

# 3G TR 21.905 V0.1.0 (1999-10)

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*Technical Report*

## **3rd Generation Partnership Project; Technical Specification Group Services and System Aspects Vocabulary for 3GPP Specifications (3G TR 21.905 version 0.1.0)**



The present document has been developed within the 3<sup>rd</sup> Generation Partnership Project (3GPP™) and may be further elaborated for the purposes of 3GPP.

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Vocabulary

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Reference

3TR/TSGS-0021905U

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Keywords

**3GPP**

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## Foreword

This Technical Report has been produced by the 3GPP.

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of this TR, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
  - 1 presented to TSG for information;
  - 2 presented to TSG for approval;
  - 3 Indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the specification.

**Note for Editor: Red text is extracted from original 21.905 version 0.2.0, the complete content of 25.990 version 3.0.0 has been included. Some clash of definitions should be resolved.**

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## 1 Scope

The purpose of this report is to identify specialist technical terms used within the 3GPP project for the purposes of specifying service requirements. The motivations for this are:

- To ensure that editors use terminology that is consistent across specifications.
- To provide a reader with convenient reference for technical terms that are used across multiple documents.
- To prevent inconsistent use of terminology across documents.

This document is a collection of terms, definitions and abbreviations related to the baseline documents defining 3GPP objectives and systems framework. This document provides a tool for further work on 3GPP technical documentation and facilitates their understanding.

The terms, definitions and abbreviations as given in this document are either imported from existing documentation (ETSI, ITU or elsewhere) or newly created by 3GPP experts whenever the need for precise vocabulary was identified.

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## 2 References

References may be made to:

- a) specific versions of publications (identified by date of publication, edition number, version number, etc.), in which case, subsequent revisions to the referenced document do not apply; or
- b) all versions up to and including the identified version (identified by "up to and including" before the version identity); or
- c) all versions subsequent to and including the identified version (identified by "onwards" following the version identity); or
- d) publications without mention of a specific version, in which case the latest version applies.

A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.

- [1] GSM 01.04: "Digital cellular telecommunication system (Phase 2+); Abbreviations and acronyms".
- [2] TS 25.990: "Technical Specification Group (TSG) RAN; Vocabulary".

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## 3 Terms and definitions related to UTRA Radio aspects

**A;** .

**Acceptable Cell;** This is a cell that the UE may camp on to make emergency calls. It must satisfy certain conditions.

**Access Stratum;**

**Access Stratum SDU (Service Data Unit);** Unit of data transferred over the access stratum SAP (Service Access Point) in the Core Network or in the User Equipment.

**Active mode;** "Active mode" is the state of a User Equipment when processing a call

**Active Set;** Set of radio links simultaneously involved in a specific communication service between an User Equipment and a UTRAN access point

**ALCAP;** Generic name for the transport signaling protocols used to set-up and tear-down transport bearers.

**Allowable PLMN;** This is a PLMN which is not in the list of forbidden PLMNs in the UE

**Authentication:** a property by which the correct identity of an entity or party is established with a required assurance. The party being authenticated could be a user, subscriber, home environment or serving network.

**Available PLMN;** This is a PLMN where the UE has found a cell that satisfies certain conditions

**Average transmit power;** The average transmitter output power obtained over any specified time interval, including periods with no transmission

**Average Transmitter Power Per Traffic Channel (dBm) ;** The mean of the total transmitted power over an entire transmission period

**B;**

**Basic telecommunication service :** this term is used as a common reference to both bearer services and teleservices.

**Bearer service :** is a type of telecommunication service that provides the capability of transmission of signals between access points.

**Bearer Service:** an information transmission path of defined capacity, delay and bit error rate, etc.

**C;**

**Cable, Connector, and Combiner Losses (Transmitter) (dB);** The combined losses of all transmission system components between the transmitter output and the antenna input (all losses in positive dB values).

**Cable, Connector, and Splitter Losses (Receiver) (dB);** These are the combined losses of all transmission system components between the receiving antenna output and the receiver input

**Call Control;**

**Camped on a cell;** The UE is in idle mode and has completed the cell selection/reselection process and has chosen a cell. The UE monitors system information and (in most cases) paging information. Note that the services may be limited, and that the PLMN may not be aware of the existence of the UE within the chosen cell.

**Cell;** A cell is a geographical area that can be identified by a User Equipment from a (cell) identification that is broadcast from one UTRAN Access Point

**Coded Composite Transport Channel (CCTrCH);** A data stream resulting from encoding and multiplexing of one or several transport channels

**Common Channel;** A Channel not dedicated to a specific UE

**Control channel;** A "control channel" is a logical channel that carries system control information.

**Connection :** is a communication channel between two or more end-points (e.g. terminal, server etc.).

**Controlling RNC;** A role an RNC can take with respect to a specific set of UTRAN access points. There is only one Controlling RNC for any UTRAN access point. The Controlling RNC has the overall control of the logical resources of its UTRAN access point's

**Core network:** an architectural term relating to the part of UMTS which is independent of the connection technology of the terminal (eg radio, wired).

**Coverage area (of a mobile cellular system):** an area where mobile cellular services are provided by that mobile cellular system to the level required of that system.

**Coverage area;** The "coverage area" is the area over which a UMTS service is provided with the service probability above a certain threshold.

**D;**

**Dedicated Channel;** A channel dedicated to a specific UE

**Downlink;** A "downlink" is a unidirectional radio link for the transmission of signals from a UTRAN access point to a UE. Also in general the direction from Network to UE.

**Drift RNS;** The role an RNS can take with respect to a specific connection between a User Equipment and UTRAN. An RNS that supports the Serving RNS with radio resources when the connection between the UTRAN and the User Equipment need to use cell(s) controlled by this RNS is referred to as Drift RNS.

**DRX cycle;** The individual time interval between reading initial paging information for specific UE

**E;**

**Explicit Diversity Gain (dB);** This is the effective gain achieved using diversity techniques.

**H;**

**Hand-off Gain/Loss (dB);** This is the gain/loss factor (+ or -) brought by hand-off to maintain specified reliability at the cell boundary.

**Handover;** The transfer of a user's connection from one radio channel to another (can be the same or different cell).

**Hard Handover;** Hard handover is a category of handover procedures where all the old radio links in the UE are abandoned before the new radio links are established

**Home Environment:** the home environment is responsible for enabling a user to obtain UMTS services in a consistent manner regardless of the user's location or terminal used (within the limitations of the serving network and current terminal).

**Home PLMN;** :This is a PLMN where the Mobile Country Code (MCC) and Mobile Network Code (MNC) of the PLMN identity are the same as the MCC and MNC of the IMSI

**I;**

**Idle mode;** Idle mode is the state of User Equipment switched on but which does not have any established RRC connection.

#### **Information Data**

**Rate;** Rate of the user information, which must be transmitted over the Air Interface. For example, output rate of the voice codec.

**Initial paging information;** This information indicates if the UE needs to continue to read more paging information and eventually receive a page message.

**Initial paging occasion;** The paging occasion the UE uses as starting point for its DRX cycle.

**Inter-cell handover;** An "inter-cell handover" is a handover between different cells. An inter-cell handover requires network connections to be altered

**Interference Signal Code Power (ISCP);** Given only interference power is received, the average power of the received signal after despreading to the code and combining

**Intra-cell handover;** An "intra-cell handover" is a handover within one sector or between different sectors of the same cell. An intra-cell handover does not require network connections to be altered

**Iu;** Interconnection point between an RNC and a Core Network. It is also considered as a reference point.

**Iub;** Interface between an RNC and a Node B

**Iur;** A logical interface between two RNC. Whilst logically representing a point to point link between RNCs, the physical realisation may not be a point to point link

**L;**

**Location Registration (LR);** The UE registers its presence in a registration area, for instance regularly or when entering a new registration area.

**Logical Channel;** A logical channel is an information stream dedicated to the transfer of a specific type of information over the radio interface. Logical Channels are provided on top of the MAC layer

**Logical Model;** A Logical Model defines an abstract view of a network or network element by means of information objects representing network element, aggregations of network elements, the topological relationship between the elements, endpoints of connections (termination points), and transport entities (such as connections) that transport information between two or more termination points.

The information objects defined in the Logical Model are used, among others, by connection management functions. In this way a physical implementation independent management is achieved.

**Logical O&M;** Logical O&M is the signaling associated with the control of logical resources (channels, cells,) owned by the RNC but physically implemented in the Node B. The RNC controls these logical resources. A number of O&M procedures physically implemented in Node B impact on the logical resources and therefore require an information exchange between RNC and Node B. All messages needed to support this information exchange are classified as Logical O&M forming an integral part of NBAP.

**LSA;** Localised Service Area. A LSA is an operator-defined area, for which specific access conditions apply. This may correspond to an area in which the Core Network offers specific services. A LSA may be defined within a PLMN or globally. Therefore, a LSA may offer a non-contiguous radio coverage

**M;**

**Macro cells;** "Macro cells" are outdoor cells with a large cell radius

**Macro diversity handover.;** "Macro diversity" is a operation state in which a User Equipment simultaneously has radio links with two or more UTRAN access points for the sole aim of improving quality of the radio connection or providing seamless

**Maximum output Power;** This refers to the measure of average power at the maximum power setting

**Maximum peak power;** The peak power observed when operating at a given maximum output power

**Maximum Power Setting;** The highest value of the Power control setting which can be used.

**Maximum Total Transmitter Power (dBm);;** The aggregate maximum transmit power of all channels.

**Maximum Transmitter Power Per Traffic Channel (dBm);** The maximum power at the transmitter output for a single traffic channel.

**Medium Access Control;**

**Micro cells;** "Micro cells" are small cells

**Mobile evaluated handover;** Mobile evaluated handover (MEHO) is a type of handover triggered by an evaluation made in the mobile. The mobile evaluates the necessity of handover based on the measured radio environment and based on criteria defined by the network. When the evaluation meets the hand-off criteria the necessary information is sent from the mobile to the network. The network then decides on the necessity of the handover based on the reported evaluation result and other conditions, e.g. uplink radio environment and/or availability of network resources, the network may then execute the handover.

**Mobile Station;** A "Mobile Station" (MS) is an entity capable of accessing a set of UMTS services via one or more radio interfaces. This entity may be stationary or in motion within the UMTS service area while accessing the UMTS services, and may simultaneously serve one or more users.

**Mobility Management;** A relation between the mobile station and the UTRAN that is used to set-up, maintain and release the various physical channels

**N;**

**Node B;** A logical node responsible for radio transmission / reception in one or more cells to/from the User Equipment. Terminates the Iub interface towards the RNC

**Non-Access Stratum;** Protocols between UE and the core network that are not terminated in the UTRAN

**P;**

**Paging;** Paging is the act of seeking a User Equipment

**Paging occasions;** The time instances where it is possible to receive initial paging information

**Peak Power;** The instantaneous power of the RF envelope which is not expected to be exceeded for [99.9%] of the time

**Physical channel data stream;** In the uplink, a data stream that is transmitted on one physical channel. In the downlink, a data stream that is transmitted on one physical channel in each cell of the active set.

**Physical Channel;** In FDD mode, a physical channel is defined by code, frequency and, in the uplink, relative phase (I/Q). In TDD mode, a physical channel is defined by code, frequency, and time-slot.

**Pico cells;** "Pico cells" are cells, mainly indoor cells, with a radius typically less than 50 metres

**Power Setting;** The value of the control signal, which determines the desired transmitter, output Power. Typically, the power setting would be altered in response to power control commands

**Public land mobile network (PLMN):** A telecommunications network providing mobile cellular services.

**Q;**

**Quality of Service :** the collective effect of service performances which determine the degree of satisfaction of a user of a service. It is characterised by the combined aspects of performance factors applicable to all services, such as;

service operability performance;

- service accessibility performance;
- service retainability performance;
- service integrity performance; and
- other factors specific to each service.

**R;**

**Radio access bearer;** The service that the access stratum provides to the non-access stratum for transfer of user data between User Equipment and CN.

**Radio Access Mode;** Mode of the cell, FDD or TDD

**Radio Access Network Application Part; :** Radio Network Signalling over the Iu.

**Radio Access System;** UTRA, GSM etc.

**Radio Bearer ;** The service provided by the RLC layer for transfer of user data between User Equipment and Serving RNC.

**Radio frame;** A radio frame is a numbered time interval of 10 ms duration used for data transmission on the radio physical channel. A radio frame is divided into 15 time slots of 0.666 ms duration. The unit of data that is mapped to a radio frame (10 ms time interval) may also be referred to as radio frame

**Radio interface;** The "radio interface" is the tetherless interface between User Equipment and a UTRAN access point. This term encompasses all the functionality required to maintain such interfaces

**Radio link;** A "radio link" is a logical association between single User Equipment and a single UTRAN access point. Its physical realization comprises one or more radio bearer transmissions

**Radio link addition;** The procedure where a new radio link is added to the active set.

**Radio Link Control;**

**Radio link removal;** The procedure where a radio link is removed from the active set.

**Radio Network Controller;** This equipment in the RNS is in charge of controlling the use and the integrity of the radio resources

**Radio Network Subsystem Application Part;** Radio Network Signaling over the Iur

**Radio Network Subsystem;** Either a full network or only the access part of a UTRAN offering the allocation and the release of specific radio resources to establish means of connection in between an UE and the UTRAN. A Radio Network Subsystem is responsible for the resources and transmission/reception in a set of cells

**Radio Network Temporary Identifier (RNTI);;** A Radio Network Temporary Identifier is an identifier for a UE when an RRC connection exists. It is e.g. used by the MAC protocol on common Transport Channels (RACH, FACH, PCH).

**Radio Resource Control;**

**Received Signal Code Power (RSCP);;** Given only signal power is received, the average power of the received signal after despreading and combining

**Receiver Antenna Gain (dBi);** The maximum gain of the receiver antenna in the horizontal plane (specified as dB relative to an isotropic radiator).

**Receiver Noise Figure (dB);;** Receiver noise figure is the noise figure of the receiving system referenced to the receiver input

**Receiver Sensitivity (dBm);;** This is the signal level needed at the receiver input that just satisfies the required  $E_b/(N_o+I_o)$ .

**Registered PLMN (RPLMN);;** This is the PLMN on which the UE has performed a location registration successfully.

**Registration Area;** A (NAS) registration area is an area in which the UE may roam without a need to perform location registration, which is a NAS procedure.

**Relay;** Terminal devices capable of ODMA relay communications

**Relay/Seed Gateway;** Relay or Seed that communicates with the UTRAN, in either TDD or FDD mode

**Relaylink;** Relaylink is a communications link between two ODMA relay nodes.

**Release 99 (R99);** a particular version of the UMTS standards produced by the 3GPP project. Also: release 00, release 01, release 02 etc.

**Repeater;** A "repeater" is a radio transceiver used to extend the transmission of a base station beyond its normal range.

**Required  $E_b/(N_o+I_o)$  (dB);;** The ratio between the received energy per information bit to the total effective noise and interference power density needed to satisfy the quality objectives

**Roaming;** the ability for a user to function in a serving network different from the home network.

**Root Relay;** ODMA relay node where communications originate or terminate

**RRC Connection;** A point-to-point bi-directional connection between RRC peer entities on the UE and the UTRAN sides, respectively. An UE has either zero or one RRC connection

**S;**

**Seamless handover;** "Seamless handover" is a handover without perceptible interruption of the radio connection

**Sector;** A "sector" is a sub-area of a cell. All sectors within one cell are served by the same base station. A radio link within a sector can be identified by a single logical identification belonging to that sector.

**Seed;** Deployed ODMA relay node with or without a display/keypad.

**Selected PLMN;** This is the PLMN that has been selected by the non-access stratum, either manually or automatically

**Service Capabilities:** Bearers defined by parameters, and/or mechanisms needed to realise services. These are within networks and under network control.

**Service feature :** Standardised building block used to create services.

**Services (of a mobile cellular system):** The set of functions that the mobile cellular system can make available to the user.

**Serving Network:** the serving network provides the user with access to the services of home environment.

**Service Access Point;**

**Serving RNS;** A role an RNS can take with respect to a specific connection between an UE and UTRAN. There is one Serving RNS for each UE that has a connection to UTRAN. The Serving RNS is in charge of the RRC connection between a UE and the UTRAN. The Serving RNS terminates the Iu for this

**Shared Channel;**

**Signaling connection;** An acknowledged-mode link between the user equipment and the core network to transfer higher layer information between the entities in the non-access stratum.

**Signaling link;** Provides an acknowledged-mode link layer to transfer the MS-UTRAN signaling messages as well as MS - Core Network signaling messages (using the signaling connection)

**Soft Handover;** Soft handover is a category of handover procedures where the radio links are added and abandoned in such manner that the UE always keeps at least one radio link to the UTRAN.

**SRNS Relocation;** The change of Iu instance and transfer of the SRNS role to another RNS.

**Subscriber:** the responsibility for payment of charges incurred by one or more users may be undertaken by another entity designated as a subscriber. This division between use of and payment for services has no impact on standardisation.

**Suitable Cell;** This is a cell on which an UE may camp. It must satisfy certain conditions

**Supplementary service :** is a service which modifies or supplements a basic telecommunication service. Consequently, it cannot be offered to a user as a standalone service. It must be offered together with or in association with a basic telecommunication service. The same supplementary service may be common to a number of basic telecommunication services.

**T;**

**Teleservice:** is a type of telecommunication service that provides the complete capability, including terminal equipment functions, for communication between users according to standardised protocols and transmission capabilities established by agreement between operators.

**Teleservice;** is a type of telecommunication service that provides the complete capability, including terminal equipment functions, for communication between users according to standardised protocols and transmission capabilities established by agreement between operators.

**Terminal:** a device into which a UICC can be inserted and which is capable of providing access to UMTS services to users, either alone or in conjunction with a UICC.

**Test environment;** A "test environment" is the combination of a test propagation environment and a deployment scenario, which together describe the parameters necessary to perform a detailed analysis of a radio transmission technology.

**Traffic channel;** A "traffic channel" is a logical channel which carries user information

**Transmission Time Interval;** Transmission Time Interval is defined as the inter-arrival time of Transport Block Sets, i.e. the time it should take to transmit a Transport Block Set.

**Transmitter Antenna Gain (dBi);** The maximum gain of the transmitter antenna in the horizontal plane (specified as dB relative to an isotropic radiator

**Transport Block;** Transport Block is defined as the basic unit passed down to L1 from MAC, for L1 processing. An equivalent term for Transport Block is “MAC PDU”.

**Transport Block Set;** Transport Block Set is defined as a set of Transport Blocks that is passed to L1 from MAC at the same time instance using the same transport channel. An equivalent term for Transport Block Set is “MAC PDU Set”.

**Transport Block Set Size;** Transport Block Set Size is defined as the number of bits in a Transport Block Set

**Transport Block Size;** Transport Block Size is defined as the size (number of bits) of a Transport Block

**Transport channel;** The channels offered by the physical layer to Layer 2 for data transport between peer L1 entities are denoted as Transport Channels. Different types of transport channels are defined by how and with which characteristics data is transferred on the physical layer, e.g. whether using dedicated or common physical channels

**Transport Format;** A Transport Format is defined as a format offered by L1 to MAC for the delivery of a Transport Block Set during a Transmission Time Interval on a Transport Channel. The Transport Format constitutes of two parts – one dynamic part and one semi-static part.

**Transport Format Combination;** A Transport Format Combination is defined as the combination of currently valid Transport Formats on all Transport Channels of an MS, i.e. containing one Transport Format from each Transport Channel.

**Transport Format Combination Set;** A Transport Format Combination Set is defined as a set of Transport Format Combinations to be used by an MS

**Transport Format Combination Indicator (TFCD);** A Transport Format Combination Indicator is a representation of the current Transport Format Combination

**Transport Format Identification (TFI);** A label for a specific Transport Format within a Transport Format Set.

**Transport Format Set;** A set of Transport Formats. For example, a variable rate DCH has a Transport Format Set (one Transport Format for each rate), whereas a fixed rate DCH has a single Transport Format

**U;**

**UMTS IC Card (UICC):** An IC card (or 'smartcard') of defined electromechanical specification which contains at least one USIM.

**Universal mobile telecommunications system (UMTS):** the telecommunications system, incorporating mobile cellular and other functionality, that is the subject of standards produced by 3GPP

**Universal Subscriber Identity Module (USIM):** an application residing on the UICC used for accessing UMTS services with appropriate security.

**Universal Terrestrial Radio Access Network;** UTRAN is a conceptual term identifying that part of the network which consists of RNCs and Node Bs between Iu and Uu

**Uplink;** An "uplink" is a unidirectional radio link for the transmission of signals from a UE to a base station, from a Mobile Station to a mobile base station or from a mobile base station to a base station

**URA updating;** URA updating is a family of procedures that updates the UTRAN registration area of a UE when a RRC connection exists and the position of the UE is known on URA level in the UTRAN

**User Equipment;** A Mobile Equipment with one or several UMTS Subscriber Identity Modules(s).

**UTRAN Registration Area (URA);** The UTRAN Registration Area is an area covered by a number of cells. The URA is only internally known in the UTRAN.

**UTRAN access point;** A conceptual point within the UTRAN performing radio transmission and reception. A UTRAN access point is associated with one specific cell, i.e. there exists one UTRAN access point for each cell. It is the UTRAN-side end point of a radio link.

**User Profile:** is the set of information necessary to provide a user with a consistent, personalised service environment, irrespective of the user's location or the terminal used (within the limitations of the terminal and the serving network).

**User:** an entity, not part of UMTS, which uses UMTS services. Example: a person using a UMTS mobile station as a portable telephone.

**Uu;** The Radio interface between UTRAN and the User Equipment

**V;**

**Value Added Service Provider:** provides services other than basic telecommunications service for which additional charges may be incurred.

**Virtual Home Environment:** A concept for personal service environment portability across network boundaries and between terminals.

**Visited PLMN of home country;** This is a PLMN, different from the home PLMN, where the MCC part of the PLMN identity is the same as the MCC of the IMSI.

## 4 Abbreviations

### 4.1 A

AAL	ATM Adaptation Layer
AAL2	ATM Adaptation Layer type 2
AAL5	ATM Adaptation Layer type 5
ACCH	Associated Control Channel
ACIR	Adjacent Channel Interference Ratio
ACK	Acknowledgement
ACLR	Adjacent Channel Leakage Power Ratio
ACS	Adjacent Channel Selectivity
AESA	ATM End System Address
AI	Acquisition Indicator
AICH	Acquisition Indication Channel
ALCAP	Access Link Control Application Protocol
AP	Access preamble
ARP	Address Resolution Protocol
ARQ	Automatic Repeat Request
AS	Access Stratum
ASC	Access Service Class
ASN.1	Abstract Syntax Notation One
ATM	Asynchronous Transfer Mode
AWGN	Additive White Gaussian Noise

### 4.2 B

BCCH	Broadcast Control Channel
BCFE	Broadcast Control Functional Entity
BCH	Broadcast Channel
BER	Bit Error Rate
BID	Binding Identity
BLER	Block Error Rate
BPSK	Binary Phase Shift Keying
BS	Base Station
BSC	Base Station Controller
BSS	Base Station System
BTS	Base Transceiver Station

## 4.3 C

C-	Control-
CA	Capacity Allocation
CAA	Capacity Allocation Acknowledgement
CB	Cell Broadcast
CBR	Constant Bit Rate
CC	Call Control
CCCH	Common Control Channel
CCH	Control Channel
CCPCH	Common Control Physical Channel
CCTrCH	Coded Composite Transport Channel
CD	Capacity Deallocation or Collision Detection
CDA	Capacity Deallocation Acknowledgement
CDMA	Code Division Multiple Access
CFN	Connection Frame Number
CN	Core Network
CPICH	Common Pilot Channel
CPCH	Common Packet Channel
CPCS	Common Part Convergence Sublayer
CPS	Common Part Sublayer
CRC	Cyclic Redundancy Check
CRNC	Controlling Radio Network Controller
CS	Circuit Switched
CTCH	Common Traffic Channel
CTDMA	Code Time Division Multiple Access
SCTP	S Common Transport Protocol CHECK WITH wg3
CW	Continuous Wave (unmodulated signal)

## 4.4 D

DC	Dedicated Control (SAP)
DCA	Dynamic Channel Allocation
DCCH	Dedicated Control Channel
DCH	Dedicated Channel
DHO	Diversity Handover
DL	Downlink (Forward Link)
DPCCH	Dedicated Physical Control Channel
DPCH	Dedicated Physical Channel
DPDCH	Dedicated Physical Data Channel
DRNC	Drift Radio Network Controller
DRNS	Drift RNS
DRX	Discontinuous Reception
DS-CDMA	Direct-Sequence Code Division Multiple Access
DSCH	Downlink Shared Channel

DTCH Dedicated Traffic Channel

DTX Discontinuous Transmission

#### 4.5 E

EIRP Equivalent Isotropic Radiated Power

#### 4.6 F

FACH Forward Access Channel

FAUSCH Fast Uplink Signaling Channel

FBI Feedback Information

FCS Frame Check Sequence

FDD Frequency Division Duplex

FDMA Frequency Division Multiple Access

FEC Forward Error Correction

FER Frame Erasure Rate, Frame Error Rate

FN Frame Number

FP Frame Protocol

#### 4.7 G

GC General Control (SAP)

GMSK Gaussian Minimum Shift Keying

GP Guard Period

GPRS General Packet Radio System

GSM Global System for Mobile communications

GTP GPRS Tunneling Protocol

#### 4.8 H

HCS Hierarchical Cell Structure

HHO Hard Handover

HO Handover

#### 4.9 I

IMA Inverse Multiplexing on ATM

IMSI International Mobile Subscriber Identity

IP Internet Protocol

IP-M IP Multicast

ISCP Interference Signal Code Power

ITU International Telecommunication Union

## 4.10 J

JD	Joint Detection
JP	Joint Predistortion

## 4.11 K

kbps	kilo-bits per second
ksps	kilo-symbols per second

## 4.12 L

L1	Layer 1 (physical layer)
L2	Layer 2 (data link layer)
L3	Layer 3 (network layer)
LAC	Link Access Control
LAI	Location Area Identity
LCD	Low Constrained Delay
LLC	Logical Link Control
LSA	Local Service Area

## 4.13 M

MA	Multiple Access
MAC	Medium Access Control
MCC	Mobile Country Code
Mcps	Mega-chips per second
MDS	Multimedia Distribution Service
ME	Mobile Equipment
MEHO	Mobile evaluated handover
MER	Message Error Rate
MM	Mobility Management
MNC	Mobile Network Code
MO	Mobile Originated
MOHO	Mobile Originated Handover
MS	Mobile Station
MSID	Mobile Station Identifier
MSC	Mobile Services Switching Center
MT	Mobile Terminated
MTP	Message Transfer Part
MTP3-B	Message Transfer Part level 3
MUI	Mobile User Identifier

## 4.14 N

NAS	Non-Access Stratum
NBAP	Node B Application Part
NEHO	Network evaluated handover
NNI	Network-Node Interface
NRT	Non-Real Time
NSAP	Network Service Access Point
Nt	Notification (SAP)

## 4.15 O

OCCCH	ODMA Common Control Channel
ODCCH	ODMA Dedicated Control Channel
ODCH	ODMA Dedicated Channel
ODMA	Opportunity Driven Multiple Access
O&M	Operation and Management
ORACH	ODMA Random Access Channel
ODTCH	ODMA Dedicated Traffic Channel
OVSF	Orthogonal Variable Spreading Factor

## 4.16 P

PC	Power Control
PCCC	Parallel Concatenated Convolutional Code
PCCH	Paging Control Channel
PCH	Paging Channel
PCPCH	Physical Common Packet Channel
PCCPCH	Primary Common Control Physical Channel
PCS	Personal Communication System
PDH	Plesiochronous Digital Hierarchy
PDSCH	Physical Downlink Shared Channel
PDU	Protocol Data Unit
PG	Processing Gain
PHS	Personal Handyphone System
PHY	Physical layer
PhyCH	Physical Channel
PI	Page Indicator
PICH	Page Indication Channel
PID	Packet Identification
PLMN	Public Land Mobile Network
PMD	Physical Media Dependent
PN	Pseudo Noise
PPM	Parts Per Million
PRACH	Physical Random Access Channel
PS	Packet Switched
PSC	Primary Synchronization Code PSCCCH
PSCH	Physical Shared Channel
PTM	Point-to-Multipoint
PTM-G	PTM Group Call
PTM-M	PTM Multicast
PU	Payload Unit
	Physical Shared Channel Control Channel

## 4.17 Q

QoS	Quality of Service
QPSK	Quadrature (Quaternary) Phase Shift Keying

## 4.18 R

RAB	Radio Access Bearer
RACH	Random Access Channel
RANAP	Radio Access Network Application Part
RF	Radio Frequency
RL	Radio Link
RLC	Radio Link Control
RLCP	Radio Link Control Protocol
RNC	Radio Network Controller
RNS	Radio Network Subsystem
RNSAP	Radio Network Subsystem Application Part
RNTI	Radio Network Temporary Identity
RRC	Radio Resource Control
RRM	Radio Resource Management
RSCP	Received Signal Code Power
RSSI	Received Signal Strength Indicator
RT	Real Time
RU	Resource Unit
RX	Receive

## 4.19 S

SAAL	Signaling ATM Adaptation Layer
SACCH	Slow Associated Control Channel
SAP	Service Access Point
SAR	Segmentation and Reassembly
SCCH	Synchronization Control Channel
SCCPCH	Secondary Common Control Physical Channel
SCH	Synchronization Channel
SDCCH	Stand-Alone Dedicated Control Channel
SDH	Synchronous Digital Hierarchy
SDU	Service Data Unit
SF	Spreading Factor
SFN	System Frame Number
SIR	Signal-to-Interference Ratio
SMS	Short Message Service
SMS-CB	SMS Cell Broadcast
SP	Switching Point
SRNC	Serving Radio Network Controller
SRNS	Serving RNS
SS7	Signaling System No. 7
SSC	Secondary Synchronization Code
SSCOP	Service Specific Connection Oriented Protocol
SSCF	Service Specific Co-ordination Function
SSCF-NNI	Service Specific Coordination Function – Network Node Interface
SSCS	Service Specific Convergence Sublayer
SSDT	Site Selection Diversity Transmission
SSSAR	Service Specific Segmentation and Re-assembly sublayer
STC	Signaling Transport Converter
STTD	Space Time Transmit Diversity

## 4.20 T

TC	Transmission Convergence
TCH	Traffic Channel
TDD	Time Division Duplex
TDMA	Time Division Multiple Access
TF	Transport Format
TFC	Transport Format Combination
TFCI	Transport Format Combination Indicator
TFCs	Transport Format Combination Set
TFI	Transport Format Indicator
TFS	Transport Format Set
TMSI	Temporary Mobile Subscriber Identity
TN	Termination Node
TPC	Transmit Power Control
TrCH	Transport Channel
TSTD	Time Switched Transmit Diversity
TTI	Transmission Timing Interval
TX	Transmit

## 4.21 U

UARFCN	UTRA Absolute Radio Frequency Channel Number
UARFN	UTRA Absolute Radio Frequency Number
UDD	Unconstrained Delay Data
UDP	User Datagram Protocol
UE	User Equipment
UE <sub>R</sub>	User Equipment with ODMA relay operation enabled
UL	Uplink (Reverse Link)
UMTS	Universal Mobile Telecommunications System
UNI	User-Network Interface
UP	User Plane
URA	User Registration Area
USCH	Uplink Shared Channel
USIM	UMTS Subscriber Identity Module
UTRA	Universal Terrestrial Radio Access
UTRAN	Universal Terrestrial Radio Access Network

## 4.22 V

VA	Voice Activity factor
VBR	Variable Bit Rate
VC	Virtual Circuit
<b>VHE</b>	<b>Virtual Home Environment</b>

## 4.23 W

WCDMA	Wideband Code Division Multiple Access
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## 5 Equations

$DPCH\_E_c$	Average energy per PN chip for DPCH.
$\frac{DPCH\_E_c}{I_{or}}$	The ratio of the received energy per PN chip of the DPCH to the total transmit power spectral density at the BS antenna connector.
$E_b$	Average energy per information bit for the PCCPCH, SCCPCH and DPCH, at the UE antenna connector.
$\frac{E_b}{N_t}$	The ratio of combined received energy per information bit to the effective noise power spectral density for the PCCPCH, SCCPCH and DPCH at the UE antenna connector. Following items are calculated as overhead: pilot, TPC, TFCI, CRC, tail, repetition, convolution coding and turbo coding.
$E_c$	Average energy per PN chip.
$\frac{E_c}{I_{or}}$	The ratio of the average transmit energy per PN chip for different fields or physical channels to the total transmit power spectral density.
$F_{uw}$	Frequency of unwanted signal
$I_o$	The total received power spectral density, including signal and interference, as measured at the UE antenna connector.
$I_{oc}$	The power spectral density of a band limited white noise source (simulating interference from other cells) as measured at the UE antenna connector.
$I_{or}$	The total transmit power spectral density of the Forward link at the base station antenna connector.
$\hat{I}_{or}$	The received power spectral density of the Forward link as measured at the UE antenna connector.
$N_t$	The effective noise power spectral density at the UE antenna connector.
$OCNS\_E_c$	Average energy per PN chip for the OCNS.
$\frac{OCNS\_E_c}{I_{or}}$	The ratio of the average transmit energy per PN chip for the OCNS to the total transmit power spectral density.
$PCCPCH \frac{E_c}{I_o}$	The ratio of the received PCCPCH energy per chip to the total received power spectral density at the UE antenna connector.
$\frac{PCCPCH\_E_c}{I_{or}}$	The ratio of the average transmit energy per PN chip for the PCCPCH to the total transmit power spectral density.
$SCCPCH$	Secondary Common Control Physical Channel.
$SCCPCH\_E_c$	Average energy per PN chip for SCCPCH.

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## Annex B (informative): Change Request History

TSG_M	TSG_DOC	SPEC	VERS_	VERS	CR	RE	SUBJECT

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## History

<b>Document history</b>		
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