
- RAT List	For conformance testing in Japan, this IE is omitted. For conformance testing in European countries, this IE is present with the following values.
- RAT identifier	GSM
- Ssearch,RAT	-105 dB
- SHCS,RAT	Not Present
- Slimit,ShearchRAT	Not Present
- Qhyst1s	0 dB
- Qhyst2s	0 dB
- Treselections	0 seconds
- HCS Serving cell information	
- HCS_PRIO	0
- QHCS	0
- TCR _{MAX}	Not used
- NCR	Not Present
- TCMA _X H _{yst}	Not Present
- Maximum allowed UL TX power	33dBm
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Cell Access Restriction	
- Cell barred	Not barred
- Cell Reserved for operator use	Not reserved
- Cell Reserved for SoLSA exclusive use	Not reserved
- Access Class Barred0	Not barred
- Access Class Barred1	Not barred
- Access Class Barred2	Not barred
- Access Class Barred3	Not barred
- Access Class Barred4	Not barred
- Access Class Barred5	Not barred
- Access Class Barred6	Not barred
- Access Class Barred7	Not barred
- Access Class Barred8	Not barred
- Access Class Barred9	Not barred
- Access Class Barred10	Not barred
- Access Class Barred11	Not barred
- Access Class Barred12	Not barred
- Access Class Barred13	Not barred
- Access Class Barred14	Not barred
- Access Class Barred15	Not barred

Contents of System Information Block type3 (TDD)

- SIB4 Indicator	TRUE
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping info	
- RAT	UTRA TDD
- Mapping Function Parameter List	1
- Function type	Linear
- Map_parameter_1	1
- Map_parameter_2	1
- Upper_limit	1
- Cell selection_and_reselection_quality_measure	Not present
- CHOICE mode	TDD
- Sintrasearch	10 dB
- Sintersearch	10 dB
- SsearchHCS	10 dB
- RAT List	For conformance testing in Japan, this IE is omitted. For conformance testing in European countries, this IE is present with the following values.
- RAT identifier	
- Ssearch,RAT	
- SHCS,RAT	Not present
- Slimit,SsearchRAT	Not Present
- Qhyst1s	0 dB
- Treselections	0 seconds
- HCS Serving cell information	
- HCS_PRIO	0
- QHCS	0
- TCRMAX	Not used
- NCR	Not Present
- TCMAXHyst	Not Present
- Maximum allowed UL TX power	30dBm
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Cell Access Restriction	
- Cell barred	Not barred
- Cell Reserved for operator use	Not reserved
- Cell Reserved for SoLSA exclusive use	Not reserved
- Access Class Barred0	Not barred
- Access Class Barred1	Not barred
- Access Class Barred2	Not barred
- Access Class Barred3	Not barred
- Access Class Barred4	Not barred
- Access Class Barred5	Not barred
- Access Class Barred6	Not barred
- Access Class Barred7	Not barred
- Access Class Barred8	Not barred
- Access Class Barred9	Not barred
- Access Class Barred10	Not barred
- Access Class Barred11	Not barred
- Access Class Barred12	Not barred
- Access Class Barred13	Not barred
- Access Class Barred14	Not barred
- Access Class Barred15	Not barred

Contents of System Information Block type4 In connected mode (FDD)

- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping Info	
- Mapping List	
- RAT	UTRA FDD
- Mapping Function Parameter List	
- Function type	Linear
- Map_parameter_1	1
- Map_parameter_2	1
- Upper_limit	1
- Cell_selection_and_reselection_quality_measure	CPICH Ec/NO
- CHOICE mode	FDD
- Sintrasearch	16 dB
- Sintersearch	16 dB
- SsearchHCS	10 dB
- RAT List	For conformance testing in Japan, this IE is omitted. For conformance testing in European countries, this IE is present with the following values.
- RAT identifier	GSM
- Ssearch,RAT	-105 dB
- SHCS,RAT	Not Present
- S _{limit} ,SsearchRAT	Not Present
- Qhyst1s	0 dB
- Qhyst2s	0 dB
- Treselections	0 seconds
- HCS Serving cell information	
- HCS_PRIO	0
- QHCS	0
- TCR _{MAX}	Not used
- NCR	Not Present
- TCMAX _{Hyst}	Not Present
- Maximum allowed UL TX power	33dBm
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Cell Access Restriction	
- Cell barred	Not barred
- Access Class Barred	Not barred
- Cell Reserved for operator use	Not reserved
- Cell Reserved for SoLSA exclusive use	Not reserved
- Access Class Barred0	Not barred
- Access Class Barred1	Not barred
- Access Class Barred2	Not barred
- Access Class Barred3	Not barred
- Access Class Barred4	Not barred
- Access Class Barred5	Not barred
- Access Class Barred6	Not barred
- Access Class Barred7	Not barred
- Access Class Barred8	Not barred
- Access Class Barred9	Not barred
- Access Class Barred10	Not barred
- Access Class Barred11	Not barred
- Access Class Barred12	Not barred
- Access Class Barred13	Not barred
- Access Class Barred14	Not barred
- Access Class Barred15	Not barred

Contents of System Information Block type4 In connected mode (similar to SIB type3) (TDD)

- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping info	
- Mapping list	
- RAT	UTRA TDD
- Mapping Function Parameter List	
- Function type	Linear
- Map_parameter_1	1
- Map_parameter_2	1
- Upper_limit	1
-	Not present
Cell_selection_and_reselection_quality_measure	
- CHOICE mode	TDD
- Sintrasearch	10 dB
- Sintersearch	10 dB
- SsearchHCS	10 dB
- RAT List	For conformance testing in Japan, this IE is omitted. For conformance testing in European countries, this IE is present with the following values
- RAT identifier	
- Ssearch,RAT	
- SHCS,RAT	
- S _{limit} ,S _{search} RAT	Not Present
- Q _{hyst} 1s	0 dB
- Treselections	0 seconds
- HCS Serving cell information	
- HCS_PRIO	0
- QHCS	0
- TCR _{MAX}	Not used
- NCR	Not Present
- TCMAX _{Hyst}	Not Present
- Maximum allowed UL TX power	30dBm
- CHOICE mode	TDD
- Q _{rxlevmin}	-103 dBm
- Cell Access Restriction	
- Cell barred	Not barred
- Access Class Barred	Not barred
- Cell Reserved for operator use	Not reserved
- Cell Reserved for SoLSA exclusive use	Not reserved
- Access Class Barred0	Not barred
- Access Class Barred1	Not barred
- Access Class Barred2	Not barred
- Access Class Barred3	Not barred
- Access Class Barred4	Not barred
- Access Class Barred5	Not barred
- Access Class Barred6	Not barred
- Access Class Barred7	Not barred
- Access Class Barred8	Not barred
- Access Class Barred9	Not barred
- Access Class Barred10	Not barred
- Access Class Barred11	Not barred
- Access Class Barred12	Not barred
- Access Class Barred13	Not barred
- Access Class Barred14	Not barred
- Access Class Barred15	Not barred

Contents of System Information Block type5 (FDD)

- SIB6 indicator	TRUE
- PICH Power offset	-5 dB
- CHOICE Mode	FDD
- AICH Power offset	0dB
- Primary CCPCH info	
- TX Diversity indicator	FALSE
- PRACH system information list	
- PRACH system information	
- PRACH info	
- CHOICE mode	FDD
- Available Signature	'0000 0000 1111 1111'B
- Available SF	Reference to clause 6.10 Parameter Set
- Preamble scrambling code number	0
- Puncturing Limit	Reference to clause 6.10 Parameter Set
- Available Sub Channel number	'1111 1111 1111'B
- Transport Channel Identity	15
- RACH TFS	
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	(This IE is repeated for TFI number)
- RLC size	Reference to clause 6.10 Parameter Set
- Number of TB and TTI List	Reference to clause 6.10 Parameter Set
- Number of Transport blocks	Reference to clause 6.10 Parameter Set
- CHOICE Mode	FDD
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	
- Transmission time interval	Reference to clause 6.10 Parameter Set
- Type of channel coding	Reference to clause 6.10 Parameter Set
- Coding Rate	Reference to clause 6.10 Parameter Set
- Rate matching attribute	Reference to clause 6.10 Parameter Set
- CRC size	Reference to clause 6.10 Parameter Set
- RACH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information	
- CHOICE TFCS representation	Addition
- TFCS addition information	
- CHOICE CTFC Size	Number of bits used must be enough to cover all combinations of CTFC from clause 6.10. Refer to clause 6.10 Parameter Set
- CTFC information	
- Power offset information	
- CHOICE Gain Factors	Signalled Gain Factor
- Gain factor β_c	0
- Gain factor β_d	0
- Reference TFC ID	Not Present
- Power offset Pp-m	0dB
- PRACH partitioning	
- Access Service Class	
- ASC Settings	
- Available signature Start Index	0 (ASC#0)
- Available signature End Index	7 (ASC#0)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#1)
- Available signature End Index	7 (ASC#1)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#2)
- Available signature End Index	7 (ASC#2)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#3)
- Available signature End Index	7 (ASC#3)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#4)
- Available signature End Index	7 (ASC#4)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#5)
- Available signature End Index	7 (ASC#5)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#6)
- Available signature End Index	7 (ASC#6)

- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#7)
- Available signature End Index	7 (ASC#7)
- Assigned Sub-channel Number	'1111'B
- Persistence scaling factor	
- Persistence scaling factor	0.9 (for ASC#2)
- Persistence scaling factor	0.9 (for ASC#3)
- Persistence scaling factor	0.9 (for ASC#4)
- Persistence scaling factor	0.9 (for ASC#5)
- Persistence scaling factor	0.9 (for ASC#6)
- Persistence scaling factor	0.9 (for ASC#7)
- AC-to-ASC mapping table	
- AC-to-ASC mapping	6 (AC0-9)
- AC-to-ASC mapping	5 (AC10)
- AC-to-ASC mapping	4 (AC11)
- AC-to-ASC mapping	3 (AC12)
- AC-to-ASC mapping	2 (AC13)
- AC-to-ASC mapping	1 (AC14)
- AC-to-ASC mapping	0 (AC15)
- Primary CPICH DL TX power	Reference to clause 6.10 Parameter Set
- Constant value	Reference to clause 6.10 Parameter Set
- PRACH power offset	
- Power Ramp Step	3dB
- Preamble Retrans Max	2
- RACH transmission parameters	
- Mmax	2
- NB01min	3 slot
- NB01max	10 slot
- AICH info	
- Channelisation code	SF-1(SF is reference to clause 6.10 Parameter Set)
- STTD indicator	FALSE
- AICH transmission timing	0
- Secondary CCPCH system info	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	Not Present
- STTD indicator	FALSE
- Spreading factor	Reference to clause 6.10 Parameter Set
- Code number	SF-1(SF is reference to clause 6.10 Parameter Set)
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible position	Flexible
- Timing offset	0
- TFCS	(This IE is repeated for TFC number for PCH and FACH.)
- Normal	
- TFCI Field 1 information	
- CHOICE TFCS representation	
- TFCS addition information	Addition
- CHOICE CTFC Size	Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.
- CTFC information	Refer to clause 6.10 Parameter Set
- Power offset information	Not Present
- FACH/PCH information	
- Transport Channel Identity	12 (for PCH)
- TFS	(PCH)
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	(This IE is repeated for TFI number.)
- RLC Size	Reference to clause 6.10 Parameter Set
- Number of TB and TTI List	Reference to clause 6.10 Parameter Set
- Number of Transport blocks	Reference to clause 6.10 Parameter Set
- CHOICE Mode	FDD
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	
- Transmission time interval	Reference to clause 6.10 Parameter Set
- Type of channel coding	Reference to clause 6.10 Parameter Set
- Coding Rate	Reference to clause 6.10 Parameter Set
- Rate matching attribute	Reference to clause 6.10 Parameter Set
- CRC size	Reference to clause 6.10 Parameter Set

<ul style="list-style-type: none"> - Transport Channel Identity - TFS - CHOICE Transport channel type - Dynamic Transport format information - RLC Size - Number of TB and TTI List - Number of Transport blocks - CHOICE Mode - CHOICE Logical Channel List - Semi-static Transport Format information - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute - CRC size - CTCH indicator - PICH info - Channelisation code - Number of PI per frame - STTD indicator - CBS DRX Level 1 information 	<p>13 (for FACH) (FACH) Common transport channels (This IE is repeated for TFI number.) Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set FDD ALL</p> <p>Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set Reference to clause 6.10 Parameter Set FALSE</p> <p>SF-1(SF is reference to clause 6.10 Parameter Set) 18 FALSE Not Present</p>
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Contents of System Information Block type5 (TDD)

<ul style="list-style-type: none"> - <u>SIB6 indicator</u> - <u>PICH Power offset</u> - <u>CHOICE Mode</u> - <u>PUSCH system information</u> - <u>PDSCH system information</u> - <u>TDD open loop power control</u> - <u>Primary CCPCH Tx Power</u> - <u>Alpha</u> - <u>PRACH Constant Value</u> - <u>DPCH Constant Value</u> - <u>PUSCH Constant Value</u> - <u>Primary CCPCH info</u> - <u>CHOICE mode</u> - <u>CHOICE SyncCase</u> - <u>Timeslot</u> - <u>Cell parameters ID</u> - <u>Block STTD indicator</u> - <u>PRACH system information list</u> - <u>PRACH system information</u> - <u>PRACH info</u> - <u>CHOICE mode</u> - <u>Timeslot number</u> - <u>PRACH Channelisation Code List</u> - <u>CHOICE SF</u> - <u>Channelisation Code List</u> - <u>Channelisation Code</u> - <u>Channelisation Code</u> - <u>Channelisation Code</u> - <u>Channelisation Code</u> - <u>PRACH Midamble</u> - <u>Transport Channel Identity</u> - <u>RACH TFS</u> - <u>CHOICE Transport channel type</u> - <u>Dynamic Transport format information</u> - <u>RLC size</u> - <u>Number of TB and TTI List</u> - <u>Number of Transport blocks</u> - <u>CHOICE Mode</u> - <u>Transmission Time Interval</u> - <u>CHOICE Logical Channel List</u> - <u>Semi-static Transport Format information</u> - <u>Transmission time interval</u> - <u>Type of channel coding</u> - <u>Coding Rate</u> - <u>Rate matching attribute</u> 	<p><u>TRUE</u> <u>-5 dB</u> <u>TDD</u> <u>Not Present</u> <u>Not Present</u></p> <p><u>30 dbm</u> <u>(1/8)</u> <u>-10</u> <u>-10</u> <u>-10</u></p> <p><u>TDD</u> <u>Sync Case 2</u> <u>0</u> <u>Not Present</u> <u>FALSE</u></p> <p><u>TDD</u> <u>14</u></p> <p><u>SF8</u></p> <p><u>8/1</u> <u>8/2</u> <u>8/3</u> <u>8/4</u> <u>Direct</u> <u>15</u></p> <p><u>Common transport channels</u> <u>(This IE is repeated for TFI number)</u> <u>Reference to clause 6.10 Parameter Set</u> <u>Reference to clause 6.10 Parameter Set</u> <u>Reference to clause 6.10 Parameter Set</u> <u>TDD</u> <u>Not Present</u> <u>ALL</u></p> <p><u>Reference to clause 6.10 Parameter Set</u> <u>Reference to clause 6.10 Parameter Set</u> <u>Reference to clause 6.10 Parameter Set</u> <u>Reference to clause 6.10 Parameter Set</u></p>
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- CRC size
- RACH TFCS
- PRACH partitioning
- Access Service Class
- ASC Settings
- CHOICE mode
- Available Channelisation codes indices
- CHOICE subchannel size
- Available Subchannels)
- ASC Settings
- CHOICE mode
- Available Channelisation codes indices
- CHOICE subchannel size
- Available Subchannels)
- ASC Settings
- CHOICE mode
- Available Channelisation codes indices
- CHOICE subchannel size
- Available Subchannels)
- ASC Settings
- CHOICE mode
- Available Channelisation codes indices
- CHOICE subchannel size
- Available Subchannels)
- ASC Settings
- CHOICE mode
- Available Channelisation codes indices
- CHOICE subchannel size
- Available Subchannels)
- Persistence scaling factors
- Access Service Class
- Persistence scaling factor
- Persistence scaling factor
- Persistence scaling factor
- Persistence scaling factor
- Persistence scaling factor
- Persistence scaling factor
- AC-to-ASC mapping
- AC-to-ASC mapping table
- AC-to-ASC mapping
- AC-to-ASC mapping
- AC-to-ASC mapping
- AC-to-ASC mapping
- AC-to-ASC mapping
- AC-to-ASC mapping
- CHOICE mode
- Secondary CCPCH system information
- Secondary CCPCH system information
- Secondary CCPCH info
- CHOICE mode
- Offset
- Common timeslot info
- 2nd interleaving mode
- TFCl coding

- Puncturing limit
- Repetition period
- Repetition length

Reference to clause 6.10 Parameter Set
Not present

TDD
Not Present (Default all)
Size1
null

TDD
Not Present (Default all)
Size1
null

TDD
Not Present (Default all)
Size1
null

TDD
Not Present (Default all)
Size1
null

TDD
Not Present (Default all)
Size1
null

TDD
Not Present (Default all)
Size1
null

TDD
Not Present (Default all)
Size1
null

0.9 (for ASC#2)
0.9 (for ASC#3)
0.9 (for ASC#4)
0.9 (for ASC#5)
0.9 (for ASC#6)
0.9 (for ASC#7)

6 (AC0-9)
5 (AC10)
4 (AC11)
3 (AC12)
2 (AC13)
1 (AC14)
0 (AC15)
TDD (no data)

TDD
Not Present

Not Present (MD "Frame")
Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.
Reference to clause 6.10 Parameter Set
Not Present (MD "1")

1

- Individual timeslot info	1
- Timeslot number	TRUE
- TFCI existence	Type 1
- Midamble Shift and burst type	Default midamble
- CHOICE Burst Type	4
- Midamble Allocation Mode	Not Present
- Midamble configuration burst type 1 and 3	Reference to clause 6.10 Parameter Set
- Midamble Shift	(This IE is repeated for TFC number for PCH and FACH.)
- Code List	
- TFCS	Addition
- Normal	Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.
- TFCI Field 1 information	Refer to clause 6.10 Parameter Set
- CHOICE TFCS representation	Not Present
- TFCS addition information	
- CHOICE CTFC Size	12 (for PCH)
	(PCH)
- CTFC information	Common transport channels
- Power offset information	(This IE is repeated for TFI number.)
- FACH/PCH information	Reference to clause 6.10 Parameter Set
- Transport Channel Identity	Reference to clause 6.10 Parameter Set
- TFS	Reference to clause 6.10 Parameter Set
- CHOICE Transport channel type	TDD
- Dynamic Transport format information	Reference to clause 6.10 Parameter Set
- RLC Size	Reference to clause 6.10 Parameter Set
- Number of TB and TTI List	Reference to clause 6.10 Parameter Set
- Number of Transport blocks	Reference to clause 6.10 Parameter Set
- CHOICE Mode	ALL
- Transmission Time Interval	Reference to clause 6.10 Parameter Set
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	Reference to clause 6.10 Parameter Set
- Transmission time interval	Reference to clause 6.10 Parameter Set
- Type of channel coding	Reference to clause 6.10 Parameter Set
- Coding Rate	Reference to clause 6.10 Parameter Set
- Rate matching attribute	Reference to clause 6.10 Parameter Set
- CRC size	Reference to clause 6.10 Parameter Set
- Transport Channel Identity	13 (for FACH)
- TFS	(FACH)
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	(This IE is repeated for TFI number.)
- RLC Size	Reference to clause 6.10 Parameter Set
- Number of TB and TTI List	Reference to clause 6.10 Parameter Set
- Number of Transport blocks	Reference to clause 6.10 Parameter Set
- CHOICE Mode	TDD
- Transmission Time Interval	Reference to clause 6.10 Parameter Set
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	Reference to clause 6.10 Parameter Set
- Transmission time interval	Reference to clause 6.10 Parameter Set
- Type of channel coding	Reference to clause 6.10 Parameter Set
- Coding Rate	Reference to clause 6.10 Parameter Set
- Rate matching attribute	Reference to clause 6.10 Parameter Set
- CRC size	Reference to clause 6.10 Parameter Set
- CTCH indicator	FALSE
- PICH info	TDD
- CHOICE mode	16/16
- Channelisation code	Not Present (MD)
- Timeslot number	Type 1
- CHOICE Burst Type	0
- Midamble Shift	Not Present (MD "(64/2)")
- Repetition period/length	0
- Offset	Not Present (MD 4)
- Paging indicator length	Not Present (MD 4)
- N _{GAP}	Not Present (MD 2)
- N _{PCH}	18
- Number of PI per frame	FALSE
- STTD indicator	Not Present
- CBS DRX Level 1 information	Not Present

<PFS>

Contents of System Information Block type6 In connected mode (FDD)

- PICH power offset	-5 dB
- CHOICE Mode	FDD
- AICH power offset	0 dB
- CSICH Power offset	Not Present
- Primary CCPCH info	
- TX Diversity indicator	FALSE
- PRACH system information list	
- PRACH system information	
- PRACH info	
- CHOICE mode	FDD
- Available Signature	'0000 0000 1111 1111'B
- Available SF	Reference to clause 6.10 Parameter Set
- Preamble scrambling code number	0
- Puncturing Limit	Reference to clause 6.10 Parameter Set
- Available Sub Channel number	'1111 1111 1111'B
- Transport Channel Identity	15
- RACH TFS	
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	(This IE is repeated for TFI number)
- RLC size	Reference to clause 6.10 Parameter Set
- Number of TB and TTI List	Reference to clause 6.10 Parameter Set
- Number of Transport blocks	Reference to clause 6.10 Parameter Set
- CHOICE Mode	FDD
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	
- Transmission time interval	Reference to clause 6.10 Parameter Set
- Type of channel coding	Reference to clause 6.10 Parameter Set
- Coding Rate	Reference to clause 6.10 Parameter Set
- Rate matching attribute	Reference to clause 6.10 Parameter Set
- CRC size	Reference to clause 6.10 Parameter Set
- RACH TFCS	(This IE is repeated for TFC number.)
- Normal	
- TFCI Field 1 information	
- CHOICE TFCS representation	Addition
- TFCS addition information	
- CHOICE CTFC Size	Number of bits used must be enough to cover all combinations of CTFC from clause 6.10. Refer to clause 6.10 Parameter Set
- CTFC information	
- Power offset information	
- CHOICE Gain Factors	Signalled Gain Factor
- Gain factor β_c	0
- Gain factor β_d	0
- Reference TFC ID	Not Present
- Power offset Pp-m	0dB
- PRACH partitioning	
- Access Service Class	
- ASC Settings	
- Available signature Start Index	0 (ASC#0)
- Available signature End Index	7 (ASC#0)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#1)
- Available signature End Index	7 (ASC#1)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#2)
- Available signature End Index	7 (ASC#2)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#3)
- Available signature End Index	7 (ASC#3)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#4)
- Available signature End Index	7 (ASC#4)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#5)
- Available signature End Index	7 (ASC#5)
- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#6)
- Available signature End Index	7 (ASC#6)

- Assigned Sub-channel Number	'1111'B
- Available signature Start Index	0 (ASC#7)
- Available signature End Index	7 (ASC#7)
- Assigned Sub-channel Number	'1111'B
- Persistence scaling factor	
- Persistence scaling factor	0.9 (for ASC#2)
- Persistence scaling factor	0.9 (for ASC#3)
- Persistence scaling factor	0.9 (for ASC#4)
- Persistence scaling factor	0.9 (for ASC#5)
- Persistence scaling factor	0.9 (for ASC#6)
- Persistence scaling factor	0.9 (for ASC#7)
- AC-to-ASC mapping	Not Present
- Primary CPICH DL TX power	Reference to clause 6.10 Parameter Set
- Constant value	Reference to clause 6.10 Parameter Set
- PRACH power offset	
- Power Ramp Step	3dB
- Preamble Retrans Max	2
- RACH transmission parameters	
- Mmax	2
- NB01min	3 slot
- NB01max	10 slot
- AICH info	
- Channelisation code	SF-1(SF is reference to clause 6.10 Parameter Set)
- STTD indicator	FALSE
- AICH transmission timing	0
- Secondary CCPCH system info	
- Secondary CCPCH info	
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- Secondary CPICH info	Not Present
- Secondary scrambling code	Not Present
- STTD indicator	FALSE
- Spreading factor	Reference to clause 6.10 Parameter Set
- Code number	Reference to clause 6.10 Parameter Set
- Pilot symbol existence	FALSE
- TFCI existence	TRUE
- Fixed or Flexible position	Flexible
- Timing offset	0
- TFCS	(This IE is repeated for TFC number for PCH and FACH.)
- Normal	
- TFCI Field 1 information	
- CHOICE TFCS representation	
- TFCS addition information	Addition
- CHOICE CTFC Size	Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.
- CTFC information	Refer to clause 6.10 Parameter Set
- Power offset information	Not Present
- FACH/PCH information	
- Transport Channel Identity	12 (for PCH)
- TFS	(PCH)
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	(This IE is repeated for TFI number.)
- RLC Size	Reference to clause 6.10 Parameter Set
- Number of TB and TTI List	Reference to clause 6.10 Parameter Set
- Number of Transport blocks	Reference to clause 6.10 Parameter Set
- CHOICE Mode	FDD
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	
- Transmission time interval	Reference to clause 6.10 Parameter Set
- Type of channel coding	Reference to clause 6.10 Parameter Set
- Coding Rate	Reference to clause 6.10 Parameter Set
- Rate matching attribute	Reference to clause 6.10 Parameter Set
- CRC size	Reference to clause 6.10 Parameter Set
- Transport Channel Identity	13 (for FACH)
- TFS	(FACH)
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	(This IE is repeated for TFI number.)
- RLC Size	Reference to clause 6.10 Parameter Set
- Number of TB and TTI List	Reference to clause 6.10 Parameter Set
- Number of Transport blocks	Reference to clause 6.10 Parameter Set

- CHOICE Mode	FDD
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	Reference to clause 6.10 Parameter Set
- Transmission time interval	Reference to clause 6.10 Parameter Set
- Type of channel coding	Reference to clause 6.10 Parameter Set
- Coding Rate	Reference to clause 6.10 Parameter Set
- Rate matching attribute	Reference to clause 6.10 Parameter Set
- CRC size	Reference to clause 6.10 Parameter Set
- CTCH indicator	FALSE
- PICH info	FALSE
- Channelisation code	SF-1(SF is reference to clause 6.10 Parameter Set)
- Number of PI per frame	18
- STTD indicator	FALSE
- CBS DRX Level 1 information	Not Present

Contents of System Information Block type6 In connected mode (similar to SIB type5) (TDD)

- PICH Power offset	-5 dB
- CHOICE Mode	TDD
- PUSCH system information	Not Present
- PDSCH system information	Not Present
- TDD open loop power control	
- Primary CCPCH Tx Power	30 dbm
- Alpha	(1/8)
- PRACH Constant Value	-10
- DPCH Constant Value	-10
- PUSCH Constant Value	-10
- Primary CCPCH info	
- CHOICE mode	TDD
- CHOICE SyncCase	Sync Case 2
- Timeslot	0
- Cell parameters ID	Not Present
- Block STTD indicator	FALSE
- PRACH system information list	
- PRACH system information	
- PRACH info	
- CHOICE mode	TDD
- Timeslot number	14
- PRACH Channelisation Code List	
- CHOICE SF	SF8
- Channelisation Code List	
- Channelisation Code	8/1
- Channelisation Code	8/2
- Channelisation Code	8/3
- Channelisation Code	8/4
- PRACH Midamble	Direct
- Transport Channel Identity	15
- RACH TFS	
- CHOICE Transport channel type	Common transport channels
- Dynamic Transport format information	(This IE is repeated for TFI number)
- RLC size	Reference to clause 6.10 Parameter Set
- Number of TB and TTI List	Reference to clause 6.10 Parameter Set
- Number of Transport blocks	Reference to clause 6.10 Parameter Set
- CHOICE Mode	TDD
- Transmission Time Interval	Not Present
- CHOICE Logical Channel List	ALL
- Semi-static Transport Format information	
- Transmission time interval	Reference to clause 6.10 Parameter Set
- Type of channel coding	Reference to clause 6.10 Parameter Set
- Coding Rate	Reference to clause 6.10 Parameter Set
- Rate matching attribute	Reference to clause 6.10 Parameter Set
- CRC size	Reference to clause 6.10 Parameter Set
- RACH TFCS	Not present
- PRACH partitioning	
- Access Service Class	
- ASC Settings	
- CHOICE mode	TDD
- Available Channelisation codes indices	Not Present (Default all)
- CHOICE subchannel size	Size1
- Available Subchannels	null
- ASC Settings	
- CHOICE mode	TDD
- Available Channelisation codes indices	Not Present (Default all)
- CHOICE subchannel size	Size1
- Available Subchannels	null
- ASC Settings	
- CHOICE mode	TDD
- Available Channelisation codes indices	Not Present (Default all)
- CHOICE subchannel size	Size1
- Available Subchannels	null
- ASC Settings	
- CHOICE mode	TDD
- Available Channelisation codes indices	Not Present (Default all)

- CHOICE subchannel size	Size1
- Available Subchannels	null
- ASC Settings	TDD
- CHOICE mode	Not Present (Default all)
- Available Channelisation codes indices	Size1
- CHOICE subchannel size	null
- Available Subchannels	TDD
- ASC Settings	Not Present (Default all)
- CHOICE mode	Size1
- Available Channelisation codes indices	null
- CHOICE subchannel size	TDD
- Available Subchannels	Not Present (Default all)
- ASC Settings	Size1
- CHOICE mode	null
- Available Channelisation codes indices	TDD
- CHOICE subchannel size	Not Present (Default all)
- Available Subchannels	Size1
- Persistence scaling factors	null
- Access Service Class	0.9 (for ASC#2)
- Persistence scaling factor	0.9 (for ASC#3)
- Persistence scaling factor	0.9 (for ASC#4)
- Persistence scaling factor	0.9 (for ASC#5)
- Persistence scaling factor	0.9 (for ASC#6)
- Persistence scaling factor	0.9 (for ASC#7)
- AC-to-ASC mapping	6 (AC0-9)
- AC-to-ASC mapping table	5 (AC10)
- AC-to-ASC mapping	4 (AC11)
- AC-to-ASC mapping	3 (AC12)
- AC-to-ASC mapping	2 (AC13)
- AC-to-ASC mapping	1 (AC14)
- AC-to-ASC mapping	0 (AC15)
- CHOICE mode	TDD (no data)
- Secondary CCPCH system information	TDD
- Secondary CCPCH system information	Not Present
- Secondary CCPCH info	Not Present (MD "Frame")
- CHOICE mode	Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.
- Offset	Reference to clause 6.10 Parameter Set
- Common timeslot info	Not Present (MD "1")
- 2 nd interleaving mode	1
- TFCI coding	1
- Puncturing limit	TRUE
- Repetition period	Type 1
- Repetition length	Default midamble
- Individual timeslot info	4
- Timeslot number	Not Present
- TFCI existence	Reference to clause 6.10 Parameter Set
- Midamble Shift and burst type	(This IE is repeated for TFC number for PCH and FACH.)
- CHOICE Burst Type	Addition
- Midamble Allocation Mode	Number of bits used must be enough to cover all combinations of CTFC from clause 6.10.
- Midamble configuration burst type 1 and 3	Refer to clause 6.10 Parameter Set
- Midamble Shift	Not Present
- Code List	Not Present
- TFCS	12 (for PCH)
- Normal	(PCH)
- TFCI Field 1 information	Common transport channels
- CHOICE TFCS representation	
- TFCS addition information	
- CHOICE CTFC Size	
- CTFC information	
- Power offset information	
- FACH/PCH information	
- Transport Channel Identity	
- TFS	
- CHOICE Transport channel type	

- <u>Dynamic Transport format information</u>	(This IE is repeated for TFI number.)
- <u>RLC Size</u>	Reference to clause 6.10 Parameter Set
- <u>Number of TB and TTI List</u>	Reference to clause 6.10 Parameter Set
- <u>Number of Transport blocks</u>	Reference to clause 6.10 Parameter Set
- <u>CHOICE Mode</u>	<u>TDD</u>
- <u>Transmission Time Interval</u>	Reference to clause 6.10 Parameter Set
- <u>CHOICE Logical Channel List</u>	<u>ALL</u>
- <u>Semi-static Transport Format information</u>	
- <u>Transmission time interval</u>	Reference to clause 6.10 Parameter Set
- <u>Type of channel coding</u>	Reference to clause 6.10 Parameter Set
- <u>Coding Rate</u>	Reference to clause 6.10 Parameter Set
- <u>Rate matching attribute</u>	Reference to clause 6.10 Parameter Set
- <u>CRC size</u>	Reference to clause 6.10 Parameter Set
- <u>Transport Channel Identity</u>	<u>13 (for FACH)</u>
- <u>TFS</u>	<u>(FACH)</u>
- <u>CHOICE Transport channel type</u>	Common transport channels
- <u>Dynamic Transport format information</u>	(This IE is repeated for TFI number.)
- <u>RLC Size</u>	Reference to clause 6.10 Parameter Set
- <u>Number of TB and TTI List</u>	Reference to clause 6.10 Parameter Set
- <u>Number of Transport blocks</u>	Reference to clause 6.10 Parameter Set
- <u>CHOICE Mode</u>	<u>TDD</u>
- <u>Transmission Time Interval</u>	Reference to clause 6.10 Parameter Set
- <u>CHOICE Logical Channel List</u>	<u>ALL</u>
- <u>Semi-static Transport Format information</u>	
- <u>Transmission time interval</u>	Reference to clause 6.10 Parameter Set
- <u>Type of channel coding</u>	Reference to clause 6.10 Parameter Set
- <u>Coding Rate</u>	Reference to clause 6.10 Parameter Set
- <u>Rate matching attribute</u>	Reference to clause 6.10 Parameter Set
- <u>CRC size</u>	Reference to clause 6.10 Parameter Set
- <u>CTCH indicator</u>	<u>FALSE</u>
- <u>PICH info</u>	
- <u>CHOICE mode</u>	<u>TDD</u>
- <u>Channelisation code</u>	<u>16/16</u>
- <u>Timeslot number</u>	<u>Not Present (MD)</u>
- <u>CHOICE Burst Type</u>	<u>Type 1</u>
- <u>Midamble Shift</u>	<u>0</u>
- <u>Repetition period/length</u>	<u>Not Present (MD "(64/2)")</u>
- <u>Offset</u>	<u>0</u>
- <u>Paging indicator length</u>	<u>Not Present (MD 4)</u>
- <u>N_{GAP}</u>	<u>Not Present (MD 4)</u>
- <u>N_{PCH}</u>	<u>Not Present (MD 2)</u>
- <u>Number of PI per frame</u>	<u>18</u>
- <u>STTD indicator</u>	<u>FALSE</u>
- <u>CBS DRX Level 1 information</u>	<u>Not Present</u>

<FFS>

Contents of System Information Block type7 (FDD)

CHOICE Mode	FDD
- UL interference	-100dBm
- PRACHs listed in system information block type5	
- Dynamic persistence level	2
- PRACHs listed in system information block type6	
- Dynamic persistence level	2
- Expiration Time Factor	Not Present – use default value of 1

Contents of System Information Block type7 (TDD)

- PRACHs listed in system information block type5	
- Dynamic persistence level	2
- PRACHs listed in system information block type6	
- Dynamic persistence level	2
- Expiration Time Factor	Not Present – use default value of 1

Contents of System Information Block type8,9 (only for FDD)

This information is used for static CPCH in the cell, so this is not present.

Contents of System Information Block type10 (only for FDD)

This information is used for DRAC, so this is not present.

Contents of System Information Block type11 (FDD)

- SIB12 indicator	TRUE
- FACH measurement occasion info	Not Present
- Measurement control system information	
- Use of HCS	Not used
- Cell_selection_and_reselection_quality_measure	CPICH Ec/N0
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	0
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	0
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Primary CPICH info	
- Primary scrambling code	The current value plus 50(When the current cell is cell No.8 then minus 50)
- Primary CPICH TX power	Not Present
- Read SFN indicator	TRUE
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	0 dB
- Qoffset2 _{s,n}	0 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Not Present
- CHOICE mode	
- Qqualmin	
- Qrxlevmin	
- Intra-frequency measurement quantity	
- Filter coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity for RACH Reporting	
-SFN-SFN observed time difference	No report
- Reporting quantity	No report
- Maximum number of reported cells on RACH	No report
- Reporting information for state CELL_DCH	
- Measurement Report Transfer	Acknowledged mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event trigger
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CHOICE mode	FDD
- CPICH Ec/N0 reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CHOICE mode	FDD
- CPICH Ec/N0 reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected set cells	Not Present
- Intra-frequency measurement reporting criteria	
- parameters required for each event	

- intra-frequency event identity	1a
- Triggering condition	monitored set cells
- Reporting Range	5dB
- cells forbidden to affect reporting range	Not Present
- Primary CPICH info	
- Primary scrambling code	
- W	1.0
- Hysteresis	0.0
- Threshold used frequency	T.B.D(-125..165)
- Reporting deactivation threshold	1
- Replacement activation threshold	Not Present
- Time to trigger	640
- Amount of reporting	Infinity
- Reporting interval	0
- Reporting cell status	
- CHOICE reporting cell	Report cell within active set and/or monitored cells on used frequency
- Maximum number of reported cells	2
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

Contents of System Information Block type11 (TDD)

- SIB 12 Indicator	TRUE
- FACH measurement occasion info	Not Present
- Measurement control system information	Not used
- Use of HCS	CPICH-RSCP Not present
- Cell_selection_and_reselection_quality_measure	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	0
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	0
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	False
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference to clause 6.1 Default settings for cell
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Timeslot number	
- Burst type	Not Present
- Cell Selection and Re-selection info	Not Present
- Qoffset_{s,n}	0
- Maximum allowed UL TX power	30 dBm
- HCS neighbouring cell information	Not Present
- CHOICE mode	
- Qrxlevmin	
- Cell for measurement	
- Intra-frequency cell id	0
- Intra-frequency measurement quantity	
- Filter coefficient	0
- CHOICE mode	TDD
- Measurement quantity list	
- Measurement quantity	P-CCPCH RSCP
- Intra-frequency reporting quantity for RACH Reporting	
- SFN-SFN observed time difference	No report
- CHOICE mode	TDD
- Reporting quantity list	
- Reporting quantity	No report
- Maximum number of reported cells on RACH	No report
- Reporting information for state CELL_DCH	
- Measurement Report Transfer	Acknowledged mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event trigger
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposal TSGN reporting required	FALSE
- P-CCPCH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE

<ul style="list-style-type: none"> - CHOICE mode - Timeslot ISCP reporting indicator - Proposal TSGN reporting required - P-CCPCH RSCP reporting indicator - Pathloss reporting indicator - Reporting quantities for detected set cells - <u>Measurement reporting mode</u> - <u>Measurement Report Transfer Mode</u> - <u>Periodical Reporting / Event Trigger Reporting Mode</u> - Intra-frequency measurement reporting criteria - <u>P</u>arameters required for each event - <u>I</u>ntra-frequency event identity - <u>T</u>riggering condition₁ - Triggering condition₂ - Reporting Range - cells forbidden to affect reporting range - Primary CCPCH info - CHOICE Sync case - Sync case 1 - Timeslot - Sync case 2 - Timeslot - Cell parameter ID - Block STTD indicator - W(optional in case of 1a,1b) - Hysteresis - Threshold used frequency - Reporting deactivation threshold - Replacement activation threshold - Time to trigger - Amount of reporting - Reporting interval - Reporting cell status - CHOICE report<u>ing</u>ed cells - Maximum number of reported cells - Inter-frequency measurement system information - Inter-RAT measurement system information - Traffic volume measurement system information - UE internal measurement system information 	<p>TDD <u>FALSE</u> <u>FALSE</u> <u>FALSE</u> <u>FALSE</u> Not Present</p> <p><u>Acknowledged mode RLC</u> <u>Event trigger</u></p> <p>1ga <u>Not Present</u> <u>Not Present</u><u>Monitored set cells</u> <u>Not Present</u> Not Present</p> <p><u>P-CCPCH RSCP</u></p> <p><u>P-CCPCH RSCP</u></p> <p><u>4</u><u>Not Present</u> <u>0</u> <u>T.B.D(-125..165)</u><u>Not Present</u> <u>4</u><u>Not Present</u> Not Present 640 Infinity 0</p> <p>Report cell within active set and/or monitored cells on used frequency 2 Not Present</p> <p>Not Present Not Present Not Present</p>
--	--

Contents of System Information Block type12 in connected mode (FDD)

<ul style="list-style-type: none"> - FACH measurement occasion info - Measurement control system information - Use of HCS - Cell_selection_and_reselection_quality_-measure - Intra-frequency measurement system information - Intra-frequency measurement identity - Intra-frequency cell info list - CHOICE intra-frequency cell removal - New intra-frequency cells - Intra-frequency cell id - Cell info - Cell individual offset - Reference time difference to cell - Primary CPICH info - Primary scrambling code - Primary CPICH TX power - Read SFN indicator 	<p>Not Present</p> <p>Not used CPICH Ec/NO</p> <p>0</p> <p>Remove no intra-frequency cells</p> <p>0</p> <p>0dB Not Present</p> <p>The current value plus 50(When the current cell is cell No.8 then minus 50) Not Present TRUE</p>
---	--

- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	0 dB
- Qoffset2 _{s,n}	0 dB
- Maximum allowed UL TX power	33dBm
- HCS neighbouring cell information	Not Present
- Intra-frequency measurement quantity	
- Filter coefficient	0
- Measurement quantity	CPICH RSCP
- Intra-frequency reporting quantity for RACH Reporting	
- SFN-SFN observed time difference	No report
- Reporting quantity	No report
- Maximum number of reported cells on RACH	No report
- Reporting information for state CELL_DCH	
- Measurement Report Transfer	Acknowledged mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event trigger
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CHOICE mode	FDD
- CPICH Ec/N0 reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell identity reporting indicator	TRUE
- CHOICE mode	FDD
- CPICH Ec/N0 reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected set cells	Not Present
- Intra-frequency measurement reporting criteria	
- parameters required for each event	
- intra-frequency event identity	1a
- Triggering condition	monitored set cells
- Reporting Range	5dB
- cells forbidden to affect reporting range	Not Present
- Primary CPICH info	
- Primary scrambling code	
- W	1.0
- Hysteresis	0.0
- Threshold used frequency	T.B.D(-125..165)
- Reporting deactivation threshold	1
- Replacement activation threshold	Not Present
- Time to trigger	0
- Amount of reporting	Infinity
- Reporting interval	0
- Reporting cell status	
- CHOICE reporting cell	Report cell Within active set and/or monitored cells on used frequency
- Maximum number of reported cells	2
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

Contents of System Information Block type12 in connected mode (similar to SIB type11) (TDD)

- <u>FACH measurement occasion info</u>	<u>Not Present</u>
- Measurement control system information	Not used
- Use of HCS	<u>CPICH-RSCP</u> <u>Not present</u>
- Cell_selection_and_reselection_quality_measure	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	0
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	0
- Cell info	
- Cell individual offset	0dB
- Reference time difference to cell	Not Present
- <u>Read SFN Indicator</u>	<u>False</u>
- <u>CHOICE mode</u>	<u>TDD</u>
- Primary CCPCH info	
- <u>Cell parameters ID</u>	<u>Reference to clause 6.1 Default settings for cell</u>
- Primary CCPCH TX power	Not Present
- Timeslot list	<u>Not Present</u>
- Timeslot number	
- Burst type	
- Cell Selection and Re-selection info	<u>Not Present</u>
- Offset_{s,n}	0
- Maximum allowed UL TX power	30 dBm
- HCS neighbouring cell information	<u>Not Present</u>
- CHOICE mode	
- Qrxlevmin	
- Intra-frequency measurement quantity	
- Filter coefficient	0
- <u>CHOICE mode</u>	<u>TDD</u>
- Measurement list	
- Measurement quantity	P-CCPCH RSCP
- Intra-frequency reporting quantity for RACH Reporting	
- SFN-SFN observed time difference	No report
- <u>CHOICE mode</u>	<u>TDD</u>
- Reporting quantity list	
- Reporting quantity	No report
- Maximum number of reported cells on RACH	No report
- Reporting information for state CELL_DCH	
- Measurement Report Transfer	<u>Acknowledged mode RLC</u>
- Periodic Reporting / Event Trigger Reporting Mode	<u>Event trigger</u>
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	<u>FALSE</u>
- Proposal TSGN reporting required	<u>FALSE</u>
- P-CCPCH RSCP reporting indicator	<u>FALSE</u>
- Pathloss reporting indicator	<u>FALSE</u>
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CHOICE mode	TDD
- Timeslot ISCP reporting indicator	<u>FALSE</u>
- Proposal TSGN reporting required	<u>FALSE</u>
- P-CCPCH RSCP reporting indicator	<u>FALSE</u>

- Pathloss reporting indicator	<u>FALSE</u>
- Reporting quantities for detected set cells	Not Present
- <u>Measurement reporting mode</u>	
- <u>Measurement Report Transfer Mode</u>	<u>Acknowledged mode RLC</u>
- <u>Periodical Reporting / Event Trigger</u>	<u>Event trigger</u>
<u>Reporting Mode</u>	
- Intra-frequency measurement reporting criteria	
- <u>P</u> parameters required for each event	
- <u>i</u> ntra-frequency event identity	<u>1ga</u>
- <u>Triggering condition 1</u>	<u>Not Present</u>
- <u>Triggering condition 2</u>	<u>Not Present</u>
- Reporting Range	<u>Monitored set cells</u>
- cells forbidden to affect reporting range	<u>Not Present</u>
- Primary CCPCH info	
- CHOICE Sync case	
- Sync case 1	
- Timeslot	<u>P-CCPCH-RSCP</u>
- Sync case 2	
- Timeslot	<u>P-CCPCH-RSCP</u>
- Cell parameter ID	
- Block STTD indicator	
- W (optional in case of 1a, 1b)	<u>4-0</u> <u>Not Present</u>
- Hysteresis	<u>0-0</u>
- Threshold used frequency	<u>T.B.D (-125..165)</u> <u>Not Present</u>
- Reporting deactivation threshold	<u>4</u> <u>Not Present</u>
- Replacement activation threshold	Not Present
- Time to trigger	640
- Amount of reporting	Infinity
- Reporting interval	0
- Reporting cell status	
- CHOICE reported cells	Report cell within active set and/or monitored cells on used frequency
- Maximum number of reported cells	2
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

Contents of System Information Block type 13 (used when supported PLMN type is ANSI-41)

<ul style="list-style-type: none"> - CN Domain system information list - CN Domain system information - CN domain identity - CHOICE CN Type - CN domain specific NAS system information - NAS (ANSI-41) system information - CN domain specific DRX cycle length coefficient - CN Domain system information - CN domain identity - CHOICE CN Type - CN domain specific NAS system information - NAS (ANSI-41) system information - CN domain specific DRX cycle length coefficient - UE timers and constants in idle mode - T300 - N300 - T312 - N312 - Capability update requirement - UE radio access FDD capability update requirement - UE radio access TDD capability update requirement - System specific capability update requirement list 	<p><i>For Packet-Switched domain</i></p> <p>PS ANSI-41</p> <p>T.B.D 7</p> <p><i>For Circuit-Switched domain</i></p> <p>CS ANSI-41</p> <p>T.B.D 7</p> <p>400 milliseconds 7 10 seconds 200</p> <p>TRUE</p> <p>FALSE</p> <p>Not Present</p>
--	---

Contents of System Information Block type14 (TDD)

- Individual Timeslot interference list	
- Individual Timeslot interference	
- Timeslot number	<u>2</u>
- UL Timeslot Interference	<u>-90 dbm</u>
- Individual Timeslot interference	
- Timeslot number	<u>3</u>
- UL Timeslot Interference	<u>-90 dbm</u>
- Individual Timeslot interference	
- Timeslot number	<u>4</u>
- UL Timeslot Interference	<u>-90 dbm</u>
- Individual Timeslot interference	
- Timeslot number	<u>5</u>
- UL Timeslot Interference	<u>-90 dbm</u>
- Individual Timeslot interference	
- Timeslot number	<u>6</u>
- UL Timeslot Interference	<u>-90 dbm</u>
- Individual Timeslot interference	
- Timeslot number	<u>7</u>
- UL Timeslot Interference	<u>-90 dbm</u>
- Individual Timeslot interference	
- Timeslot number	<u>9</u>
- UL Timeslot Interference	<u>-90 dbm</u>
- Individual Timeslot interference	
- Timeslot number	<u>10</u>
- UL Timeslot Interference	<u>-90 dbm</u>
- Individual Timeslot interference	
- Timeslot number	<u>11</u>
- UL Timeslot Interference	<u>-90 dbm</u>
- Individual Timeslot interference	
- Timeslot number	<u>12</u>
- UL Timeslot Interference	<u>-90 dbm</u>
- Individual Timeslot interference	
- Timeslot number	<u>13</u>
- UL Timeslot Interference	<u>-90 dbm</u>
- Individual Timeslot interference	
- Timeslot number	<u>14</u>
- UL Timeslot Interference	<u>-90 dbm</u>
- Expiration Time Factor	<u>Not Present (MD "1")</u>

Contents of System Information Block type 16

- Re-establishment timer	[FFS]
- Predefined RB configuration	[FFS]
- Predefined TrCh configuration	[FFS]
- Predefined Phy configuration	[FFS]

Contents of System Information Block type17 (TDD)

This system information block contains fast changing parameters for the configuration of the shared physical channels to be used in connected mode, so this is not present.

Default settings for cell No.1 (FDD):

Downlink input level Uplink output power PCCPCH/PCPICH carrier number Cell Channel Description - Primary CPICH info - Primary scrambling code	Reference to clause 6.10 Parameter Set Minimum supported by the UE's power class. Reference to clause 6.10 Parameter Set 100
--	---

Default settings for cell No.1 (TDD):

<u>Downlink input level</u> <u>Uplink output power</u> <u>PCCPCH/PCPICH carrier number</u> <u>Cell Channel Description</u> - Primary CCPCH info - Cell parameters ID	<u>Reference to clause 6.10 Parameter Set</u> <u>Minimum supported by the UE's power class.</u> <u>Reference to clause 6.10 Parameter Set</u> 0
---	--

Cell No.2

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.2 are identical to those of cell No.1 with the following exceptions:

Cell identity	0000 0000 0000 0000 0000 0000 0010B
URA identity	0000 0000 0000 0001B

Default settings for cell No.2 (FDD):

Downlink input level Uplink output power PCCPCH/PCPICH carrier number Cell Channel Description - Primary CPICH info - Primary scrambling code	Reference to clause 6.10 Parameter Set Minimum supported by the UE's power class. Reference to clause 6.10 Parameter Set 150
--	---

Default settings for cell No.2 (TDD):

<u>Downlink input level</u> <u>Uplink output power</u> <u>PCCPCH/PCPICH carrier number</u> <u>Cell Channel Description</u> - Primary CCPCH info - Cell parameters ID	<u>Reference to clause 6.10 Parameter Set</u> <u>Minimum supported by the UE's power class.</u> <u>Reference to clause 6.10 Parameter Set</u> 4
---	--

Cell No.3

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.3 are identical to those of cell No.1 with the following exceptions:

Cell identity	0000 0000 0000 0000 0000 0000 0011B
URA identity	0000 0000 0000 0010B

Default settings for cell No.3 (FDD):

Downlink input level Uplink output power PCCPCH/PCPICH carrier number Cell Channel Description - Primary CPICH info - Primary scrambling code	Reference to clause 6.10 Parameter Set Minimum supported by the UE's power class. Reference to clause 6.10 Parameter Set 200
--	---

Default settings for cell No.3 (TDD):

<u>Downlink input level</u> <u>Uplink output power</u> <u>PCCPCH/PCPICH carrier number</u> <u>Cell Channel Description</u> - Primary CCPCH info - Cell parameters ID	<u>Reference to clause 6.10 Parameter Set</u> <u>Minimum supported by the UE's power class.</u> <u>Reference to clause 6.10 Parameter Set</u> 8
---	--

Cell No.4

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.4 are identical to those of cell No.1 with the following exceptions:

Cell identity	0000 0000 0000 0000 0000 0000 0100B
URA identity	0000 0000 0000 0010B

Default settings for cell No.4 (FDD):

Downlink input level Uplink output power PCCPCH/PCPICH carrier number Cell Channel Description - Primary CPICH info - Primary scrambling code	Reference to clause 6.10 Parameter Set Minimum supported by the UE's power class. Reference to clause 6.10 Parameter Set 250
--	---

Default settings for cell No.4 (TDD):

<u>Downlink input level</u> <u>Uplink output power</u> <u>PCCPCH/PCPICH carrier number</u> <u>Cell Channel Description</u> - Primary CCPCH info - Cell parameters ID	<u>Reference to clause 6.10 Parameter Set</u> <u>Minimum supported by the UE's power class.</u> <u>Reference to clause 6.10 Parameter Set</u> 12
---	---

Cell No.5

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.5 are identical to those of cell No.1 with the following exceptions:

Cell identity	0000 0000 0000 0000 0000 0000 0101B
URA identity	0000 0000 0000 0011B

Default settings for cell No.5 (FDD):

Downlink input level Uplink output power PCCPCH/PCPICH carrier number Cell Channel Description - Primary CPICH info - Primary scrambling code	Reference to clause 6.10 Parameter Set Minimum supported by the UE's power class. Reference to clause 6.10 Parameter Set 300
--	---

Default settings for cell No.5 (TDD):

<u>Downlink input level</u> <u>Uplink output power</u> <u>PCCPCH/PCPICH carrier number</u> <u>Cell Channel Description</u> - Primary CCPCH info - Cell parameters ID	<u>Reference to clause 6.10 Parameter Set</u> <u>Minimum supported by the UE's power class.</u> <u>Reference to clause 6.10 Parameter Set</u> 114
---	--

Cell No.6

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.6 are identical to those of cell No.1 with the following exceptions:

Cell identity	0000 0000 0000 0000 0000 0000 0110B
URA identity	0000 0000 0000 0011B

Default settings for cell No.6 (FDD):

Downlink input level Uplink output power PCCPCH/PCPICH carrier number Cell Channel Description - Primary CPICH info - Primary scrambling code	Reference to clause 6.10 Parameter Set Minimum supported by the UE's power class. Reference to clause 6.10 Parameter Set 350
--	---

Default settings for cell No.6 (TDD):

<u>Downlink input level</u> <u>Uplink output power</u> <u>PCCPCH/PCPICH carrier number</u> <u>Cell Channel Description</u> <u>- Primary CCPCH info</u> <u>- Cell parameters ID</u>	<u>Reference to clause 6.10 Parameter Set</u> <u>Minimum supported by the UE's power class.</u> <u>Reference to clause 6.10 Parameter Set</u> 119
---	--

Cell No.7

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.7 are identical to those of cell No.1 with the following exceptions:

Cell identity URA identity	0000 0000 0000 0000 0000 0000 0111B 0000 0000 0000 0100B
-------------------------------	---

Default settings for cell No.7 (FDD):

Downlink input level Uplink output power PCCPCH/PCPICH carrier number Cell Channel Description - Primary CPICH info - Primary scrambling code	Reference to clause 6.10 Parameter Set Minimum supported by the UE's power class. Reference to clause 6.10 Parameter Set 400
--	---

Default settings for cell No.7 (TDD):

<u>Downlink input level</u> <u>Uplink output power</u> <u>PCCPCH/PCPICH carrier number</u> <u>Cell Channel Description</u> <u>- Primary CCPCH info</u> <u>- Cell parameters ID</u>	<u>Reference to clause 6.10 Parameter Set</u> <u>Minimum supported by the UE's power class.</u> <u>Reference to clause 6.10 Parameter Set</u> 123
---	--

Cell No.8

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.8 are identical to those of cell No.1 with the following exceptions:

Cell identity URA identity	0000 0000 0000 0000 0000 0000 1000B 0000 0000 0000 0100B
-------------------------------	---

Default settings for cell No.8 (FDD):

Downlink input level Uplink output power PCCPCH/PCPICH carrier number Cell Channel Description - Primary CPICH info - Primary scrambling code	Reference to clause 6.10 Parameter Set Minimum supported by the UE's power class. Reference to clause 6.10 Parameter Set 450
--	---

Table 6.1.3 Default radio conditions in Connected mode

Parameter	Unit	Cell 1	Cell 2	Cell 3	Cell 4	Cell 5	Cell 6
CPICH_Ec/lor	dB	-10	-10	-10	-10	-10	-10
PCCPCH_Ec/lor	dB	-12	-12	-12	-12	-12	-12
SCCPCH_Ec/lor	dB	-12	-12	-12	-12	-12	-12
AICH_Ec/lor	dB	-15	-15	-15	-15	-15	-15
SCH_Ec/lor	dB	-12	-12	-12	-12	-12	-12
PICH_Ec/lor	dB	-15	-15	-15	-15	-15	-15
DPCH_Ec/lor	dB	- 15	- 15	- 15	- 15	- 15	- 15
OCNS_Ec/lor	dB	-2.106	-2.106	-2.106	-2.106	-2.106	-2.106
I_{oc}	dBm/ 3.84 MHz	-70					
Propagation Condition		AWGN					
UE_TXPWR_MAX _RACH	dBm	Max. RF Output of UE	Max. RF Output of UE	Max. RF Output of UE	Max. RF Output of UE	Max. RF Output of UE	Max. RF Output of UE

Default Radio Conditions for Multi-Cell Environment (TDD)

<FFS>

3GPP TSG-T1 Meeting #11
Melbourne, Australia, 17 – 18 May 2001

Tdoc T1-010215

3GPP TSG-T1 SIG Meeting #17
Melbourne, Australia 14th – 16th May 2001

Tdoc T1S-010123

CR-Form-v3

CHANGE REQUEST

⌘ **34.108 CR 047** ⌘ rev **-** ⌘ Current version: **3.3.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Editorial correction and removal of a reference document
Source:	⌘ Nokia
Work item code:	⌘ Date: ⌘ 12 th May 2001
Category:	⌘ F Release: ⌘ R99
Use <u>one</u> of the following categories:	
F (essential correction)	
A (corresponds to a correction in an earlier release)	
B (Addition of feature),	
C (Functional modification of feature)	
D (Editorial modification)	
Detailed explanations of the above categories can be found in 3GPP TR 21.900.	
Use <u>one</u> of the following releases:	
2 (GSM Phase 2)	
R96 (Release 1996)	
R97 (Release 1997)	
R98 (Release 1998)	
R99 (Release 1999)	
REL-4 (Release 4)	
REL-5 (Release 5)	

Reason for change:	⌘ One editorial error on message name corrected and one reference document removed from References list.
Summary of change:	⌘ In clause 7.2.2.1.3 TMSI RELOCATION COMPLETE changed to TMSI REALLOCATION COMPLETE. In clause 2 reference to GSMA-ISG: "Typical Radio Parameter Sets, version 1.1, IS Doc 049/00, 20 March 2000" document deleted based on the decision in T1 SIG meeting 16 in Singapore.
Consequences if not approved:	⌘ Errors in specification

Clauses affected:	⌘ 2 and 7.2.2.1.3
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications ⌘ <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications
Other comments:	⌘

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.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://www.3gpp.org/specs/>. For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.

1 Scope

The present document contains definitions of reference conditions and test signals, default parameters, reference Radio Bearer configurations, common requirements for test equipment and generic set-up procedures for use in UE conformance tests.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

- [1] 3GPP TS 34.123-1: "Mobile Station (MS) conformance specification; Part 1: Protocol conformance specification".
- [2] 3GPP TS 34.121: "Terminal Conformance Specification; Radio transmission and reception (FDD)".
- [3] 3GPP TS 34.123-2: "User Equipment (UE) conformance specification; Part 2: Implementation Conformance Statement (ICS) proforma specification".
- [4] 3GPP TS 34.124: "Electromagnetic compatibility (EMC) requirements for Mobile terminals and ancillary equipment".
- [5] 3GPP TS 34.122: "Terminal Conformance Specification; Radio transmission and reception (TDD)".
- [6] 3GPP TS 34.109: "Terminal Logical Test Interface; Special conformance testing functions".
- [8] 3GPP TS 25.214: "Physical layer procedures (FDD)".
- [7] 3GPP TS 25.301 Services Provided by the physical layer
- [9] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".
- [10] 3GPP TR 25.990: "Vocabulary".
- [11] 3GPP TS 25.101: "UE Transmission and Reception (FDD)".
- [12] 3GPP TS 25.102: "UE Transmission and Reception (TDD)".
- [13] 3GPP TS 25.211: "Physical Channels and mapping of Transport Channels onto Physical channels (FDD)".
- [14] 3GPP TS 25.212: "Multiplexing and Channel Coding (FDD)".
- [15] 3GPP TS 23.107: "QoS concept and Architecture".
- [16] 3GPP TS 26.110: "Codec for Circuit Switched Multimedia Telephony Service; General Description".
- [17] 3GPP TS 29.007: "General requirements on interworking between the Public Land Mobile Network (PLMN) and the Integrated Services Digital Network (ISDN) or Public Switched Telephone Network (PSTN)".

- [18] 3GPP TR 23.910: "Circuit Switched Data Bearer Service".
- [19] ~~GSMA ISG: "Typical Radio Parameter Sets, version 1.1, IS Doc 049/00, 20 March 2000"-void~~
- [20] 3GPP TS 25.104: "UTRA (BS)-FDD Radio Transmission and Reception".
- [21] 3GPP TS 25.105: "UTRA (BS)-TDD Radio Transmission and Reception".
- [22] 3GPP TS 31.101: "UICC-Terminal Interface; Physical and Logical Characteristics".
- [23] 3GPP TS 31.102: "Characteristics of the USIM Application".
- [24] 3GPP TS 33.102: "Security Architecture".
- [25] 3GPP TS 33.103: "Integration Guidelines".
- [26] 3GPP TS 33.105: "Cryptographic Algorithm Requirements".
- [27] 3GPP TS 25.224: "Physical layer procedures (TDD)".
- [28] 3GPP TS 25.221: "Physical Channels and mapping of Transport Channels onto Physical channels (TDD)".
- [29] 3GPP TS 25.222: "Multiplexing and Channel Coding (TDD)".

7.2.2 Registration of UE

7.2.2.1 Registration on CS

7.2.2.1.1 Initial condition

System Simulator:

1 cell, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions.
- The Test-USIM shall be inserted.

7.2.2.1.2 Definition of system information messages

The default system information messages are used.

7.2.2.1.3 Procedure

Registration of UE for SS shall be established under ideal radio conditions as defined in 5. Reference Test Conditions:

Step	Direction		Message	Comments
	UE	SS		
1	<--		SYSTEM INFORMATION (BCCH)	NW Broadcast
2	-->		RRC CONNECTION REQUEST (CCCH)	RRC
3	<--		RRC CONNECTION SETUP (CCCH)	RRC
4	-->		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
5	-->		LOCATION UPDATING REQUEST	MM
6	<--		AUTHENTICATION REQUEST	MM
7	-->		AUTHENTICATION RESPONSE	MM
8	<--		SECURITY MODE COMMAND	RRC
9	-->		SECURITY MODE COMPLETE	RRC
10	<--		LOCATION UPDATING ACCEPT	MM
11	-->		TMSI REALLOCATION COMPLETE	MM
12	<--		RRC CONNECTION RELEASE	RRC
13	-->		RRC CONNECTION RELEASE COMPLETE	RRC

7.2.2.1.4 Specific message contents

All Specific message contents shall be referred to clause 9 "Default Message Contents of Layer3 Messages for Layer 3 Testing".