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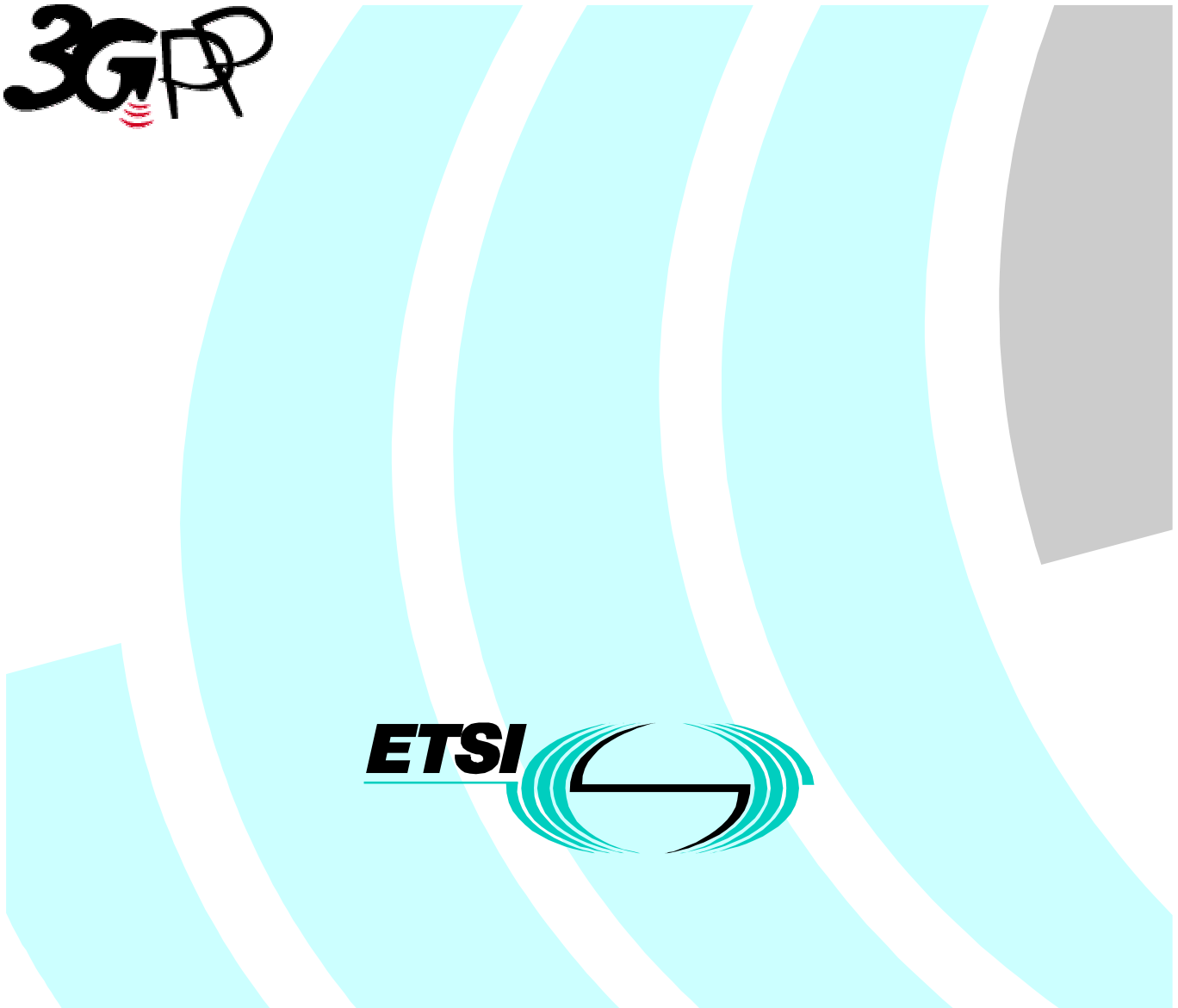
Technical Specification

Universal Mobile Telecommunications System (UMTS);
Common Test Environments for User Equipment (UE)
Conformance Testing
(3GPP TS 34.108 version 3.2.0 Release 1999)



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Foreword

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Contents

Foreword

This Technical Specification (TS) has been produced by the 3rd Generation Partnership Project (3GPP).

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Introduction

The definition of the Conformance Tests for UE in 3G will be a complex task as the complete test suite covers RF, EMC and Protocol aspects of the UE.

Each test requires a Test Environment to be defined in which the UE has to operate to defined standards, constraints and performance. The overall task can be simplified if there are a number of well defined and agreed Common Test Environments where every one can be used for a number of tests. Hence this documents defines testing conditions that are common to several tests avoiding the need to duplicate the same information for every single test.

This document defines default values for a variety of common areas. Where values are not specified in test cases, the defaults in this document will apply. If specified, the test case values will take precedence.

This document addresses the FDD mode as well as the TDD mode. Due to the fact that TDD is not a requirement for release 99, much emphasis has gone in defining the FDD environments. Some TDD definitions have been also included where possible. The TDD mode, however, needs some further studies and refinement in the future.

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: "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: "Logical Test Interface (FDD) 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

[20] 3GPP TS 25.104 UTRA (BS)-FDD Radio Transmission and Reception

[21] 3GPP TS 25.105 UTRA (BS)-TDD Radio Transmission and Reception

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 Randome Access Channel
PS	Packet switching
RAB	Radio Access Bearer
RB	Radio Bearer
SCCPCH	Secondary Common Control Physical Channel
SMS	Short Message Service
SRB	Signalling RB
SSD	Source statistics descriptor
TC	Turbo coding
TM	Transparent mode
UL	Uplink
UM	Unacknowledgement mode

4 Common requirements of test equipment

Mobile conformance testing can be categorised into 3 distinct areas:

RF Conformance Testing.

EMC Conformance Testing.

Signalling Conformance Testing.

The test equipment required for each category of testing may or not be different, depending on the supplier of the test equipment. However, there will be some generic requirements of the test equipment that are essential for all three categories of test, and these are specified in this sub-clause.

In addition, there will be requirements to test operation in multi-system configurations (eg UTRA plus GSM/DCS1800). However, these would not form a common test equipment requirement for the three test areas and are not considered in this specification.

4.1 General Functional Requirements

Note: This clause has been written such that it does not constrain the implementation of different architectures and designs of test equipment.

All test equipment used to perform conformance testing on a UE shall provide a platform suitable for testing UE's that are either:

a) FDD Mode, or

b) TDD Mode, or

c) both FDD/TDD Modes.

All test equipment shall provide (for the mode(s) supported) the following minimum functionality.

- The capability of emulating a single UTRA cell with the appropriate channels to allow the UE to register on the cell.
- The capability to allow the UE to set up an RRC connection with the System Simulator, and to maintain the connection for the duration of the test.
- The capability (for the specific test):
  - to select and support an appropriate Radio Bearer for the downlink;
  - to set the appropriate downlink power levels;
  - to set up and support the appropriate Radio Bearer for the uplink;
  - to set and control the uplink power levels.

4.2 Minimum performance levels

4.2.1 Supported Cell Configuration

The System Simulator shall provide the capability to simulate a minimum number of cells (of the appropriate UTRA Mode) whose number and capabilities are governed by the test cases that need to be performed (test cases are defined in [1](Signalling), [2] (RF-FDD) and [5] (RF-TDD)). For this purpose test cases can be split into two different categories: Tests that require only one cell and Tests that require several cells.

To perform test cases requiring one cell, the system simulator must provide a Cell offering the capabilities to perform all the test cases in this category.

To perform test cases requiring several cells, additional cells must be provided by the system simulator. The additional cells, however, need only provide a minimum set of capabilities so as to support the first cell in carrying out the multi-cell test cases.

The type and number of channels (especially physical channels) constitute an important set of capabilities for a cell. The following sub-clauses list possible channels that may be supported by the SS. Each channel type, however, and the minimum number of channels needed are only mandatory if specific test cases require them.

The mapping between Logical and Transport channels is as described in [7]. Similarly the mapping between Transport channels and Physical channels is as described in 3GPP TS 25.211 for the FDD mode, and 3GPP TS 25.221 for the TDD mode. The reference measurement channels (mapping between Transport channels and Physical channels for DTCH/DCCH to be tested) are defined in [2] Annex-C for FDD and [5] Annex-C for TDD.

4.2.1.1 Supported Channels for FDD Mode

4.2.1.1.1 Logical Channels

Logical Channel	Minimum Number	Comments
BCCH	1	
CCCH	1	
DCCH	4	2 for RRC testing, 2 for NAS testing
PCCH	1	
DTCH	n <FFS>	Depending on SS's support for RB service testing (See Clause 14 of TS 34.123-1)

4.2.1.1.2 Transport Channels

Transport Channel	Minimum Number	Comments
BCH	1	
FACH	1	
PCH	1	
DCH	n <FFS>	
DSCH	1	
RACH	2	
CPCH	1	
FAUSCH	N/A	Not in Release 99

4.2.1.1.3 Physical Channels

Physical Channel	Minimum Number	Comments
P-CCPCH	1	Primary Common Control Physical Channel. This is used by the Cell to Broadcast System Information messages, it is transmitted using the Primary Scrambling Code for the Cell.
P-CPICH	1	Primary Common Pilot Channel using the Primary Scrambling Code for the Cell.
S-CPICH	1 (For RF Tests)	Secondary Common Pilot Channel. This signal is used as the phase reference for some RF tests.
SCH	1	Synchronisation Channel (includes P-SCH and S-SCH)
S-CCPCH	2	Secondary Common Control Physical Channel.
PICH	1	To identify when the UE should access the PCCH for Paging Messages.
AICH	1	General Acquisition Indicator Channel that can be used for: - Aquisition Indicator Channel, for PRACH - Access Preamble Acquisition Indicator Channel (AP-ICH), for PCPCH - Collision-Detection/Channel-Assignment Indicator Channel (CD/CA-ICH), for PCPCH
DPDCH	3	Downlink Physical Data Channel. There will be a single DPCCH associated with all the DPDCHs used for Layer 1 signalling. This number is for the First Cell. Additional Cells may define a lower number which should be at least 1.
PDSCH	1	Physical Downlink Shared Channel.
DPCH	1	Uplink Dedicated Physical Channel
PRACH	2	Physical Random Access Channel.
PCPCH	1	Physical Common Packet Channel.
CSICH	1	CPCH Status Indicator Channel

4.2.1.2 Supported Channels for TDD Mode

4.2.1.2.1 Logical Channels

Logical Channel	Minimum Number	Comments
BCCH	1	
CCCH	1	
DCCH	1	
PCCH	1	
DTCH	1	
SHCH	1	

4.2.1.2.2 Transport Channels

Transport Channel	Minimum Number	Comments
BCH	1	
FACH	1	
PCH	1	
DCH	n <FFS>	
DSCH	1	
USCH	1	
RACH	1	

4.2.1.2.3 Physical Channels

Physical Channel	Minimum Number	Comments
P-CCPCH	1	Primary Common Control Physical Channel. This is the Cell Broadcast Channel, transmitted using the Primary Scrambling Code for the Cell.
SCH	1	Synchronisation Channel
S-CCPCH	2	Secondary Common Control Physical Channel.
PICH		To identify when the UE should access the PCCH for Paging Messages.
DPCH (DL)	3	Downlink Dedicated Physical Channel
PDSCH	1	Physical Downlink Shared Channel.
DPCH (UL)	1	Uplink Dedicated Physical Channel
PUSCH	1	Physical Uplink Shared Channel.
PRACH	2	Physical Random Access Channel.

4.2.1.3 Support of T_{cell} timing offset

In test case parameter declarations, the parameter T_{cell} may be specified between 0 to 38399, to allow for extensibility. However, the system simulator is required only to support a maximum T_{cell} value of 2304, with a step resolution of 256. The SS may limit a T_{cell} value of greater than 2304, and may round T_{cell} to the nearest multiple of 256.

4.2.2 RF Performance

4.2.2.1 Frequency of Operation

The System Simulator shall be capable of adjusting the Carrier Frequency of the DL channels to any frequency allowed in the DL frequency band. The DL frequency shall be accurate to the level of accuracy set by the core specications [20] for FDD and [21] for TDD.

For RF tests, the requirement of Test Equipment is described in [2] Annex-F for FDD and [5] Annex-F for TDD respectively.

4.2.2.2 Power Level Setting Accuracy

The system simulator shall be able to adjust the average power output of the DL Channels to meet the absolute accuracy of the system simulator DL power levels covered in 5.4.1 Downlink Signal Levels.

For RF tests, the requirement of Test Equipment is described in [2] Annex-F for FDD and [5] Annex-F for TDD respectively.

The system simulator shall be capable of altering the power of the DL Dedicated channels under control of the UE Layer 1 Signalling information.

4.2.2.3 Uplink Power Control

The system simulator shall be able to command the UE to transmit at the maximum level for its power class or a lower level required for specific tests. The system simulator shall also provide the capability of generating the Layer 1 Signalling information to set the power levels of the Uplink Dedicated Channels from the UE to lower levels if required.

4.2.2.4 Uplink Signal Handling

For FDD mode, the System Simulator shall not be damaged by a Power Class 1 UE transmitting at the maximum power level permitted in [11] and for TDD mode by a Power Class 2 UE transmitting at the maximum power level permitted in [12].

4.2.2.5 Uplink Sensitivity

The simulator shall be able to receive uplink transmissions from the UE when it is transmitting at the minimum power level defined in [11] for FDD mode, and [12] for TDD mode.

Editor's note: this is obviously a useful feature for the system simulator; however it is <ffs> if it should be an essential common requirement for a protocol test system

4.2.3 Timers Tolerances

All the timers used during testing are within a tolerance margin given by the equation below. If for a specific test a different tolerance value is required then this should be specified in the relevant test document (i.e. the document where the test is described).

Timer tolerance = 10%, or 2 * TTI + t_{delta}, whichever value is the greater.

where t_{delta} is 55 ms.

5 Reference Test Conditions

5.1 Test frequencies

The test frequencies are based the UMTS frequency bands defined in the core specifications.

To avoid interference with adjacent frequency bands the lowest test frequency (downlink and uplink) needs to be offset upwardly by at least 2.6 MHz since the channel's width is 5 MHz and the raster spacing is 200KHz. Similarly the highest test frequency (downlink and uplink) needs to be offset downwardly by at least 2.6 MHz.

NB: Additional regulations concerning interferences to frequency bands used by different systems may also exist. Those regulations are specific to the country where the test equipment is used and need to be taken into account if they require a higher offset than 2.6 MHz from the edge frequencies.

5.1.1 FDD Mode Test frequencies

UTRA/FDD is designed to operate in either of two paired bands [11]. The second band is used in ITU Region 2. The reference test frequencies for the common test environment for each of the 2 regions are defined in the following tables:

5.1.1.1 Standard FDD reference test frequencies

Test Frequency ID	UARFCN	Frequency of Uplink	Frequency of Downlink
Low Range	9613	1922.6 MHz	2112.6 MHz
Mid Range	9750	1950.0 MHz	2140.0 MHz
High Range	9887	1977.4 MHz	2167.4 MHz

5.1.1.2 FDD reference test frequencies for ITU region 2

Test Frequency ID	UARFCN	Frequency of Uplink	Frequency of Downlink
Low Range	9263	1852.6 MHz	1932.6 MHz
Mid Range	9400	1880 MHz	1960 MHz
High Range	9537	1907.4 MHz	1987.4 MHz

5.1.2 TDD Mode Test frequencies

The reference test frequencies for the common test environment in the TDD [12] Bands are defined in the following tables:

Editor's note: the offset from the edge frequencies have not been defined yet. So the values given are the frequencies at the ends of the spectrum bands.

5.1.2.1 Standard TDD reference test frequencies

	Band 1		Band 2	
Test Frequency ID	**UARFCN**	**Frequency (UL and DL)**	**UARFCN**	**Frequency (UL and DL)**
Low Range	9513	1902.6 MHz	10063	2012.6 MHz
Mid Range	9550	1910 MHz	10087	2017.4 MHz
High Range	9587	1917.4 MHz	10117	2023.4 MHz

5.1.2.2 TDD reference test frequencies for ITU Region 2

a)

	Band 1		Band 2	
Test Frequency ID	**UARFCN**	**Frequency (UL and DL)**	**UARFCN**	**Frequency (UL and DL)**
Low Range	9263	1852.6 MHz	9663	1932.6 MHz
Mid Range	9400	1880 MHz	9800	1960 MHz
High Range	9537	1907.4 MHz	9937	1987.4 MHz

b)

Test Frequency ID	UARFCN	Frequency (UL and DL)
Low Range	9563	1912.6 MHz
Mid Range	9600	1920 MHz
High Range	9637	1927.4 MHz

5.2 Radio conditions

There are a number of radio propagation conditions defined in [2] for FDD mode and [5] for TDD mode, which may be required for a number of tests and hence can be considered as Common Conditions for FDD mode and TDD mode respectively.

NB: The System Simulator is required to support at least the normal Propagation Condition; support of the other propagation conditions is optional, depending on the specific test supported by the simulator

5.2.1 Normal Propagation Condition

This condition provides a connection between the System Simulator that is effectively free from Additive White Gaussian Noise, and where there are no fading or multipath effects. This condition will be used for Signalling tests.

5.2.2 Static Propagation Condition

See [2] Annex-D for FDD and [5] Annex-D for TDD.

5.2.3 Multi-Path Fading Propagation Conditions

See [2] Annex-D for FDD and [5] Annex-D for TDD.

5.2.4 Moving Propagation Conditions

See [2] Annex-D for FDD. There are no currently defined Moving propagation conditions for TDD.

5.2.5 Birth-Death propagation conditions

See [2] Annex-D for FDD. There are no currently defined Birth-Death propagation conditions for TDD.

5.3 Standard test signals

Reference [11] and [12] for definitions of standard test signals.

5.4 Signal levels

The power levels given in the following sub-clauses (5.4.1 and 5.4.2) apply for Signalling tests only. For RF tests power levels are given in [2] Annex-E for FDD and [5] Annex-E for TDD.

5.4.1 Downlink Signal Levels

<FFS>

5.4.2 Uplink Signal Levels

<FFS>

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).

This version of the specification covers the simulation of the Single Mode FDD Network only to align with the Release 99 requirements. It will need to be extended in a later version to cover the Single Mode TDD network case. 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 (1 to 8)
- Supported PLMN types	
- PLMN type	GSM-MAP
- PLMN identity(GSM-MAP)	
- MCC digit	Mobile Country Code(3 digit) According to the contents of USIM.
- MNC digit	Mobile Network Code(2-3 digit) According to the contents of USIM.
- ANSI-41 Core Network information	Not Present
- P_REV(Protocol revision level)	
- MIN_P_REV(Minimum protocol revision level)	
- SID(System identification)	
- NID(Network identification)	
- References to other system information blocks	
- Scheduling information	
- SIB type	Type1
- PLMN Value tag	1(1 to 256)
- Cell Value tag	Not Present
- SEG_COUNT	1 (1 to 16)
- SIB_REP	
- SIB_POS	
- SIB_OFF	
- SIB type	Type2
- PLMN Value tag	1(1 to 256)
- Cell Value tag	Not Present
- SEG_COUNT	1 (1 to 16)
- SIB_REP	
- SIB_POS	
- SIB_OFF	
- SIB type	Type3
- PLMN Value tag	Not Present
- Cell Value tag	1 (1 to 4)
- SEG_COUNT	1 (1 to 16)
- SIB_REP	
- SIB_POS	
- SIB_OFF	
- SIB type	Type4
- PLMN Value tag	Not Present
- Cell Value tag	1 (1 to 4)
- SEG_COUNT	1 (1 to 16)
- SIB_REP	
- SIB_POS	
- SIB_OFF	
- SIB type	Type5
- PLMN Value tag	Not Present
- Cell Value tag	1 (1 to 4)
- SEG_COUNT	1 (1 to 16)
- SIB_REP	
- SIB_POS	
- SIB_OFF	
- SIB type	Type6
- PLMN Value tag	Not Present
- Cell Value tag	1 (1 to 4)
- SEG_COUNT	1 (1 to 16)
- SIB_REP	
- SIB_POS	
- SIB_OFF	
- SIB type	Type7
- PLMN Value tag	Not Present
- Cell Value tag	1 (1 to 4)
- SEG_COUNT	1 (1 to 16)
- SIB_REP	
- SIB_POS	
- SIB_OFF	
- SIB type	Type8
- PLMN Value tag	Not Present
- Cell Value tag	1 (1 to 4)

- SEG_COUNT	1 (1 to 16)
- SIB_REP	
- SIB_POS	
- SIB_OFF	
- SIB type	Type9
- PLMN Value tag	Not Present
- Cell Value tag	1 (1 to 4)
- SEG_COUNT	1 (1 to 16)
- SIB_REP	
- SIB_POS	
- SIB_OFF	
- SIB type	Type10
- PLMN Value tag	Not Present
- Cell Value tag	1 (1 to 4)
- SEG_COUNT	1 (1 to 16)
- SIB_REP	
- SIB_POS	
- SIB_OFF	
- SIB type	Type11
- PLMN Value tag	Not Present
- Cell Value tag	1 (1 to 4)
- SEG_COUNT	1 (1 to 16)
- SIB_REP	
- SIB_POS	
- SIB_OFF	
- SIB type	Type12
- PLMN Value tag	Not Present
- Cell Value tag	1 (1 to 4)
- SEG_COUNT	1 (1 to 16)
- SIB_REP	
- SIB_POS	
- SIB_OFF	
- SIB type	Type13
- PLMN Value tag	Not Present
- Cell Value tag	1 (1 to 4)
- SEG_COUNT	1 (1 to 16)
- SIB_REP	
- SIB_POS	
- SIB_OFF	
- SIB type	Type13.1
- PLMN Value tag	Not Present
- Cell Value tag	1 (1 to 4)
- SEG_COUNT	1 (1 to 16)
- SIB_REP	
- SIB_POS	
- SIB_OFF	
- SIB type	Type13.2
- PLMN Value tag	Not Present
- Cell Value tag	1 (1 to 4)
- SEG_COUNT	1 (1 to 16)
- SIB_REP	
- SIB_POS	
- SIB_OFF	
- SIB type	Type13.3
- PLMN Value tag	Not Present
- Cell Value tag	1 (1 to 4)
- SEG_COUNT	1 (1 to 16)
- SIB_REP	
- SIB_POS	
- SIB_OFF	
- SIB type	Type13.4
- PLMN Value tag	Not Present
- Cell Value tag	1 (1 to 4)
- SEG_COUNT	1 (1 to 16)
- SIB_REP	
- SIB_POS	
- SIB_OFF	
- SIB type	Type14
- PLMN Value tag	Not Present

- Cell Value tag	1 (1 to 4)
- SEG_COUNT	1 (1 to 16)
- SIB_REP	
- SIB_POS	
- SIB_OFF	
- SIB type	Type15
- PLMN Value tag	Not Present
- Cell Value tag	1 (1 to 4)
- SEG_COUNT	1 (1 to 16)
- SIB_REP	
- SIB_POS	
- SIB_OFF	
- SIB type	Type16
- PLMN Value tag	Not Present
- Cell Value tag	1 (1 to 4)
- SEG_COUNT	1 (1 to 16)
- SIB_REP	
- SIB_POS	
- SIB_OFF	

Contents of System Information Block type1 PLMN type is the case of GSM-MAP

- CN common GSM-MAP NAS system information	
- GSM-MAP NAS system information	Contains the PLMN Identity and Location Area Code
- MCC digit	Mobile Country Code(3 digit) According to the contents of USIM.
- MNC digit	Mobile Network Code(2-3 digit) According to the contents of USIM.
- 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 CELL_DCH	
-T304	Not Present – Use Default
-N304	7
-T308	Not Present – Use Default
-T309	8 seconds
-T310	Not Present
-N310	Not Present
-T311	Not Present
-T313	15 seconds
-N313	200
-T314	20 seconds
-T315	1800 seconds
-N315	1000
- UE Timers and constants in idle mode	
-T300	400 milliseconds
-N300	7
-T312	10 seconds
- N312	200

Contents of System Information Block type2

- URA identity	0000 0000 0000 0001B
- UE Timers and constants in connected mode	
- T301	2000 milliseconds
- N301	2
- T302	4000 milliseconds
- N302	3
- T303	2000 milliseconds
- N303	3
- T304	1000 milliseconds
- N304	3
- T305	60 minutes
- T306	120 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	200
- T314	20 seconds
- T315	30 seconds
- N315	200

Contents of System Information Block type3

- References to other system information blocks	Not Present
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- Mapping info	
- RAT	UTRA FDD
- Mapping Function Parameter List	1
- Function type	Linear (0)
- 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	Not Present
- RAT identifier	
- Ssearch,RAT	
- SHCS,RAT	
- $S_{limit,ShearchRAT}$	Not Present
- Q_{hyst1s}	0 dB
- Qhyst2s	0 dB
- Treselections	0 seconds
- HCS Serving cell information	
- HCS_PRIO	0
- QHCS	0
- T_{CRMAX}	Not used
- NCR	Not Present
- $T_{CMAXHyst}$	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 type4 In connected mode (similar to SIB type3)

- References to other system information blocks	Not Present
- Cell identity	0000 0000 0000 0000 0000 0000 0001B
- Cell selection and re-selection info	
- RAT	UTRA FDD
- Mapping Function Parameter List	Not Present
- Function type	
- Map_parameter_1	
- Map_parameter_2	
- Upper_limit	
- Cell_selection_and_reselection_quality_measure	CPICH Ec/N0
- CHOICE mode	FDD
- Sintrasearch	16 dB
- Sintersearch	16 dB
- SsearchHCS	10 dB
- RAT List	
- RAT identifier	Not Present
- Ssearch,RAT	
- SHCS,RAT	
- $S_{limit,ShearchRAT}$	Not Present
- $Qhyst1_S$	0 dB
- $Qhyst2_S$	0 dB
- Treselections	0 seconds
- HCS Serving cell information	
- HCS_PRIO	0
- QHCS	0
- TCR_{MAX}	Not used (not used, 30, 60, 120, 180, 240)
- NCR	Not Present
- $TCMAXH_{yst}$	Not Present
- Maximum allowed UL TX power	33dBm
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	115 dBm
- Cell Access Restriction	
- Cell barred	Not barred(not barred, barred)
- Access Class Barred	Not barred(not barred, barred)
- Cell Reserved for operator use	Not reserved(reserved, not reserved)
- Cell Reserved for SoLSA exclusive use	Not reserved(reserved, 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

- References to other system information blocks	Not Present
- PICH Power offset	0dB
- AICH Power offset	0dB
- Primary CCPCH info	
- TX Diversity indicator	FALSE
- 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	1
- RACH 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
- 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.
- CTFC information	Refer to clause 6.10 Parameter Set
- Power offset information	
- CHOICE Gain Factors	Signalled Gain Factor
- Gain factor ßc	0
- Gain factor ßd	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)
- Available sub-channel Start Index	0 (ASC#0)
- Available sub-channel End Index	11 (ASC#0)
- Available signature Start Index	0 (ASC#1)
- Available signature End Index	7 (ASC#1)
- Available sub-channel Start Index	0 (ASC#1)
- Available sub-channel End Index	10 (ASC#1)
- Available signature Start Index	0 (ASC#2)
- Available signature End Index	7 (ASC#2)
- Available sub-channel Start Index	0 (ASC#2)
- Available sub-channel End Index	9 (ASC#2)
- Available signature Start Index	0 (ASC#3)
- Available signature End Index	7 (ASC#3)
- Available sub-channel Start Index	0 (ASC#3)
- Available sub-channel End Index	8 (ASC#3)
- Available signature Start Index	0 (ASC#4)
- Available signature End Index	7 (ASC#4)
- Available sub-channel Start Index	0 (ASC#4)
- Available sub-channel End Index	7 (ASC#4)
- Available signature Start Index	0 (ASC#5)
- Available signature End Index	7 (ASC#5)
- Available sub-channel Start Index	0 (ASC#5)
- Available sub-channel End Index	6 (ASC#5)
- Available signature Start Index	0 (ASC#6)

- Available signature End Index	7 (ASC#6)
- Available sub-channel Start Index	0 (ASC#6)
- Available sub-channel End Index	5 (ASC#6)
- Available signature Start Index	0 (ASC#7)
- Available signature End Index	7 (ASC#7)
- Available sub-channel Start Index	0 (ASC#7)
- Available sub-channel End Index	4 (ASC#7)
- 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	
- Secondary scrambling code	1 (1 to 15)
- 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	
- Channelisation code	
- STTD indicator	
- Secondary scrambling code	1
- 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 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	1 (for PCH)
- TFS	(PCH)
- 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
- Transport Channel Identity	2 (for FACH)
- TFS	(FACH)
- 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
- CTCH indicator	FALSE
- PICH info	
- Secondary scrambling code	2
- 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)

- References to other system information blocks	Not Present
- PICH power offset	0 dB
- AICH power offset	0 dB
- Primary CCPCH info	
- TX Diversity indicator	FALSE
- 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	1
- RACH 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
- 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.
- CTFC information	Refer to clause 6.10 Parameter Set
- Power offset information	
- CHOICE Gain Factors	Signalled Gain Factor
- Gain factor ßc	0
- Gain factor ßd	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)
- Available sub-channel Start Index	0 (ASC#0)
- Available sub-channel End Index	11 (ASC#0)
- Available signature Start Index	0 (ASC#1)
- Available signature End Index	7 (ASC#1)
- Available sub-channel Start Index	0 (ASC#1)
- Available sub-channel End Index	10 (ASC#1)
- Available signature Start Index	0 (ASC#2)
- Available signature End Index	7 (ASC#2)
- Available sub-channel Start Index	0 (ASC#2)
- Available sub-channel End Index	9 (ASC#2)
- Available signature Start Index	0 (ASC#3)
- Available signature End Index	7 (ASC#3)
- Available sub-channel Start Index	0 (ASC#3)
- Available sub-channel End Index	8 (ASC#3)
- Available signature Start Index	0 (ASC#4)
- Available signature End Index	7 (ASC#4)
- Available sub-channel Start Index	0 (ASC#4)
- Available sub-channel End Index	7 (ASC#4)
- Available signature Start Index	0 (ASC#5)
- Available signature End Index	7 (ASC#5)
- Available sub-channel Start Index	0 (ASC#5)
- Available sub-channel End Index	6 (ASC#5)
- Available signature Start Index	0 (ASC#6)

- Available signature End Index	7 (ASC#6)
- Available sub-channel Start Index	0 (ASC#6)
- Available sub-channel End Index	5 (ASC#6)
- Available signature Start Index	0 (ASC#7)
- Available signature End Index	7 (ASC#7)
- Available sub-channel Start Index	0 (ASC#7)
- Available sub-channel End Index	4 (ASC#7)
- 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	Not Present
- AC-to-ASC mapping	
- AC-to-ASC mapping	
- AC-to-ASC mapping	
- AC-to-ASC mapping	
- AC-to-ASC mapping	
- AC-to-ASC mapping	
- AC-to-ASC mapping	
- 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	
- Secondary scrambling code	1 (1 to 15)
- 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	
- Channelisation code	
- STTD indicator	
- Secondary scrambling code	1
- 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	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	1 (for PCH)
- TFS	(PCH)
- 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
- Transport Channel Identity	2 (for FACH)
- TFS	(FACH)
- 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
- CTCH indicator	FALSE
- PICH info	
- Secondary scrambling code	2
- 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 type7

- UL interference - PRACHs listed in system information block type5 - Dynamic persistence level - PRACHs listed in system information block type6 - Dynamic persistence level	-100dBm(-110 to –70 dBm) 2 (1 to 8) 2 (1 to 8)

Contents of System Information Block type8,9

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

Contents of System Information Block type10

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

Contents of System Information Block type11

- References to other system information blocks	Not Present
- FACH measurement occasion info	Not Present
- k_UTRA	
- Other RAT present in intersystem cell info	
- RAT type	
- k_Intrer_Rat	
- 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 number	0
- Intra-frequency cell info list	
- Removed intra-frequency cells	Not Present
- Intra-frequency cell id	
- New intra-frequency cells	
- Intra-frequency cell id	0
- Cell info	
- Cell individual offset	0dB(-10,-9.5…10 by step of 0.5)
- 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
- Qoffset2s,n	0 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Not Present
- HCS_PRIO	
- Q_{HCS}	
- HCS Cell Re-selection information	
- Penalty time	
- Temporary_offsets	
- Temporary_offset1	
- Temporary_offset2	
- 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	No report
- Cell identity	TRUE
- CPICH Ec/N0	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-SFN observed time difference	TRUE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/N0	FALSE
- CPICH RSCP	TRUE

- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for detected set cells	Not Present
- SFN-SFN observed time difference	
- Cell identity	
- CPICH Ec/N0	
- CPICH RSCP	
- Pathloss	
- CFN-SFN observed time difference	
- Intra-frequency measurement reporting criteria	
- parameters required for each event	
- intra-frequency event identity	1a
- Triggering condition(mandatory in case of 1a,1b,1e,1f)	monitored set cells
- Reporting Range(optional in case of 1a,1b)	5dB
- cells forbidden to affect reporting range(optional in case of 1a,1b)	Not Present
- Primary CPICH info	
- Primary scrambling code	
- W(optional in case of 1a,1b)	1.0
- Hysteresis (mandatory in case of 1a,1b,1c,1d,1g,1h,1I,1j)	0.0
- Threshold used frequency (in case of 1e,1f,1h,1i,1j)	T.B.D(-125..165)
- Reporting deactivation threshold(mandatory in case of 1a)	1
- Replacement activation threshold(mandatory in case of 1c)	Not Present(not applicable,1,2,3,4,5,6,7)
- Time to trigger	640(0,10,20,40,60,80,100,120,160,200,240,320,640,1280,2560,5000)
- Amount of reporting	Infinity(1,2,4,816,32,64,Infinity)
- Reporting interval	0(0,250,500,1000,2000,4000,8000,16000 milliseconds)
- Reporting cell status	
- CHOICE reporting cell	Within monitored cells on used frequency and within monitored cells on non-used frequency
- Maximum number of reporting cells type 2	2
- Inter-frequency measurement system information	Not Present
- Inter-frequency measurement identity number	
- Inter-frequency cell info list	
- Removed inter-frequency cells	
- Inter-frequency cell id	
- New inter-frequency cells	
- Inter-frequency cell id	
- Frequency info	
- UARFCN uplink(Nu)	
- UARFCN downlink(Nd)	
- Cell info	
- Cell individual offset	
- Reference time difference to cell	
- Primary CPICH info	
- Primary scrambling code	
- Primary CPICH TX power	
- Read SFN indicator	
- TX Diversity indicator	
- Cell Selection and Re-selection info	
- Qoffsets,n	
- Maximum allowed UL TX power	
- HCS neighbouring cell information	
- HCS_PRIO	
- Q_{HCS}	
- HCS Cell Re-selection information	
- Penalty time	
- Temporary_offsets	
- Temporary_offset1	
- Temporary_offset2	
- CHOICE mode	
- Qqualmin	

- Qrxlevmin - Inter-frequency measurement quantity - Intra-frequency reporting criteria - Intra-frequency measurement quantity - Filter coefficient - Measurement quantity - Inter-frequency reporting criteria - Inter-frequency measurement quantity - Filter coefficient - Measurement quantity for frequency quality estimate - Inter-frequency measurement reporting criteria	
- Inter-system 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)

- References to other system information blocks	Not Present
- FACH measurement occasion info	Not Present
- k_UTRA	
- Other RAT present in intersystem cell info	
- RAT type	
- k_Intrer_Rat	
- 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 number	0
- Intra-frequency cell info list	
- Removed intra-frequency cells	Not Present
- Intra-frequency cell id	
- New intra-frequency cells	
- Intra-frequency cell id	0
- Cell info	
- Cell individual offset	0dB(-10,-9.5…10 by step of 0.5)
- 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	33dBm
- HCS neighbouring cell information	Not Present
- HCS_PRIO	
- QHCS	
- HCS Cell Re-selection information	
- Penalty_time	
- Temporary_offsets	
- Temporary_offset1	
- Temporary_offset2	
- 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	No report
- Cell identity	TRUE
- CPICH Ec/N0	FALSE
- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-SFN observed time difference	TRUE
- Reporting quantities for monitored set cells	
- SFN-SFN observed time difference	No report
- Cell identity	TRUE
- CPICH Ec/N0	FALSE

- CPICH RSCP	TRUE
- Pathloss	FALSE
- CFN-SFN observed time difference	FALSE
- Reporting quantities for detected set cells	Not Present
- SFN-SFN observed time difference	
- Cell identity	
- CPICH Ec/N0	
- CPICH RSCP	
- Pathloss	
- CFN-SFN observed time difference	
- Intra-frequency measurement reporting criteria	
- parameters required for each event	
- intra-frequency event identity	1a
- Triggering condition(mandatory in case of 1a,1b,1e,1f)	monitored set cells
- Reporting Range(optional in case of 1a,1b)	5dB
- cells forbidden to affect reporting range(optional in case of 1a,1b)	Not Present
- Primary CPICH info	
- Primary scrambling code	
- W(optional in case of 1a,1b)	1.0
- Hysteresis (mandatory in case of 1a,1b,1c,1d,1g,1h,1I,1j)	0.0
- Threshold used frequency (in case of 1e,1f,1h,1i,1j)	T.B.D(-125..165)
- Reporting deactivation threshold(mandatory in case of 1a)	1
- Replacement activation threshold(mandatory in case of 1c)	Not Present(not applicable,1,2,3,4,5,6,7)
- Time to trigger	0(0,10,20,40,60,80,100,120,160,200,240,320,640,1280,2560,5000)
- Amount of reporting	Infinity(1,2,4,816,32,64,Infinity)
- Reporting interval	0 (0,250,500,1000,2000,4000,8000,16000 milliseconds)
- Reporting cell status	
- CHOICE reporting cell	Within monitored cells on used frequency and within monitored cells on non-used frequency
- Maximum number of reporting cells type 2	2
- Inter-frequency measurement system information	Not Present
- Inter-frequency measurement identity number	
- Inter-frequency cell info list	
- Removed inter-frequency cells	
- Inter-frequency cell id	
- New inter-frequency cells	
- Inter-frequency cell id	
- Frequency info	
- UARFCN uplink(Nu)	
- UARFCN downlink(Nd)	
- Cell info	
- Cell individual offset	
- Reference time difference to cell	
- Primary CPICH info	
- Primary scrambling code	
- Primary CPICH TX power	
- Read SFN indicator	
- TX Diversity indicator	
- Cell Selection and Re-selection info	
- Qoffsets,n	
- Maximum allowed UL TX power	
- HCS neighbouring cell information	
- HCS_PRIO	
- Q_{HCS}	
- HCS Cell Re-selection information	
- Penalty_time	
- Temporary_offsets	
- Temporary_offset1	
- Temporary_offset2	
- CHOICE mode	

- Qqualmin - Qrxlevmin - Inter-frequency measurement quantity - Intra-frequency reporting criteria - Intra-frequency measurement quantity - Filter coefficient - Measurement quantity - Inter-frequency reporting criteria - Inter-frequency measurement quantity - Filter coefficient - Measurement quantity for frequency quality estimate - Inter-frequency measurement reporting criteria	
- Inter-system measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- UE internal measurement system information	Not Present

Default settings for cell No.1:

Downlink input level	Reference to clause 6.10 Parameter Set
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference to clause 6.10 Parameter Set
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	100

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:

Downlink input level	Reference to clause 6.10 Parameter Set
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference to clause 6.10 Parameter Set
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	150

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:

Downlink input level	Reference to clause 6.10 Parameter Set
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference to clause 6.10 Parameter Set
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	200

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:

Downlink input level	Reference to clause 6.10 Parameter Set
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference to clause 6.10 Parameter Set
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	250

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:

Downlink input level	Reference to clause 6.10 Parameter Set
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference to clause 6.10 Parameter Set
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	300

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:

Downlink input level	Reference to clause 6.10 Parameter Set
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference to clause 6.10 Parameter Set
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	350

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	0000 0000 0000 0000 0000 0000 0111B
URA identity	0000 0000 0000 0100B

Default settings for cell No.7:

Downlink input level	Reference to clause 6.10 Parameter Set
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference to clause 6.10 Parameter Set
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	400

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	0000 0000 0000 0000 0000 0000 1000B
URA identity	0000 0000 0000 0100B

Default settings for cell No.8:

Downlink input level	Reference to clause 6.10 Parameter Set
Uplink output power	Minimum supported by the UE's power class.
PCCPCH/PCPICH carrier number	Reference to clause 6.10 Parameter Set
Cell Channel Description	
- Primary CPICH info	
- Primary scrambling code	450

Default Radio Conditions for Multi-Cell Environment

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

Parameter	**Unit**	**Cell 1**	**Cell 2**	**Cell 3**	**Cell 4**	**Cell 5**	**Cell 6**	**Cell 7**	**Cell 8**
UTRA RF Channel Number								Switched Off	Switched Off
CPICH_Ec/No	dB	-5	-15	-20	-24	-18	-10	-	-
CPICH RSCP	dBm	-60	-70	-75	-95	-73	-65	-	-
UTRA RSSI	dBm	-55	-55	-55	-55	-55	-55	-	-
Propagation Profile		Static							
Qrxlevmin *Qrxqualmin*	dBm dB	-90dBm -20dB	-90dBm -20dB	-90dBm -20dB	-90dBm -20dB	-90dBm -20dB	-70dBm -5dB		
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		
MNC		001D	001D	001D	001D	001D	001D		
MCC		01D	01D	01D	01D	02D	01D		
Cell barred		No	No	No	No	No	No	No	No

6.2 Number of neighbour cells

The options for the number of neighbour cells (ie the total number of active cells in the simulated network) are given below. See clause 6.1 for cell configurations.

6.2.1 Basic Network

Number of Cells	Use of Network Configuration
1	Basic UE registration; RRC Connection Establishment and Release; operation of dedicated channels in non-handover modes; general RF and EMC testing

6.2.2 Soft Handover Network (FDD)

Number of Cells	Use of Network Configuration/Constraints
2	Can be used in place of basic network, plus offering operation of dedicated channels in 2 way soft handover or in 2 way SSDT handover for RF or signalling tests; simple cell reselection tests

6.2.3 Hard Handover Network

Number of Cells	Use of Network Configuration
2	Can be used in place of basic network, plus offering operation in 2 cell hard handover (inter-frequency)

6.2.4 'Roaming' Network

Number of Cells	Use of Network Configuration
7	This configuration is intended to provide the capability for extensive cell selection and reselection testing, as defined under Idle Mode Testing. It is <ffs> if 7 is the correct number of cells and also <ffs> is the number of separate RF channels to be supported by the 'Roaming Network'

6.3 Cell/BS codes etc

See clause 6.1.

6.4 Routing/location area

See clause 6.1.

6.5 Network options settings

See clause 6.1.

6.6 Power control mode

6.6.1 Downlink Power Control

6.6.1.1 Outer Loop Power Control

This is used to set the SIR requirements from the given BER/BLER requirements for the dedicated channel – the reference configuration is for the BER/BLER and SIR requirements to be fixed, ie Outer Loop Power Control is disabled.

6.6.1.2 Inner Loop Power Control

The inner loop power control adjusts the power of the dedicated channel to meet the SIR requirements. The reference condition is for the Inner Loop Power Control to be disabled.

6.6.2 Uplink Power Control

6.6.2.1 Outer Loop Power Control

This is used to set the SIR requirements from the given BER/BLER requirements for the dedicated channel – the reference configuration is for the BER/BLER and SIR requirements to be fixed, ie Outer Loop Power Control is disabled.

6.6.2.2 Inner Loop Power Control

The inner loop power control adjusts the power of the dedicated channel to meet the SIR requirements.

6.7 Tx Diversity modes

The reference settings for Tx Diversity Mode shall be

6.7.1 Non-Diverse Operation

DL Transmit Diversity shall be disabled on all cells in the simulated network

6.7.2 Diverse Operation

6.7.2.1 Diverse Operation (FDD mode)

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

Channel	Open loop mode		Closed loop Mode
	TSTD	STTD	
P-CCPCH	–	X	–
SCH	X	–	–
S-CCPCH	–	X	–
DPCH	–	X	-
PICH	–	X	–
AICH	–	X	–

6.7.2.2 Diverse Operation (TDD mode)

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

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

6.8 Compressed Mode Parameters (FDD)

The reference configuration is that Compressed Mode is disabled, except when the Hard Handover (inter-frequency network configuration is being used). It is necessary to define a set of compressed mode parameters to be used for inter-frequency hard handover.

6.8.1 Normal Operation

Downlink Compressed Mode – disabled

Uplink Compressed Mode – disabled

6.8.2 Inter-Frequency Hard Handover

Downlink compressed Mode – enabled

Parameters

Downlink Compression Method

SF Reduction

Left/Right Alternative DL Scrambling Codes
No

Compressed Mode Sequence and Parameters
Frame Structure Type A
SFN for first transmission gap
Fixed Gap Position
TGL = 7
Double Slot Gap
TGP
TGD
PD

Uplink Compressed Mode - disabled

6.9 BCCH parameters

See clause 6.1.

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.

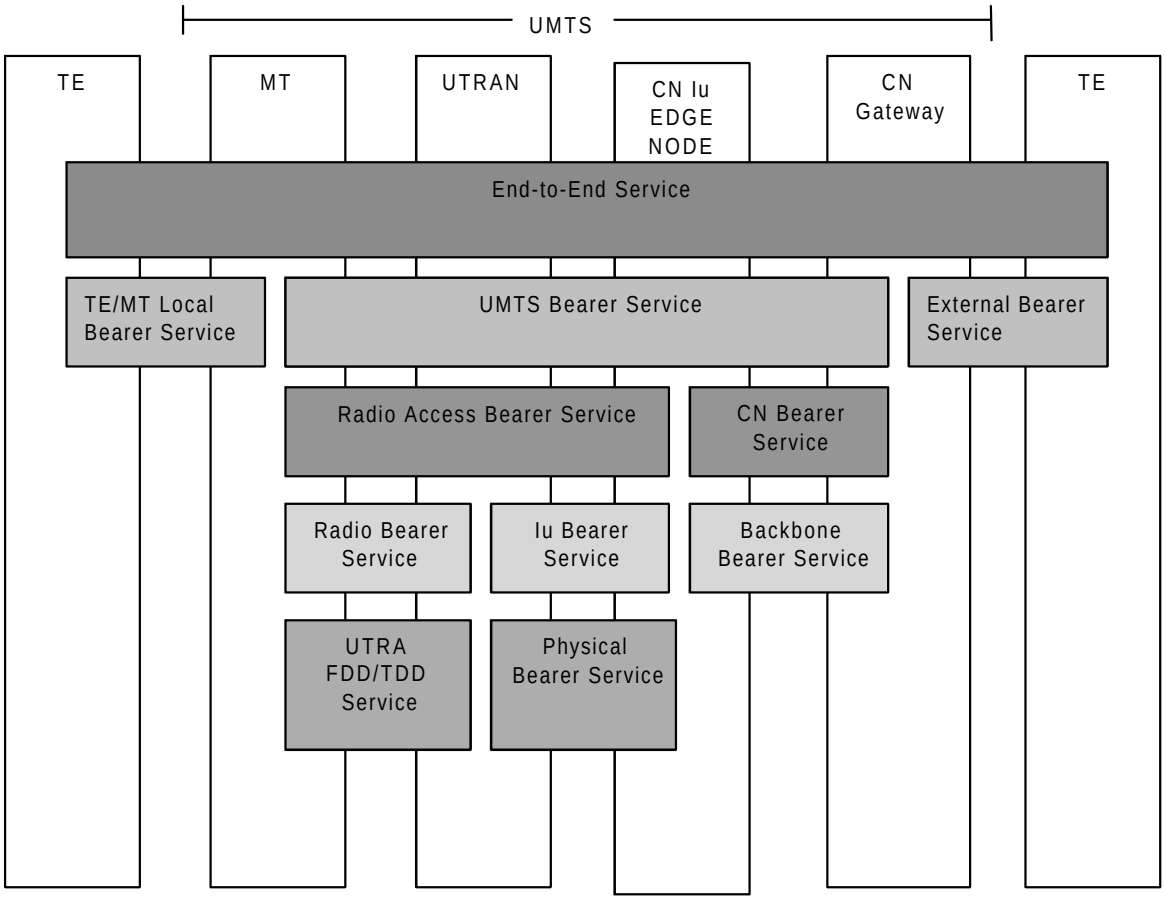

Figure 6.10.1.1: UMTS QoS Architecture

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

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

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

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

Combinations on SCCPCH

1) Stand-alone 32 kbps SRB for PCCH

2) Interactive or background / DL:32 kbps / PS RAB
+ SRB for CCCH
+ SRBs for DCCH
+ SRB for BCCH

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

Combinations on PRACH

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

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	$5x10^{-4}$, $1x10^{-3}$, $5x10^{-3}$	AMR speech
Conversational	Unknown	UL:64 DL:64	CS	$1x10^{-4}$ or $1x10^{-6}$	UDI 1B, 64k 3G-324M [16]
Conversational	Unknown	UL:32 DL:32	CS	$1x10^{-4}$ or $1x10^{-6}$	32k 3G-324M [16]
Conversational	Unknown	UL:28.8 DL:28.8	CS	$1x10^{-3}$	Transparent modem
Streaming	Unknown	UL:14.4 DL:14.4	CS	$1x10^{-3}$	FAX[6]
Streaming	Unknown	UL:28.8 DL:28.8	CS	$1x10^{-3}$	FAX [18] PIAFS 32 kbps
Streaming	Unknown	UL:57.6 DL:57.6	CS	$1x10^{-3}$	Modem [18], FTM [17] PIAFS 64 kbps
Streaming	Unknown	UL:64-128 or DL:64-384	CS or PS	$1x10^{-3}$ or $1x10^{-4}$	Streaming video, uni-directional
Interactive or Background	N/A	UL:32-384 DL:8-2048	PS	$1x10^{-3}$ or $1x10^{-4}$	Packet

Note 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, 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			

######## 6.10.2.4.1.1.1.1.2 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, 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			

6.10.2.4.1.1.2.1.2 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, 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			

6.10.2.4.1.2.1.1.2 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, 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			

6.10.2.4.1.2.2.1.2 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, 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

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

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, 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: 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	0.88

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, bit		0		
MAC	MAC header, bit		0		
	MAC multiplexing		N/A		
Layer 1	TrCH type		DCH	DCH	DCH
	TB sizes, bit		0 39 81	103	60
	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 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

6.10.2.4.1.5 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*[1]	TF0, bits	0x65 (alt. 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
	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: 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	1

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 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 39 65	99	40
	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, 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*[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
	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: 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	1

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 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.).

6.10.2.4.1.6.2.1.2 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, 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: 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	1

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 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.).

6.10.2.4.1.7.2.1.2 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, 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*[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
	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: 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	1

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 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 39 58	76
	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, 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*[1]	TF0, bits	0x55 (alt. 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
	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: 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	1

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 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.).

6.10.2.4.1.9.2.1.2 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*[2])	0x54
		TF1, bits	1x39	1x54
		TF2, bits	1x49	N/A
	TTI, ms		20	20
	Coding type		CC 1/3	CC 1/3
	CRC, bit		12	N/A
	Max number of bits/TTI after channel coding		207	186
	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: 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:3.4 kbps SRBs for DCCH

See 6.10.2.4.1.2.1.1.1

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	1

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 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.).

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.10.2.1.3 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, 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: 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 kbps SRBs for DCCH

See 6.10.2.4.1.2.1.1.1

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	1

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 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.).

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

See 6.10.2.4.1.2.2.1.1

6.10.2.4.1.11.2.1.3 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, 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	0.92

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 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

6.10.2.4.1.14 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, 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	0.8

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 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

6.10.2.4.1.15 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, 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	1

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, 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, 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	1

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 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 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	1

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		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 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, 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, 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

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

6.10.2.4.1.21 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, 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	1

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, 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, 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	0.96

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, 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 TFCI bits/slot	2
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	4
	DPDCH	Number of data bits/slot	32
		Number of data bits/frame	480

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, 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	1

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, 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, 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 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

6.10.2.4.1.28 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, 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	1

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, 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, 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	0.96

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

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, 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, 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, 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	1

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 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

6.10.2.4.1.39 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, 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)

6.10.2.4.1.40.1.2 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

6.10.2.4.1.44.2.1.4 TFCS

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

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	1

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		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

6.10.2.4.1.46 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 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

6.10.2.4.1.48 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 6.10.2.5.4.1.13.1.1.1

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 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

6.10.2.4.1.53 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	1

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 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

6.10.2.4.2 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

See 6.10.2.4.1.31.2.1.1

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

6.10.2.4.22 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

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

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

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

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 6.10.2.4.1.31.2.1.1

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)
	Spreading factor		4
DPCH Downlink	RAB or SRB, TrCh		Conversational / speech / 12.2 kbps / CS RAB, DCH + 3.4 kbps SRBs for DCCH. DCH
	DTX position		Fixed
	Spreading factor		128
	DPCCH	Number of TFCI bits/slot	0
		Number of TPC bits/slot	2
		Number of Pilot bits/slot	4
	DPDCH	Number of data bits/slot	34
		Number of data bits/frame	510

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 6.10.2.4.1.32.2.1.1

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

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 6.10.2.4.1.35.2.1.1

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)	
	Spreading factor		4	
DPCH Downlink	RAB or SRB, TrCh		Conversational / speech / 12.2 kbps / CS RAB, DCH + 3.4 kbps SRBs for DCCH. DCH	
	DTX position		Fixed	
	Spreading factor		128	
	DPCCH	Number of TFCI bits/slot	0	
		Number of TPC bits/slot	2	
		Number of Pilot bits/slot	4	
	DPDCH	Number of data bits/slot	34	
		Number of data bits/frame	510	

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 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
	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
	RLC header, bit		16
MAC	MAC header, bit		24
	MAC multiplexing		N/A
Layer 1	TrCH type		FACH
	TB sizes, bit		360
	TFS	TF0, bits	0x360
		TF1, bits	1x360
	TTI, ms		10
	Coding type		TC
	CRC, bit		16
	Max number of bits/TTI before rate matching		1140
	RM attribute		110-150

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)
	RLC header, bit		8	8	16	16	16	0
MAC	MAC header, bit		8	24 or 40	24	24	24	2
	MAC multiplexing		6 logical channel multiplexing					
Layer 1	TrCH type		FACH					
	TB sizes, bit		168					
	TFS	TF0, bits	0x168					
		TF1, bits	1x168					
		TF2, bits	2x168					
		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.

6.10.2.4.3.2.2 Physical channel parameters

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

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

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

6.10.2.4.3.3.2 Physical channel parameters

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

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, 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					
	TFS TF1, bits	1x360					
	TTI, ms	20 (alt. 10)					
	Coding type	CC 1/2					
	CRC, bit	16					
	Max number of bits/TTI after channel coding	768	384	384	384	384	384
	Max number of bits/ Radio frame before rate matching	384 (alt. 768)	192 (alt. 384)	192 (alt. 384)	192 (alt. 384)	192 (alt. 384)	192 (alt. 384)

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

7 Generic setup procedures

7.1 Basic Generic Procedures

7.1.1 UE Test States for Basic Generic Procedures

This clause describes a set of procedures for use by test cases in TS 34.123-1. Describing these procedures in a generic manner allows their use in many test cases. By using these procedures, test case descriptions need not detail signalling that is not relevant to its purpose or understanding.

The procedures are based upon default values that are adapted to the most common usage. Test cases that require values different from the default will, when specifying the Basic Generic Procedure, also specify those parameters that are modified.

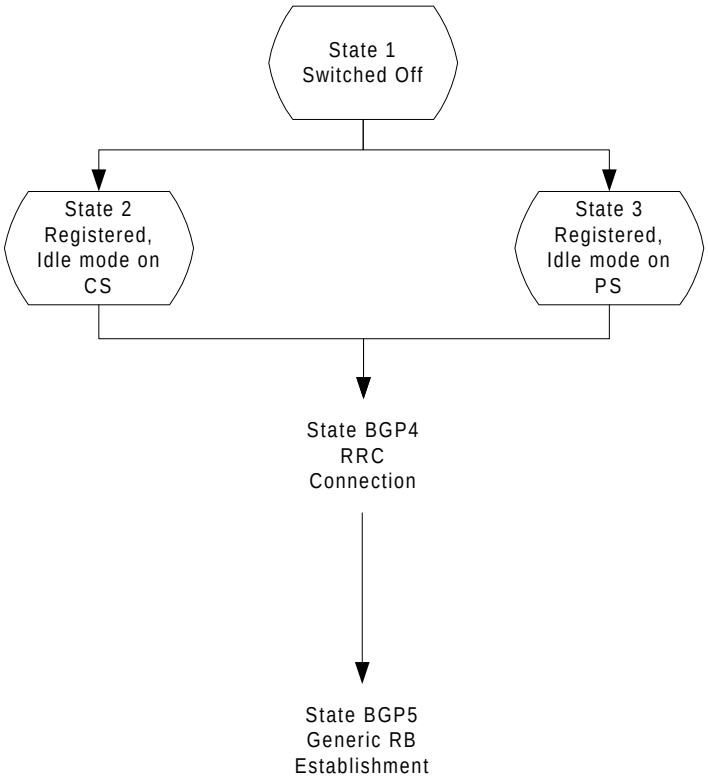

Figure 7.1.1: UE Test States for Basic Generic Procedures

In order that the UE can set up a call in UTRAN, there are a number of procedures to be undertaken in a hierachical sequence to move between known states. The sequences are shown in Figure 7.1.1 above and the status of the relevant protocols in the UE in the different states are given in Table 7.1.1 below.

Table 7.1.1: The UE states

		RRC	CC	MM	SM	GMM
State 1	**Power OFF**	-----	null	detached	inactive	detached
State 2	**CS Registered Idle Mode**	idle	null	idle	inactive	detached
State 3	**PS Registered Idle Mode**	idle	null	detached	inactive	idle
State BGP4	**RRC Connection**	connected	null	as previous	inactive	as previous
State BGP5	**Generic RB Establishment**	connected	null	as previous	inactive	as previous

7.1.2 Mobile terminated establishment of Radio Resource Connection

7.1.2.1 Initial conditions

System Simulator:

The system simulator will start from the default idle state. Parameters will the default parameters for a single cell, unless otherwise specified in the test case.

User Equipment:

Unless otherwise specified in the test case, the UE will be in the following state:

- Default test operating conditions
- The UE shall have followed the generic registration procedure for CS or PS operations, and will be in Idle Mode, Camped-on (State 2 or State 3).

7.1.2.2 Definition of system information messages

The default system information messages are used.

7.1.2.3 Procedure

- The SS sends a PAGING TYPE 1 message to the UE on the appropriate paging block, and with the IE “Paging record” containing the TMSI or P-TMSI of the UUT.
- The SS receives an RRC CONNECTION REQUEST message from the UE.
- On receipt of the RRC CONNECTION REQUEST the SS shall transmit a RRC CONNECTION SETUP message to the UE. The SS shall wait for the receipt of an RRC CONNECTION COMPLETE message from the UE.
- On receipt of an RRC COONECTION COMPLETE message, the procedure is complete.

Step	Direction		Message	Comments
	UE	SS		
1	←		SYSTEM INFORMATION (BCCH)	Default SI messages
2	←		PAGING TYPE 1 (PCCH)	Sent on appropriate cycle
3	→		RRC CONNECTION REQUEST (CCCH)	RRC
4	←		RRC CONNECTION SETUP (CCCH)	RRC
5	→		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC

7.1.2.4 Specific message contents

7.1.2.4.1 PAGING TYPE 1

This message is sent from the SS to the UE, using the TM RLC SAP, on the PCCH logical channel:

Information Element				Value/Remark
Message Type				PAGING TYPE 1
UE Information elements				
Paging record list	Paging record	CN originator	Paging cause	Terminating Speech Call*
			CN domain identity	CS domain*
			TMSI (GSM-MAP)	As specified during Registration procedure
Other information elements				
BCCH modification info				omit

NOTE*: These defaults are applied if no subsequent procedure is to be run. Otherwise, the Paging cause and CN domain identity are selected in accordance with the requirements of the following procedure.

7.1.2.4.2 RRC CONNECTION REQUEST

This message is sent by the UE to the SS using the TM-RLC SAP. It is sent on the CCCH Logical channel.

Information Element			Value/Remark
Message Type			RRC CONNECTION REQUEST
UE information elements			
Initial UE identity	TMSI and LAI	TMSI (GSM-MAP)	As specified during Registration procedure
		LAI (GSM-MAP)	As specified by default 1 cell environment
Initial UE capability	Maximum number of AM entities		As declared in UE ICS
Establishment cause			As appropriate
Protocol error indicator			FALSE
Measurement information elements			
Measured results on RACH			Not checked

7.1.2.4.3 RRC CONNECTION SETUP

This message is sent from the SS to the UE using the UM-RLC SAP. The message is sent on the CCCH Logical channel.

The default RRC CONNECTION SETUP message for the transition to connected mode CELL_DCH is used except for the IE fields specified below.

Information Element			**Value/Remark**
Message Type			RRC CONNECTION SETUP
UE Information Elements			
Initial UE identity	TMSI and LAI	TMSI (GSM-MAP)	As specified during Registration procedure
		LAI (GSM-MAP)	As specified by default 1 cell environment
RB Information Elements			
Use default for 3.4k bit/s signalling radio bearer			
TrCH Information Elements			
Use default for 3.4k bit/s signalling radio bearer			
Frequency info			As specified by default 1 cell environment
Uplink radio resources			
Use default			
Downlink radio resources			
Use default			

7.1.2.4.4 RRC CONNECTION SETUP COMPLETE

This message is sent by the UE to the SS using AM-RLC SAP. The message is sent on the DCCH Logical channel.

Information Element			Value/Remark
Message Type			RRC CONNECTION SETUP COMPLETE
UE Information Elements			
Hyper frame number			Not checked
UE radio access capability	Conformance test compliance		R99
	PDCP capability	Support for lossless SRNS relocation	Not checked
		Supported algorithm types	Not checked
	RLC capability	Total RLC AM buffer size	Not checked
		Maximum number of AM entities	Not checked
	Transport channel capability	**Downlink**	
		Max no of bits received	Not checked
		Max convolutionally coded bits received	Not checked
		Max turbo coded bits received	Not checked
		Maximum number of simultaneous transport channels	Not checked
		Max no of received transport blocks	Not checked
		Maximum number of TFC in the TFCS	Not checked
		Maximum number of TF	Not checked
		Support for turbo decoding	Not checked
		Uplink	
		Max no of bits transmitted	Not checked
		Max convolutionally coded bits received	Not checked
		Max turbo coded bits received	Not checked
		Maximum number of simultaneous transport channels	Not checked
		Max no of transmitted transport blocks	Not checked
		Maximum number of TFC in the TFCS	Not checked
		Maximum number of TF	Not checked
		Support for turbo encoding	Not checked
	RF capability	UE power class	As declared for UE
		Tx/Rx frequency separation	Not checked
	Physical channel capability	**Downlink**	
		Maximum number of simultaneous CCTrCH	Not checked
		Max no DPCH/PDSCH codes	Not checked
		Max no physical channel bits received	Not checked
		Support for SF 512	Not checked
		Support of PDSCH	Not checked
		Simultaneous reception of SCCPCH and DPCH	Not checked
		Max no of S-CCPCH RL	Not checked
		Uplink	
		Maximum number of DPDCH bits transmitted per 10 ms	Not checked
		Support of PCPCH	Not checked

	UE multi-mode/multi-RAT capability	Multi-RAT capability	
		Multi-mode capability	FDD or FDD/TDD
	Security capability	Ciphering algorithm capability	Not checked
		Integrity protection algorithm capability	Not checked
	LCS capability	Standalone location method(s) supported	Not checked
		UE based OTDOA supported	Not checked
		Network Assisted GPS support	Not checked
		GPS reference time capable	Not checked
		Support for IPDL	Not checked
	Measurement capability	Need for downlink compressed mode	Not checked
		FDD measurements DL	Not checked
		TDD measurements DL	Not checke
		GSM 900 DL	Not checked
		DCS 1800 DL	Not checked
		GSM 1900 DL	Not checked
		Multi-carrier measurement DL	Not checked
		Need for uplink compressed mode	Not checked
		FDD measurements UL	Not checked
		TDD measurements UL	Not checked
		GSM 900 UL	Not checked
		DCS 1800 UL	Not checked
		GSM 1900 UL	Not checked
		Multi-carrier measurement UL	Not checked
UE system specific capability			Not checked

7.1.3 Radio Bearer Setup Procedure

7.1.3.1 Initial conditions

The procedure specified in clause 7.1.2 will be run. This procedure starts from the successful completion of clause 7.1.2.:

7.1.3.2 Definition of system information messages

The default system information messages are used.

7.1.3.3 Procedure

- The SS sends a RADIO BEARER SETUP message to the UE on the DCCH established by the RRC Connection Establishment procedure.
- The SS receives a RADIO BEARER SETUP COMPLETE message from the UE in RLC Acknowledged mode on the DCCH.

On receiption of the RADIO BEARER SETUP COMPLETE the procedure is complete.

Step	Direction		Message	Comments
	UE	SS		
1	←		RADIO BEARER SETUP (DCCH)	RRC
2	→		RADIO BEARER SETUP COMPLETE (DCCH)	RRC

7.1.3.4 Specific message contents

7.1.3.4.1 RADIO BEARER SETUP

The RADIO BEARER SETUP message is sent from the System Simulator to the UE, using AM-RLC on the DCCH logical channel.

The default RRC CONNECTION SETUP message for the setup of a speech radio access bearer is used except for the IE fields specified below.

Information Element	Value/Remark
Message Type	RADIO BEARER SETUP
UE Information Elements	
CN Information Elements	
RB Information Elements	
RAB information for setup	Default parameters for 12.2 kbps speech RAB

7.1.3.4.2 RADIO BEARER SETUP COMPLETE

The RADIO BEARER SETUP COMPLETE message is sent from the UE to the System Simulator, using AM-RLC on the DCCH logical channel.

The default RADIO BEARER SETUP COMPLETE message is used .

Information Element	Value/Remark
Message Type	RADIO BEARER SETUP COMPLETE
Use default	

7.2 Generic setup procedures

7.2.1 UE Test States for Generic setup procedures

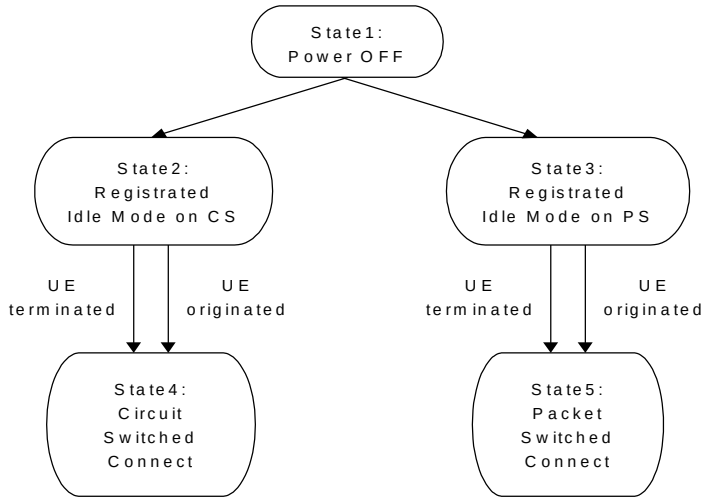

Figure 7.2.1.1: UE Test States for Generic setup procedures

In order that the UE can 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 7.2.1.1 above and the status of the relevant protocols in the UE in the different states are given in Table 7.2.1.1 below.

Table 7.2.1.1: The UE states

		RRC	CC	MM	SM	GMM
State1	Power OFF	-----	null	detached	inactive	detached
State2	Registered Idle Mode on CS	idle	null	idle	inactive	detached
State3	Registered Idle Mode on PS	idle	null	detached	inactive	idle
State4	Circuit Switched Connect	connected	active	connected	inactive	same as previous state
State5	Packet Switched Connect	connected	null	same as previous state	active	connected
State7	Registered Idle Mode on CS/PS	idle	null	idle	inactive	idle

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 RELOCATION 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”.

7.2.2.2 Registration on PS

7.2.2.2.1 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.

7.2.2.2.2 Definition of system information messages

The default system information messages are used.

7.2.2.2.3 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		-->	ATTACH REQUEST	GMM
6		<--	AUTHENTICATION AND CIPHERING REQUEST	GMM
7		-->	AUTHENTICATION AND CIPHERING RESPONSE	GMM
8		<--	SECURITY MODE COMMAND	RRC
9		-->	SECURITY MODE COMPLETE	RRC
10		<--	ATTACH ACCEPT	GMM
11		-->	ATTACH COMPLETE	GMM
12		<--	RRC CONNECTION RELEASE	RRC
13		-->	RRC CONNECTION RELEASE COMPLETE	RRC

7.2.2.2.4 Specific message contents

All Specific message contents shall be referred to clause 9 “Default Message Contents of Layer3 Messages for Layer 3 Testing”.

7.2.2.3 Registration on CS / PS combined environment

7.2.2.3.1 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.

7.2.2.3.2 Definition of system information messages

The default system information messages are used.

7.2.2.3.3 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		-->	ATTACH REQUEST	GMM
6		<--	AUTHENTICATION AND CIPHERING REQUEST	GMM
7		-->	AUTHENTICATION AND CIPHERING RESPONSE	GMM
8		<--	SECURITY MODE COMMAND	RRC
9		-->	SECURITY MODE COMPLETE	RRC
10		<--	ATTACH ACCEPT	GMM
11		-->	ATTACH COMPLETE	GMM
12		<--	RRC CONNECTION RELEASE	RRC
13		-->	RRC CONNECTION RELEASE COMPLETE	RRC

7.2.2.3.4 Specific message contents

All Specific message contents shall be referred to clause 9 “Default Message Contents of Layer3 Messages for Layer 3 Testing”.

7.2.3 Call setup

7.2.3.1 Generic call set up procedure for mobile terminating circuit switched calls

7.2.3.1.1 Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions.
- The Test-USIM shall be inserted.

7.2.3.1.2 Definition of system information messages

The default system information messages are used.

7.2.3.1.3 Procedure

The Call Set-up procedure shall be performed under Ideal radio conditions as defined in 5. Reference Test Conditions:

Step	Direction		Message	Comments
	UE	SS		
1		<--	SYSTEM INFORMATION (BCCH)	Broadcast
2		<--	PAGING (PCCH)	Paging
3		-->	RRC CONNECTION REQUEST (CCCH)	RRC
4		<--	RRC CONNECTION SETUP (CCCH)	RRC
5		-->	RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6		-->	PAGING RESPONSE	RR
7		<--	AUTHENTICATION REQUEST	MM
8		-->	AUTHENTICATION RESPONSE	MM
9		<--	SECURITY MODE COMMAND	RRC
10		-->	SECURITY MODE COMPLETE	RRC
11		<--	SET UP	CC
12		-->	CALL CONFIRMED	CC
13		<--	RADIO BEARER SETUP	RRC RAB SETUP
14		-->	RADIO BEARER SETUP COMPLETE	RRC
15		-->	ALERTING	CC (this message is optional)
16		-->	CONNECT	CC
17		<--	CONNECT ACKNOWLEDGE	CC

7.2.3.1.4 Specific message contents

All Specific message contents shall be referred to clause 9 “Default Message Contents of Layer3 Messages for Layer 3 Testing”.

7.2.3.2 Generic call set-up procedure for mobile originating circuit switched calls

7.2.3.2.1 Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions.
- The Test-USIM shall be inserted.

7.2.3.2.2 Definition of system information messages

The default system information messages are used.

7.2.3.2.3 Procedure

The Call Set-up procedure shall be performed under Ideal radio conditions as defined in 5. Reference Test Conditions:

Step	Direction		Message	Comments
	UE	SS		
1		<--	SYSTEM INFORMATION (BCCH)	Broadcast
2		-->	RRC CONNECTION REQUEST (CCCH)	RRC
3		<--	RRC CONNECTION SETUP (CCCH)	RRC
4		-->	RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
5		-->	CM SERVICE REQUEST	MM
6		<--	AUTHENTICATION REQUEST	MM
7		-->	AUTHENTICATION RESPONSE	MM
8		<--	SECURITY MODE COMMAND	RRC
9		-->	SECURITY MODE COMPLETE	RRC
10		-->	SET UP	CC
11		<--	CALL PROCEEDING	CC
12		<--	RADIO BEARER SETUP	RRC RAB SETUP
13		-->	RADIO BEARER SETUP COMPLETE	RRC
14		<--	ALERTING	CC
15		<--	CONNECT	CC
16		-->	CONNECT ACKOWLEDGE	CC

7.2.3.2.4 Specific message contents

All Specific message contents shall be referred to clause 9 “Default Message Contents of Layer3 Messages for Layer 3 Testing”.

7.2.4 Session setup

7.2.4.1 Generic session set up procedure for mobile terminating packet switched sessions

7.2.4.1.1 Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions.
- The Test-USIM shall be inserted.

7.2.4.1.2 Definition of system information messages

The default system information messages are used.

7.2.4.1.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in 5. Reference Test Conditions:

Step	Direction		Message	Comments
	UE	SS		
1		<--	SYSTEM INFORMATION (BCCH)	Broadcast
2		<--	PAGING TYPE1 (PCCH)	Paging
3		-->	RRC CONNECTION REQUEST (CCCH)	RRC
4		<--	RRC CONNECTION SETUP (CCCH)	RRC
5		-->	RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6		-->	SERVICE REQUEST	GMM
7		<--	AUTHENTICATION AND CIPHERING REQUEST	GMM
8		-->	AUTHENTICATION AND CIPHERING RESPONSE	GMM
9		<--	SECURITY MODE COMMAND	RRC
10		-->	SECURITY MODE COMPLETE	RRC
11		<--	REQUEST PDP CONTEXT ACTIVATION	SM
12		-->	ACTIVATE PDP CONTEXT REQUEST	SM
13		<--	RADIO BEARER SETUP	RRC RAB SETUP
14		-->	RADIO BEARER SETUP COMPLETE	RRC
15		<--	ACTIVATE PDP CONTEXT ACCEPT	SM

7.2.4.1.4 Specific message contents

All Specific message contents shall be referred to clause 9 “Default Message Contents of Layer3 Messages for Layer 3 Testing”.

7.2.4.2 Generic session set up procedure for mobile originating packet switched sessions

7.2.4.2.1 Initial conditions

System Simulator:

1 cell, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions.
- The Test-USIM shall be inserted.

7.2.4.2.2 Definition of system information messages

The default system information messages are used.

7.2.4.2.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in 5. Reference Test Conditions:

Step	Direction		Message	Comments
	UE	SS		
1	<--		SYSTEM INFORMATION (BCCH)	Broadcast
2	-->		RRC CONNECTION REQUEST (CCCH)	RRC
3	<--		RRC CONNECTION SETUP (CCCH)	RRC
4	-->		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
5	-->		SERVICE REQUEST	GMM
6	<--		AUTHENTICATION AND CIPHERING REQUEST	GMM
7	-->		AUTHENTICATION AND CIPHERING RESPONSE	GMM
8	<--		SECURITY MODE COMMAND	RRC
9	-->		SECURITY MODE COMPLETE	RRC
10	-->		ACTIVATE PDP CONTEXT REQUEST	SM
11	<--		RADIO BEARER SETUP	RRC RAB SETUP
12	-->		RADIO BEARER SETUP COMPLETE	RRC
13	<--		ACTIVATE PDP CONTEXT ACCEPT	SM

7.2.4.2.4 Specific message contents

All Specific message contents shall be referred to clause 9 “Default Message Contents of Layer3 Messages for Layer 3 Testing”.

7.3 Test procedures for RF test

7.3.1 UE Test States for RF testing

In this sub clause, the states of the UE for the test are defined.

		RRC	CC	MM	SM	GMM
State1	Power OFF	-----	null	detached	inactive	detached
State2	CS Registered Idle Mode	idle	null	idle	inactive	detached
State3	PS Registered Idle Mode	idle	null	detached	inactive	idle
State4	Test Mode	connected	null	detached	inactive	detached

7.3.2 Test procedure for TX, RX and Performance Requirement (without handover)

7.3.2.1 Initial conditions

System Simulator

1cell, default parameters.

User Equipment

The UE shall be operated under RF test conditions.

The special Test-USIM shall be inserted.

7.3.2.2 Definition of system information messages

[T.B.D.]

7.3.2.2 Procedure

Step	Direction		Message	Comments
	UE	SS		
1		<--	SYSTEM INFORMATION (BCCH)	Broadcast
2		<--	PAGING (PCCH)	Paging
3		-->	RRC CONNECTION REQUEST (CCCH)	RRC
4		<--	RRC CONNECTION SETUP (CCCH)	RRC
5		-->	RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6		<--	ACTIVATE RB TEST MODE (DCCH)	TC
7		-->	ACTIVATE RB TEST MODE COMPLETE (DCCH)	TC
8		<--	RADIO BEARER SETUP (DCCH)	RRC (RAB SETUP using Reference Radio Bearer Configuration)
9		-->	RADIO BEARER SETUP COMPLETE (DCCH)	RRC
10		<--	CLOSE UE TEST LOOP (DCCH)	TC
11		-->	CLOSE UE TEST LOOP COMPLETE	TC (confirms that loopback entities for the radio bearer(s) have been created and loop back is activated)
12		<--	OPEN UE TEST LOOP	TC
13		-->	OPEN UE TEST LOOP COMPLETE	TC
14		<--	RRC CONNECTION RELEASE	RRC
15		-->	RRC CONNECTION RELEASE COMPLETE	RRC

7.3.2.4 Specific message contents

[T.B.D.]

7.3.3 Test procedure for Handover

FFS

7.3.4 Test procedure for Measurement Performance Requirement

FFS

7.4 Common generic procedures for AS testing

7.4.1 UE RRC Test States for common procedures

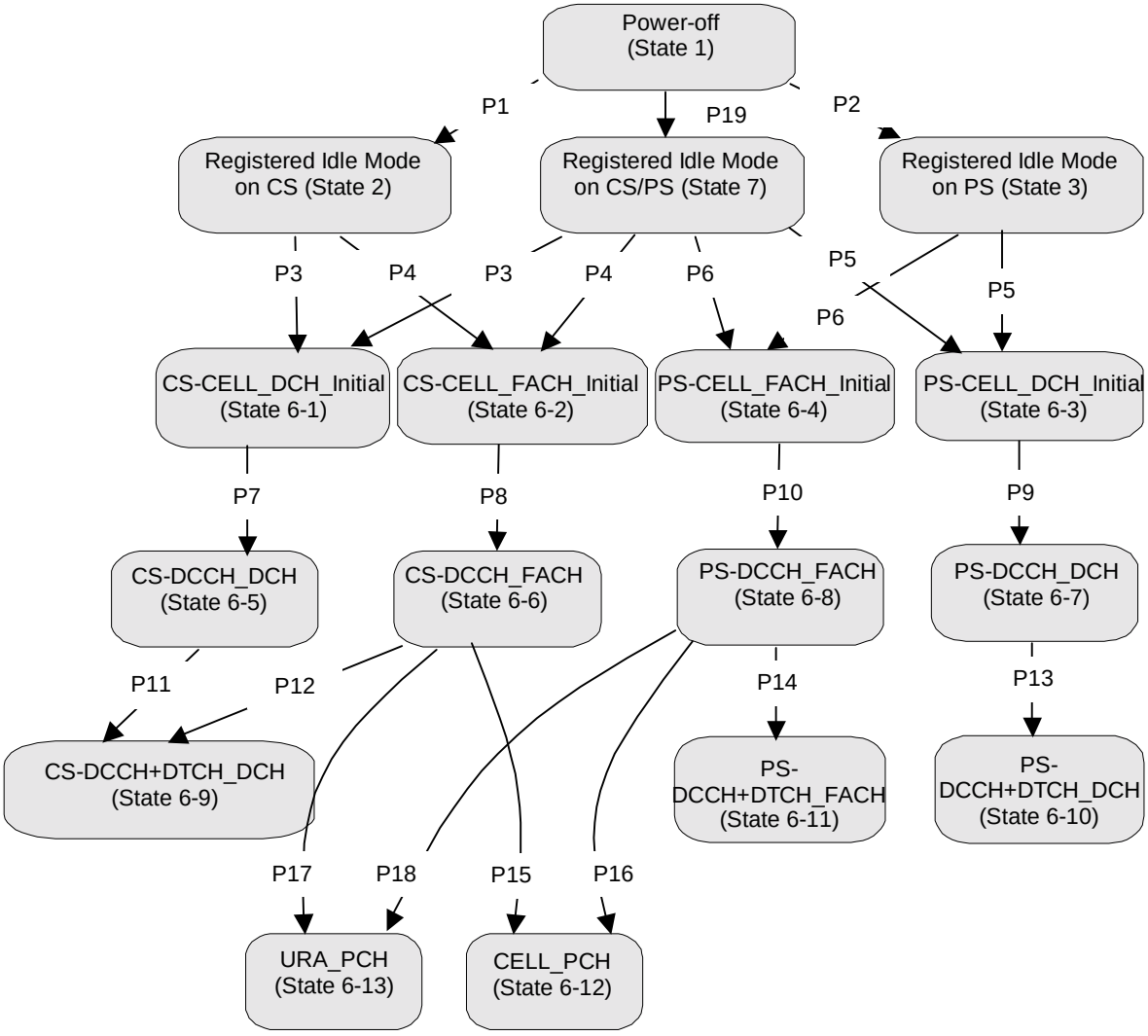

Figure 7.4.1.1: UE RRC test initial states and common procedures

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

Table 7.4.1.1: The UE states

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 6-1or 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 ACKOWLEDGE	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	DRX with cell updating
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
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

8. Test USIM Parameters

8.1 Introduction

This clause defines default parameters for programming the elementary files of the test USIM. The requirements of this clause do not apply to the USIM/ME tests of TS34.123-1.

8.1.1 Definitions

"Test USIM card":

A USIM card supporting the test algorithm for authentication, programmed with the parameters defined in this clause. The electrical, mechanical and environmental requirements of the test USIM card are specified in TS31.101 and TS31.102.

"Test USIM":

Either a test USIM card or the USIM simulator programmed with the parameters defined in this clause.

8.1.2 Definition of the test algorithm for authentication

In order to be able to easily test the UMTS authentication and key agreement procedure as specified in TS 33.102 along the whole system, the availability of a test algorithm for generation of authentication vector based on quintets is needed (in GSM triplets was used).

The test algorithm defined in the present clause shall be implemented in test USIM cards as well in test USIM simulators.

The following procedure employs bit wise modulo 2 addition ("XOR").

The following convention applies:

In all data transfer the most significant byte is the first byte to be sent; data is represented so that the left most bit is the most significant bit of the most significant byte.

Step 1:

XOR to the challenge **RAND**, a predefined number **Ki** (in which at least one bit is not zero, see 8.2), having the same bit length (128 bits) as **RAND**.

The result **XDOUT** of this is:

XDOUT[bits 0,1, . . .126,127] = **Ki**[bits 0,1, . . .126,127] XOR **RAND**[bits 0,1, . . .126,127]

Step 2:

XRES, **CK, IK** and **AK** are extracted from **XDOUT** this way:

XRES[bits 0,1, . . .n-1,n] = **XDOUT**[bits 0,1, . . .n-1,n] (with 30 < n < 128)

CK[bits 0,1, . . .126,127] = **XDOUT**[bits 8,9, . . .126,127,0,1, . . .6,7]

IK[bits 0,1, . . . 126,127] = **XDOUT**[bits 16,17, . . .126,127,0,1, . . .14,15]

AK[bits 0,1, . . . 46,47] = **XDOUT**[bits 24,25, . . .70,71]

Step 3:

Concatenate **SQN** with **AMF** to obtain **CDOUT** like this:

CDOUT[bits 0,1,. . .62,63] = **SQN**[bits 0,1,. . .46,47] || **AMF**[bits 0,1,. . .14,15]

Step 4:

MAC and **MACS** are calculated from **XDOUT** and **CDOUT** this way:

MAC[bits 0,1, . . .62, 63] = **MACS**[bits 0,1, . . .62, 63] = **XDOUT**[bits 0,1. . .62,63] XOR **CDOUT**[bits 0,1,. . .62,63]

8.2 Default Parameters for the test USIM

Ki:

The authentication key "Ki" will be chosen by the test house and will be non zero. The "Ki" value used by the SS will align with this value.

PIN Disabling:

The PIN enabled / disabled flag will be set to "PIN Disabled". This ensures that when the Test USIM is inserted into a UE the user will not be prompted for PIN entry.

8.3 Default settings for the Elementary Files (EFs)

The format and coding of elementary files of the USIM are defined in TS31.101 and TS31.102. The following clauses define the default parameters to be programmed into each elementary file. Some files may be updated by the UE based on information received from the SS. These are identified in the following clauses.

If EFs have an unassigned value, it may not be clear from the main text what this value should be. This clause suggests values in these cases.

8.3.1 Contents of the EFs at the MF level

8.3.1.1 EF_{DIR}

8.3.1.2 EF_{ICCID} (ICC Identity)

The programming of this EF is a test house option.

8.3.1.3 EF_{PL} (Preferred Languages)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.1.4 EF_{ARR} (Access rule reference)

The programming of this EF is a test house option.

8.3.2 Contents of files at the USIM ADF (Application DF) level

8.3.2.1 EF_{LI} (Language Indication)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.2 EF_{IMSI} (IMSI)

The IMSI value will be chosen by the test house. The IMSI used by the SS will align this value.

File size: 9 bytes

Default values: Byte 1 (DEC): 8

Bytes 2-9 (HEX):09 10 10 ** ** ** ** **

"*" indicates any number between 0 and 9 subject to the restriction that IMSI mod 1000 (i.e. bytes 7, 8 and 9) lies in one of the following ranges:

063-125, 189-251, 315-377, 441-503, 567-629, 693-755, 819-881 or 945-999

NOTE: This ensures that the UE can listen to the second CCCH when more than one basic physical channel is configured for the CCCH. This is necessary for the test of "paging re-organization".

8.3.2.3 EF_{Keys} (Ciphering and Integrity Keys)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.4 EF_{KeysPS} (Ciphering and Integrity Keys for Packet Switched domain)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.5 $EF_{UPLMNsel}$ (User PLMN selector)

File size: 5n bytes

Default values (HEX): Bytes 1-3: 32 F4 10 (MCC, MNC) - Translates to 234, 01

Bytes 4-5: 80 00 (Access Technology) – Translates to UTRAN

Bytes 6-8: 32 F4 20 (MCC, MNC)

Bytes 9-10: 80 00 (Access Technology)

Bytes 11-13: 32 F4 30 (MCC, MNC)

....

....

....

Bytes(5n-4) - (5n-2): 32 F4 43 (MCC, MNC)

Bytes (5n-1) - 5n: 80 00 (Access Technology)

PLMNs are shown coded above since this is the largest number required for a test. It is necessary to take this into account since the USIM cards must be dimensioned to cope with this number of records.

8.3.2.6 EF_{HPLMN} (HPLMN search period)

File size: 1 byte

Default value (HEX): 00 (no HPLMN search attempts)

8.3.2.7 EF_{ACMmax} (ACM maximum value)

File size: 3 bytes

Default: Byte 1: 00

Byte 2: 00

Byte 3: 00

The above translates to: “Not valid”.

8.3.2.8 EF_{UST} (USIM Service Table)

Services will be allocated and activated as follows:

Services			Activated
Service n°1 :	Local Phone Book		
Service n°2 :	Fixed Dialling Numbers (FDN)		
Service n°3 :	Extension 2		
Service n°4 :	Service Dialling Numbers (SDN)		
Service n°5 :	Extension3		
Service n°6 :	Barred Dialling Numbers (BDN)		
Service n°7 :	Extension4		
Service n°8 :	Outgoing Call Information (OCI and OCT)		
Service n°9 :	Incoming Call Information (ICI and ICT)		
Service n°10:	Short Message Storage (SMS)		
Service n°11:	Short Message Status Reports (SMSR)		
Service n°12:	Short Message Service Parameters (SMSP)		
Service n°13:	Advice of Charge (AoC)		
Service n°14:	Capability Configuration Parameters (CCP)		
Service n°15:	Cell Broadcast Message Identifier		
Service n°16:	Cell Broadcast Message Identifier Ranges		
Service n°17:	Group Identifier Level 1		
Service n°18:	Group Identifier Level 2		
Service n°19:	Service Provider Name		
Service n°20:	PLMN selector		
Service n°21:	MSISDN		
Service n°22:	Image (IMG)		
Service n°23:	Not used (reserved for SoLSA)		
Service n°24:	Enhanced Multi-Level Precedence and Pre-emption Service		
Service n°25:	Automatic Answer for Emlpp		
Service n°26:	RFU		
Service n°27:	GSM Access		
Service n°28:	Data download via SMS-PP		
Service n°29:	Data download via SMS-CB		
Service n°30:	Call Control by USIM		
Service n°31:	MO-SMS Control by USIM		
Service n°32:	RUN AT COMMAND command		
Service n°33:	Packet Switched Domain		
Service n°34:	Enabled Services Table		
Service n°35:	APN Control List (ACL)		
Service n°36:	Depersonalisation Control Keys		
Service n°37:	Co-operative Network List		
Service n°38:	GSM security context		
Service n°39:	CPBCCH Information		
Service n°38:	Investigation Scan		
Service n°38:	MExE		

8.3.2.9 EF_{ACM} (Accumulated Call Meter)

File size: 3 bytes

Default: Byte 1: 00

Byte 2: 00

Byte 3: 00

Byte 4: 02

The above translates to: “Not yet implemented”.

8.3.2.10 EF_{GID1} (Group Identifier Level 1)

The programming of this EF is a test house option.

8.3.2.11 EF_{GID2} (Group Identifier Level 2)

The programming of this EF is a test house option.

8.3.2.12 EF_{SPN} (Service Provider Name)

The programming of this EF is a test house option.

8.3.2.13 EF_{PUCT} (Price per Unit and Currency Table)

File size: 5 bytes

Default: Byte 1-3: FF

Byte 4-5: 00

8.3.2.14 EF_{CBMI} (Cell Broadcast Message identifier selection)

The programming of this EF is a test house option.

The file size is 2n bytes, where n is the number of Cell broadcast message identifier records - each record defining a type of Cell Broadcast message which may be accessed by the UE. Care should be taken when dimensioning the USIM to take into account the number of Cell Broadcast message identifier records required.

8.3.2.15 EF_{ACC} (Access Control Class)

File size: 2 Bytes

Default values (BIN): Byte 1: 00000000

Byte 2: ********

The test house may set any single bit of byte 2 to "1". All remaining bits of byte 2 will be set to "0". This determines the access control class of the USIM.

8.3.2.16 EF_{FPLMN} (Forbidden PLMNs)

Length: 12 Bytes

Format (HEX): Bytes 1-3: FF FF FF

Bytes 4-6: FF FF FF

Bytes 7-9: FF FF FF

Bytes 10-12: FF FF FF

This coding corresponds to an empty "forbidden PLMN list". The bytes within this file may be updated if a LOCATION UPDATE REJECT message is received by the UE with cause, "PLMN not allowed".

8.3.2.17 EF_{LOCI} (Location Information)

File size: 11 Bytes

Default values: Bytes 1-4 (HEX): FF FF FF FF (TMSI)

Bytes 5-9 (HEX): 42 F6 18 FF FE (LAI)

Byte 10 (HEX): FF (RFU)

Byte 11 (BIN): 00000001 (Location Update Status = "not updated")

Bytes 5-9: LAI-MCC = 246 (bytes 5-6) and LAI-MNC = 81 (byte 7) are frequently used. The LAC (bytes 8-9) is set to "FF FE" since this, in conjunction with byte 11 setting of "01", is used to ensure that the UE performs a location update at the beginning of a test.

Bytes in this file (e.g. TMSI in bytes 1-4) may be updated as a result of a location update attempt by the UE.

8.3.2.18 EF_{AD} (Administrative Data)

File size: 3 bytes

Default values Byte 1: 10000000 - (type approval operations)

Byte 2: 11111111

Byte 3: 11111111

8.3.2.19 Void

8.3.2.20 EF_{CBMID} (Cell Broadcast Message Identifier for Data Download)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.21 EF_{ECC} (Emergency Call Codes)

The programming of this EF is a test house option.

8.3.2.22 EF_{CBMIR} (Cell Broadcast Message Identifier Range selection)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.23 EF_{PSLOCI} (Packet Switched location information)

File size: 14 Bytes

Default values: Bytes 1-4 (HEX): FF FF FF FF (P-TMSI)

Bytes 5-7 (HEX): FF FF FF (P-TMSI signature value)

Bytes 8-13 (HEX): 42 F6 18 FF FE FF (RAI)

Byte 14 (BIN): 001 (Routing Area update status = "not updated")

Bytes 8-13: RAI-MCC = 246 (bytes 8-9) and RAI-MNC = 81 (byte 10) are frequently used. The LAC (bytes 11-12) is set to "FF FE" since this, in conjunction with byte 14 setting of "01", is used to ensure that the UE performs a location update at the beginning of a test.

Bytes in this file (e.g. P-TMSI in bytes 1-4) may be updated as a result of a location update attempt by the UE.

8.3.2.24 EF_{FDN} (Fixed Dialling Numbers)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.25 EF_{SMS} (Short messages)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.26 EF_{MSISDN} (MSISDN)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.27 EF_{SMSP} (Short message service parameters)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.28 EF_{SMSS} (SMS status)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.29 EF_{SDN} (Service Dialling Numbers)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.30 EF_{EXT2} (Extension2)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.31 EF_{EXT3} (Extension3)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.32 EF_{SMSR} (Short message status reports)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.33 EF_{ICI} (Incoming Call Information)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.34 EF_{OCI} (Outgoing Call Information)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.35 EF_{ICT} (Incoming Call Timer)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.36 EF_{OCT} (Outgoing Call Timer)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.37 EF_{EXT5} (Extension5)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.38 EF_{CCP2} (Capability Configuration Parameters 2)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.39 EF_{eMLPP} (enhanced Multi Level Precedence and Pre-emption)

The programming of this EF is a test house option.

8.3.2.40 EF_{AAeM} (Automatic Answer for eMLPP Service)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.41 Void

8.3.2.42 $EF_{Hiddenkey}$ (Key for hidden phone book entries)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.43 Void

8.3.2.44 EF_{BDN} (Barred dialling numbers)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.45 EF_{EXT4} (Extension 4)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.46 EF_{CMI} (Comparison method information)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.47 EF_{EST} (Enabled service table)

The programming of this EF is a test house option.

8.3.2.48 EF_{ACL} (Access point name control list)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.49 EF_{DCK} (Depersonalisation control keys)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.50 EF_{CNL} (Co-operative network list)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.51 $EF_{START-HFN}$ (Initialisation values for Hyperframe number)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.52 $EF_{THRESHOLD}$ (Maximum value of START)

The programming of this EF is a test house option.

8.3.2.53 $EF_{OPLMNsel}$ (OPLMN selector)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.54 $EF_{PHPLMNAT}$ (Preferred HPLMN Access Technology)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.55 EF_{ARR} (Access rule reference)

8.3.3 Contents of DFs at the USIM ADF (Application DF) level

8.3.3.1 Contents of files at the USIM SoLSA level

8.3.3.1.1 EF_{SAI} (SoLSA Access Indicator)

This subclause is expected to be defined in the release 2000 version of the present document.

8.3.3.1.2 EF_{SLL} (SoLSA LSA List)

This subclause is expected to be defined in the release 2000 version of the present document.

8.3.3.1.3 LSA Descriptor files

This subclause is expected to be defined in the release 2000 version of the present document.

8.3.3.1.4 Contents of files at the MExE level

8.3.3.1.4.1 $EF_{MExE-ST}$ (MExE Service table)

The programming of this EF follows default parameter.

8.3.3.1.4.2 EF_{ORPK} (Operator Root Public Key)

The programming of this EF follows default parameter.

8.3.3.1.4.3 EF_{ARPK} (Administrator Root Public Key)

The programming of this EF follows default parameter.

8.3.3.1.4.4 EF_{TPRPK} (Third Party Root Public Key)

The programming of this EF follows default parameter.

8.3.3.1.4.5 EF_{TKCDF} (Trusted Key/Certificates Data Files)

The programming of this EF follows default parameter.

8.3.3.2 Contents of files at the DF PHONEBOOK level

8.3.3.2.1 EF_{PBR} (Phone Book Reference file)

The programming of this EF is a test house option.

8.3.3.2.2 EF_{IAP} (Index Administration Phone book)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.3.2.3 EF_{ADN} (Abbreviated dialling numbers)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.3.2.4 EF_{EXT1} (Extension1)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.3.2.5 EF_{PBC} (Phone Book Control)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.3.2.6 EF_{GRP} (Grouping file)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.3.2.7 EF_{AAS} (Additional number Alpha String)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.3.2.8 EF_{GAS} (Grouping information Alpha String)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.3.2.9 EF_{ANR} (Additional Number)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.3.2.10 EF_{SNE} (Second Name Entry)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.3.2.11 EF_{CCP1} (Capability Configuration Parameters 1)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.3.2.12 Phone Book Synchronisation

8.3.3.2.12.1 EF_{UID} (Unique Identifier)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.3.2.12.2 EF_{PSC} (Phone book Synchronisation Counter)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.3.2.12.3 EF_{CC} (Change Counter)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.3.2.12.4 EF_{PUID} (Previous Unique Identifier)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.3.2.13 EF_{EMAIL} (e-mail address)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.3.3 Contents of files at the DF GSM level (Files required for GSM Access)

8.3.3.3.1 EF_{Kc} (GSM Ciphering key Kc)

File size: 9 Bytes

Default values (HEX): Bytes 1-8: Align with Kc used by SS

Byte 9: 07

Byte 9 is set to 07 to indicate that there is no key available at the start of a test.

The bytes within this elementary file may be updated by the UE as a result of a successful authentication attempt.

8.3.3.3.2 EF_{KcGPRS} (GPRS Ciphering key KcGPRS)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.3.3.3 EF_{BCCH} (Broadcast Control Channels)

File size: 16 Bytes

Default values (BIN): Bytes 1-2: 11111111 11111111

Bytes 3-4: 11111111 11111111

Bytes 5-6: 11111111 11111111

Bytes 7-8: 11111111 11111111

Bytes 9-10: 11111111 11111111

Bytes 11-12: 11111111 11111111

Bytes 13-14: 11111111 11111111

Bytes 15-16: 11111111 11111111

This field may be updated dependent on the UE implementation.

8.3.3.3.4 EF_{CPBCCH} (CPBCCH Information)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.3.3.5 $EF_{InvScan}$ (Investigation Scan)

The programming of this EF follows default parameter.

8.3.4 Contents of EFs at the TELECOM level

8.3.4.1 EF_{ADN} (Abbreviated dialling numbers)

The programming of this EF is a test house option. It should be noted that sufficient space should be provided on the USIM card for 101 records.

8.3.4.2 EF_{EXT1} (Extension1)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.4.3 EF_{CCP} (Capability Configuration Parameters)

File size: 14 bytes

Default values Byte 1: 04

Byte 2: 01

Byte 3: A0

Bytes 4-14: FF

<The above translates to: "Full rate, GSM Standardized coding, circuit mode and speech".>

8.3.4.4 EF_{SUME} (SetUpMenu Elements)

The programming of this EF is a test house option.

8.3.4.5 EF_{ARR} (Access rule reference)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.5 Contents of DFs at the TELECOM level

8.3.5.1 Contents of files at the $DF_{GRAPHICS}$ level

8.3.5.1.1 EF_{IMG} (Image)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.5.1.2 Image Instance Data Files

8.3.5.2 Contents of files at the $DF_{PHONEBOOK}$ under the $DF_{TELECOM}$

8.3.5.2.1 EF_{CCP} (Capability Configuration Parameters)

The programming of this EF follows default parameter written in TS31.102 Annex E.

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	
Integrity check info	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.
- 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.
CN domain identity	CS domain
NAS message	See Specific Message Content for each test case

Contents of INITIAL DIRECT TRANSFER message: AM

Information Element	Value/remark
Message Type	
Integrity check info	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.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Service Descriptor	Not checked
Flow Identifier	Not checked
CN domain identity	Not checked
NAS message	Not checked
Meqasured results on RACH	Not checked

Contents of PAGING TYPE1 message: TM (Speech in CS)

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

Contents of PAGING TYPE1 message: TM (The others of speech in CS)

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

Contents of PAGING TYPE1 message: TM (Packet in PS)

Information Element	Value/remark
Message Type	
Paging record	
- Paging cause	Terminating Interactive Call
- CN domain identity	PS domain
- CHOICE UE identity	
- IMSI	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	
Integrity check info	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.
- 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	This presence of this IE is dependent on IXIT statements in TS 34.123-2. If ciphering is indicated to be active, this IE present with the values of the sub IEs as stated below. Else, this IE is omitted.
- Ciphering mode command	start
- Ciphering algorithm	Use one of the supported ciphering algorithms.
- Activation time for DPCH	(256+CFN-(CFN MOD 8 + 8))MOD 256
- Radio bearer downlink ciphering activation time info	Not Present
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
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
- RB identity	
- CHOICE RLC info type	
- RLC info	
- CHOICE Uplink RLC mode	
- Transmission RLC discard	
- SDU discard mode	
- Timer_MRW	
- Timer discard	
- MaxMRW	
- Transmission window size	
- CHOICE Downlink RLC mode	
- In-sequence delivery	
- RB mapping info	
- Information for each multiplexing option	
- Number of RLC logical channels	
- Uplink transport channel type	
- Transport channel identity	
- Logical channel identity	
- MAC logical channel priority	
- Logical channel max loss	
- Number of RLC logical channels	
- Downlink transport channel type	
- Transport channel identity	
- Logical channel identity	
RAB information for setup	
- RAB info	

- RAB identity	0000 0001B
- CN domain identity	CS domain
- Re-establishment timer	
- T314	20 seconds
- RB information to setup	
- RB identity	5
- PDCP info	Not Present
- 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	1
- MAC logical channel priority	1
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	2
- Logical channel identity	1
- RB information to setup	
- RB identity	6
- PDCP info	Not Present
- 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	1
- MAC logical channel priority	1
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	3
- Logical channel identity	1
- RB information to setup	(This IE is needed for 12.2 kbps and 10.2 kbps)
- RB identity	7
- PDCP info	Not Present
- 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	4
- Logical channel identity	1
- MAC logical channel priority	1
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	4
- Logical channel identity	1
RB information to be affected	(UM DCCH 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	1
- Logical channel identity	1
- MAC logical channel priority	1
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- 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	1
- Logical channel identity	2
- MAC logical channel priority	2
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- 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	1
- Logical channel identity	3
- MAC logical channel priority	3
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- 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	1
- Logical channel identity	4
- MAC logical channel priority	4
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- 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	
- 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.
- CTFC information	Refer to clause 6.10 Parameter Set

- Power offset information	
- CHOICE Gain Factors	Signalled Gain Factor
- Gain factor ßc	0
- Gain factor ßd	0
- Reference TFC ID	Not Present
- Power offset Pp-m	0dB
Added or Reconfigured UL TrCH information	
- Transport channel identity	2
- 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
Added or Reconfigured UL TrCH information	
- Transport channel identity	3
- 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
Added or Reconfigured UL TrCH information	(This IE is needed for 12.2 kbps and 10.2 kbps)
- Transport channel identity	4
- TFS	(This IE is repeated for TFI number)
- Dynamic Transport format information	
- 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
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	1
- 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
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.
- CTFC information	Refer to clause 6.10 Parameter Set
- Power offset information	
- CHOICE Gain Factors	Signalled Gain Factor
- Gain factor ßc	0
- Gain factor ßd	0
- Reference TFC ID	Not Present
- Power offset Pp-m	0dB
Added or Reconfigured DL TrCH information	
- Transport channel identity	2
- CHOICE DL parameters	SameAsUL
- UL TrCH Identity	2
- DCH quality target	
- BLER Quality value	0.00
- Transparent mode signalling info	Not Present
Added or Reconfigured DL TrCH information	
- Transport channel identity	3
- CHOICE DL parameters	SameAsUL
- UL TrCH information	3
Added or Reconfigured DL TrCH information	(This IE is needed for 12.2 kbps and 10.2 kbps)
- Transport channel identity	4
- CHOICE DL parameters	SameAsUL
- UL TrCH information	4
- DCH quality target	
- BLER Quality value	0.00
- 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	1
- CHOICE DL parameters	Independent
- UL TrCH Identity	1
- 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	0.00
- 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	
- DPCCH 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	
- 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	1
- 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 SETUP COMPLETE message: AM

Message Type	
START	Not checked
Radio bearer uplink ciphering activation time info	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.
Other information element	Not checked

Contents of RADIO BEARER RELEASE message: AM or UM (Speech in CS)

Information Element	Value/remark
Message Type	
Integrity check info	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.
- 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
- Ciphering mode command	
- Ciphering algorithm	
- Activation time for DPCH	
- Radio bearer downlink ciphering activation time info	
- Radio bearer identity	
- RLC sequence number	
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
DRX indicator	noDRX
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
RAB information to reconfigure list	Not Present
RB information to release	
- RB identity	5
RB information to release	
- RB identity	6
RB information to release	
- RB identity	7
RB information to be affected	(UM DCCH 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	1
- Logical channel identity	1
- MAC logical channel priority	1
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- 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	1
- Logical channel identity	2
- MAC logical channel priority	2

- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- 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	1
- Logical channel identity	3
- MAC logical channel priority	3
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- 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	1
- Logical channel identity	4
- MAC logical channel priority	4
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- 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	
- 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.
- CTFC information	Refer to clause 6.10 Parameter Set
- Power offset information	
- CHOICE Gain Factors	Signalled Gain Factors
- Gain factor ßc	0
- Gain factor ßd	0
- Reference TFC ID	Not Present
- Power offset Pp-m	0dB
Deleted UL TrCH Information	
- Transport channel identity	2
Deleted UL TrCH Information	
- Transport channel identity	3
Deleted UL TrCH Information	
- Transport channel identity	4
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	1
- 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
CPCH set ID	Not Present
DRAC static information	Not Preaent
- 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.
- CTFC information	Refer to clause 6.10 Parameter Set
- Power offset information	
- CHOICE Gain Factors	Signalled Gain Factor
- Gain factor ßc	0
- Gain factor ßd	0
- Reference TFC ID	Not Present
- Power offset Pp-m	0dB
Deleted DL TrCH Information	
- Transport channel identity	2
Deleted DL TrCH Information	
- Transport channel identity	3
Deleted DL TrCH Information	
- Transport channel identity	4
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	1
- CHOICE DL parameters	SameAsUL
- UL TrCH Identity	1
- DCH quality target	
- BLER Quality value	0.00
- 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	
- DPCCH 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	
- 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
- TFCI existence	FALSE

- Number of bits for Pilot bits(SF=128,256)	Reference to clause 6.10 Parameter Set
- 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	1
- 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 - 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 - Scheduling information	Not Present Not Present

Contents of RADIO BEARER RELEASE COMPLETE message: AM

Message Type Other information element	 Not checked

Contents of RRC CONNECTION REQUEST message: TM

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

Contents of RRC CONNECTION RELEASE message: UM

Information Element	Value/remark
Message Type	
Initial UE identity	To be checked against requirement if specified
Number of RRC Message Transmissions	2 (for CELL_DCH state). Not Present for UE in other connected mode states.
Release cause	Normal

Contents of RRC CONNECTION RELEASE COMPLETE message: AM or UM

Information Element	Semantics description
Message Type	
U-RNTI	If this message is sent on DCCH, this IE should be absent. If this message is sent on DCCH, this IE shall contain the U-RNTI value assigned.
Integrity check info	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.
- Message authentication code	Checked to see if it's identical to the value of XMAC-I calculated by the SS
- RRC Message sequence number	Checked to see if it is present. This number is used by the SS to compute the XMAC-I
Error indication	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
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
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	1
- Logical channel identity	1
- MAC logical channel priority	1
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- 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 PU poll	TRUE
- Last retransmission PU 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 PU indicator	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	2
- MAC logical channel priority	2
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- 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 PU poll	TRUE
- Last retransmission PU 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 PU indicator	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	3
- MAC logical channel priority	3
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- 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 PU poll	TRUE
- Last retransmission PU 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 PU indicator	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	4
- MAC logical channel priority	4
- Logical channel max loss	0
- Number of RLC logical channels	1
- Downlink transport channel type	DCH
- Transport channel identity	1
- 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	
- 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.
- CTFC information	Refer to clause 6.10 Parameter Set
- Power offset information	
- CHOICE Gain Factors	Signalled Gain Factor
- Gain factor ßc	0
- Gain factor ßd	0
- Reference TFC ID	Not Present
- Power offset Pp-m	0dB
Added or Reconfigured UL TrCH information	
- Transport channel identity	1
- 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
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.
- CTFC	Refer to clause 6.10 Parameter Set
- Power offset information	
- CHOICE Gain Factor	Signalled Gain Factor
- Gain factor ßc	0
- Gain factor ßd	0

- Reference TFC ID	Not Present
- Power offset Pp-m	0dB
Added or Reconfigured DL TrCH information	
- Transport channel identity	1
- CHOICE DL parameters	SameAsDL
- UL TrCH Identity	1
- DCH quality target	
- BLER Quality value	0.00
- 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	
- DPCCH 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
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- 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	Flexible
- TFCI existence	TRUE
- Number of bits for Pilot bits(SF=128,256)	Not Present
- 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	1
- 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 RRC CONNECTION SETUP COMPLETE message: AM

Information Element	Value/remark
Message Type	
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
Message Type	
Integrity check info	
- Message authentication code	Set to an arbitrarily selected 32-bits integer
- RRC Message Sequence Number	Set to an arbitrarily selected integer between 0 and 15
Security capability	
- Ciphering algorithm capability	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)
- Integrity protection algorithm capability	0000000000000010B (UIA1)
Ciphering mode info	This presence of this IE is dependent on IXIT statements in TS 34.123-2. If ciphering is indicated to be active, this IE present with the values of the sub IEs as stated below. Else, this IE is omitted.
- Ciphering mode command	Start
- Ciphering algorithm	Use the same ciphering algorithm specified in “ciphering algorithm capability” IE in this message.
- Activation time for DPCH	Not Present
- Radio bearer downlink ciphering activation time info	
- Radio bearer activation time	
- RB identity	1
- RLC sequence number	Current RLC SN+2
- RB identity	2
- RLC sequence number	Current RLC SN+2
- RB identity	3
- RLC sequence number	Current RLC SN + 2
- RB identity	4
- RLC sequence number	Current RLC SN + 2
Integrity protection mode info	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.
- Integrity protection mode command	Start
- Downlink integrity protection activation info	Not Present
- Integrity protection algorithm	UIA1
- Integrity protection initialisation number	SS selects an arbitrary 32 bits number for FRESH
CN domain identity	Supported domain

Contents of SECURITY MODE COMPLETE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	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.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Uplink integrity protection activation info	Not checked.
Radio bearer uplink ciphering activation time info	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 SIGNALLING CONNECTION RELEASE message: AM

Information Element	Value/remark
Message Type	
Integrity check info	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.
- 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.
Signalling Flow related information list	
- Flow Identifier requirement	Set to “Flow Identifier” field in the INITIAL DIRECT TRANSFER message

Contents of UPLINK DIRECT TRANSFER message: AM

Information Element	Value/remark
Message Type	
Integrity check info	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.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Flow Identifier	To be checked against requirement if specified
NAS message	Set according to that indicated in specific message content clause
Measured results on RACH	Not checked

Annex A (informative): Change history

Meeting -1st-Level	Doc-1st-Level	CR	Rev	Subject	Cat	Version-Current	Version -New	Doc-2nd-Level
TP-08				Approval of the specification		2.0.0	3.0.0	
TP-09	TP-000131	001		RRC Message Contents: RLCSize	C	3.0.1	3.1.0	T1-000190
TP-09	TP-000131	002		RRC Message Contents: RLCParam	C	3.0.1	3.1.0	T1-000191
TP-09	TP-000131	003		RRC Message Contents: PCPreamble	C	3.0.1	3.1.0	T1-000192
TP-09	TP-000131	004		RRC Message Contents: RBIdentity	C	3.0.1	3.1.0	T1-000193
TP-09	TP-000131	005		RRC Message Contents: TrCHParam	C	3.0.1	3.1.0	T1-000194
TP-09	TP-000131	006		RRC Message Contents: UECapability	C	3.0.1	3.1.0	T1-000195
TP-09	TP-000131	007		RRC Message Contents: RBMapping	C	3.0.1	3.1.0	T1-000196
TP-09	TP-000131	008		RRC Message Contents: PagingCause	C	3.0.1	3.1.0	T1-000197
TP-09	TP-000131	009		RRC Message Contents: CipheringAndIntegrity	C	3.0.1	3.1.0	T1-000198
TP-09	TP-000131	010		RRC Message Contents: RLCInfo	C	3.0.1	3.1.0	T1-000199
TP-09	TP-000131	011		RRC Message Contents: CompressedMode	C	3.0.1	3.1.0	T1-000200
TP-09	TP-000131	012		RRC Message Contents: SIB	C	3.0.1	3.1.0	T1-000201
TP-09	TP-000131	013		RRC Message Contents: PhyCH	D	3.0.1	3.1.0	T1-000202
TP-09	TP-000131	014		RRC Message Contents: Measurement	C	3.0.1	3.1.0	T1-000203
TP-09	TP-000131	015		RRC Message Contents: TFCS	C	3.0.1	3.1.0	T1-000204
TP-09	TP-000131	016		RRC Message Contents: DPCHFrameOffset	C	3.0.1	3.1.0	T1-000205
TP-09	TP-000131	017		Test USIM Parameters	F	3.0.1	3.1.0	T1-000215
TP-09	TP-000131	018		Correction to definition of the test algorithm for authentication (clause 8.1.2)	F	3.0.1	3.1.0	T1-000164
TP-09	TP-000131	019		Reference Radio Bearer Configurations	F	3.0.1	3.1.0	T1-000212
TP-09	TP-000131	020		TDD Single mode	F	3.0.1	3.1.0	T1-000220
TP-10	TP-000215	021		Common generic procedure for AS testing	B	3.1.0	3.2.0	T1-000294
TP-10	TP-000215	022		Requirements for the system simulator for support of Tcell	F	3.1.0	3.2.0	T1-000303
TP-10	TP-000215	023		Minimum Performance Levels	F	3.1.0	3.2.0	T1-000306
TP-10	TP-000215	024		Downlink signal conditions and propagation conditions	D	3.1.0	3.2.0	T1-000307
TP-10	TP-000215	025		Updating 34.108 v3.1.0 to TDD single mode	F	3.1.0	3.2.0	T1-000281
TP-10	TP-000215	026		Application of integrity mode protection to signalling	F	3.1.0	3.2.0	T1-000296
TP-10	TP-000215	027		Updates to the default message contents in clause 9	C	3.1.0	3.2.0	T1-000282
TP-10	TP-000215	028		Updates to System Information Block (SIB) and Master	C	3.1.0	3.2.0	T1-000283
TP-10	TP-000215	029		Application of ciphering during conformance testing	C	3.1.0	3.2.0	T1-000285
TP-10	TP-000215	030		Addition for System Information parameters (34.108 clause	F	3.1.0	3.2.0	T1-000304
TP-10	TP-000215	031		Correction for Generic Setup Procedures (34.108 clause	F	3.1.0	3.2.0	T1-000305

History

Document history		
V3.0.1	June 2000	Publication
V3.1.0	September 2000	Publication
V3.2.0	January 2001	Publication