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*Technical Report*

**Digital cellular telecommunications system (Phase 2+);  
Universal Mobile Telecommunications System (UMTS);  
Vocabulary for 3GPP Specifications  
(3GPP TR 21.905 version 8.3.0 Release 8)**



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## Foreword

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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

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] Void
- [2] 3GPP TS 25.990: "Technical Specification Group (TSG) RAN; Vocabulary".
- [3] 'The Path towards UMTS - Technologies for the Information Society' – Report #2, UMTS Forum.
- [4] 3GPP TS 23.122: "Non-Access-Statum (NAS) functions related to Mobile Station (MS) in idle mode".
- [5] ETSI TR 180 000: "NGN terminology".

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# 3 Terms and definitions

## 0-9

**1.8V technology Smart Card:** A Smart Card operating at  $1.8V \pm 10\%$  and  $3V \pm 10\%$ .

**1.8V technology Terminal:** A terminal operating the Smart Card - Terminal interface at  $1.8V \pm 10\%$  and  $3V \pm 10\%$ .

**3GPP Generic User Profile (GUP):** The 3GPP Generic User Profile is the collection of user related data which affects the way in which an individual user experiences services and which may be accessed in a standardised manner.

**3GPP system:** the telecommunication system standardised by the 3GPP consisting of a core network and a radio access network that may be either GERAN or UTRAN, or both.

**3GPP System core network:** refers in this specification to an evolved GSM core network infrastructure.

**3GPP System coverage:** see coverage area.

**3GPP System IC Card:** An IC card (or 'smartcard') of defined electromechanical specification which contains at least one USIM.

**3GPP System mobile termination:** part of the 3GPP System Mobile Station which provides functions specific to the management of the radio interface (Um).

**3GPP-WLAN Interworking:** Used to generically refer to interworking between the 3GPP system and the WLAN family of standards.

**3V technology Smart Card:** A Smart Card operating at  $3V \pm 10\%$  and  $5V \pm 10\%$ .

**3V technology Terminal:** A terminal operating the Smart Card - Terminal interface at  $3V \pm 10\%$  and  $5V \pm 10\%$ .

## A

**A/Gb mode:** mode of operation of the MS when connected to the Core Network via GERAN and the A and/or Gb interfaces.

**Acceptable Cell:** A cell that the UE may camp on to make emergency calls. It must satisfy certain conditions.

**Access conditions:** A set of security attributes associated with a file.

**Access delay:** The value of elapsed time between an access request and a successful access (source: ITU-T X.140).

**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.

**Access protocol:** A defined set of procedures that is adopted at an interface at a specified reference point between a user and a network to enable the user to employ the services and/or facilities of that network (source: ITU-T I.112).

**Accounting:** The process of apportioning charges between the Home Environment, Serving Network and User.

**Accuracy:** A performance criterion that describes the degree of correctness with which a function is performed. (The function may or may not be performed with the desired speed.) (source: ITU-T I.350).

**Active communication:** a UE is in active communication when it has a CS connection established. For PS active communication is defined by the existence of one or more Activated PDP contexts. Either one or both of the mentioned active communications may occur in the UE.

**Active Set:** Set of radio links simultaneously involved in a specific communication service between an UE and a UTRAN access point.

**Adjacent Channel Leakage power Ratio (ACLR):** The ratio of the average power centered on the assigned channel frequency to the average power centered on an adjacent channel frequency. In both cases the average power is measured with a filter that has Root Raised Cosine (RRC) filter response with roll-off  $\alpha = 0.22$  and a bandwidth equal to the chip rate.

**Air Interface User Rate:** The user rate between Mobile Termination and IWF. For T services it is the maximum possible AIUR not including padding. For NT services it is the maximum possible AIUR.

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

**Allowable PLMN:** A PLMN which is not in the list of forbidden PLMN in the UE.

**Applet:** A small program that is intended not to be run on its own, but rather to be embedded inside another application

**Application:** an application is a service enabler deployed by service providers, manufacturers or users. Individual applications will often be enablers for a wide range of services. (UMTS Forum report #2) [3]

**Applications / Clients:** These are services, which are designed using service capability features.

**Application Dedicated File (ADF):** an application DF is the entry point to an application on the UICC.

**Application Interface:** Standardised Interface used by application/clients to access service capability features.



**Application protocol:** The set of procedures required by the application.

**ASCI** Generic name to identify the services VGCS, VBS and eMLPP.

**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:** A PLMN where the UE has found a cell that satisfies certain conditions.

**Average power:** The thermal power as measured through a root raised cosine filter with roll-off  $\alpha = 0.22$  and a bandwidth equal to the chip rate of the radio access mode. The period of measurement shall be one power control group (timeslot) unless otherwise stated.

## B

**Base Station:** A base station is a network element in radio access network responsible for radio transmission and reception in one or more cells to or from the user equipment. A base station can have an integrated antenna or be connected to an antenna by feeder cables. In UTRAN it terminates the  $I_{ub}$  interface towards the RNC. In GERAN it terminates the Abis interface towards the BSC.

**Baseline capabilities:** Capabilities that are required for a service-less UE to operate within a network. The baseline capabilities for a UE include the capabilities to search for, synchronise with and register (with authentication) to a network. The negotiation of the UE and the network capabilities, as well as the maintenance and termination of the registration are also part of the required baseline capabilities.

**Base Station Controller:** This equipment in the BSS is in charge of controlling the use and the integrity of the radio resources.

**Base Station Subsystem:** Either a full network or only the access part of a GERAN offering the allocation, release and management of specific radio resources to establish means of connection between an MS and the GERAN. A Base Station Subsystem is responsible for the resources and transmission/reception in a set of cells.

**Baseline Implementation Capabilities:** Set of Implementation capabilities, in each technical domain, required to enable a UE to support the required Baseline capabilities.

**Basic OR** Basic Optimal Routeing

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

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

**Bearer capability:** A transmission function which the UE requests to the network.

**Bearer independent protocol:** (UICC) Mechanism by which the ME provides the (U)SIM applications on the UICC with access to the data bearers supported by the ME and the network.

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

**Best effort QoS:** The lowest of all QoS traffic classes. If the guaranteed QoS cannot be delivered, the bearer network delivers the QoS which can also be called best effort QoS.

**Best effort service:** A service model which provides minimal performance guarantees, allowing an unspecified variance in the measured performance criteria.

**Billing:** A function whereby CDRs generated by the charging function are transformed into bills requiring payment.

**Broadcast:** A value of the service attribute "communication configuration", which denotes unidirectional distribution to all users (source: ITU-T I.113).

**Byte code:** (UICC) A hardware machine independent representation of a primitive computer operation that serves as an instruction to a software program called an interpreter or a virtual machine that simulates the hypothetical computer's central processing unit. code generated by a Java compiler and executed by the Java interpreter.

## 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):** The combined losses of all transmission system components between the receiving antenna output and the receiver input.

**CAC (Connection Admission Control):** A set of measures taken by the network to balance between the QoS requirements of new connections request and the current network utilisation without affecting the grade of service of existing/already established connections.

**Call:** a logical association between several users (this could be connection oriented or connection less).

**Charging Data Record (CDR):** A formatted collection of information about a chargeable event (e.g. time of call set-up, duration of the call, amount of data transferred, etc) for use in billing and accounting. For each party to be charged for parts of or all charges of a chargeable event a separate CDR shall be generated, i.e more than one CDR may be generated for a single chargeable event, e.g. because of its long duration, or because more than one charged party is to be charged.

**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.

**Capability Class:** A piece of information which indicates general 3GPP System mobile station characteristics (e.g. supported radio interfaces,...) for the interest of the network.

**Card session:** A link between the card and the external world starting with the ATR and ending with a subsequent reset or a deactivation of the card.

**CBS DRX cycle:** The time interval between successive readings of BMC messages.

**Cell:** Radio network object that can be uniquely identified by a User Equipment from a (cell) identification that is broadcasted over a geographical area from one UTRAN Access Point. A Cell is either FDD or TDD mode.

**Cell Radio Network Temporary Identifier (C-RNTI):** The C-RNTI is a UE identifier allocated by a controlling RNC and it is unique within one cell controlled by the allocating CRNC. C-RNTI can be reallocated when a UE accesses a new cell with the cell update procedure.

**Cellular Text telephone Modem (CTM):** A modulation and coding method intended for transmission of text in voice channels for the application of real time text conversation.

**Chargeable Event:** An activity utilising telecommunications network infrastructure and related services for user to user communication (e.g. a single call, a data communication session or a short message), or for user to network communication (e.g. service profile administration), or for inter-network communication (e.g. transferring calls, signalling, or short messages), or for mobility (e.g. roaming or inter-system handover), which the network operator wants to charge for. The cost of a chargeable event may cover the cost of sending, transporting, delivery and storage. The cost of call related signalling may also be included.

**Charged Party:** A user involved in a chargeable event who has to pay parts or the whole charges of the chargeable event, or a third party paying the charges caused by one or all users involved in the chargeable event, or a network operator.

**Charging:** A function whereby information related to a chargeable event is formatted and transferred in order to make it possible to determine usage for which the charged party may be billed.

**Cipher key:** A code used in conjunction with a security algorithm to encode and decode user and/or signalling data.

**Closed group:** A group with a pre-defined set of members. Only defined members may participate in a closed group.

**Coded Composite Transport Channel:** A data stream resulting from encoding and multiplexing of one or several transport channels.

**Common Channel:** A Channel not dedicated to a specific UE.

**Confidentiality:** The avoidance of disclosure of information without the permission of its owner.

**Connected Mode:** Connected mode is the state of User Equipment switched on and an RRC connection established.

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

**Connection mode:** The type of association between two points as required by the bearer service for the transfer of information. A bearer service is either connection-oriented or connectionless. In a connection oriented mode, a logical association called *connection* needs to be established between the source and the destination entities before information can be exchanged between them. Connection oriented bearer services lifetime is the period of time between the establishment and the release of the connection. In a connectionless mode, no connection is established beforehand between the source and the destination entities; the source and destination network addresses need to be specified in each message. Transferred information cannot be guaranteed of ordered delivery. Connectionless bearer services lifetime is reduced to the transport of one message.

**Connectionless (for a bearer service):** In a connectionless bearer, no connection is established beforehand between the source and the destination entities ; the source and destination network addresses need to be specified in each message. Transferred information cannot be guaranteed of ordered delivery. Connectionless bearer services lifetime is reduced to the transport of one message.

**Connectionless service:** A service which allows the transfer of information among service users without the need for end-to-end call establishment procedures (source: ITU-T I.113).

**Control channel:** A logical channel that carries system control information.

**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.

**Conversational service:** An interactive service which provides for bi-directional communication by means of real-time (no store-and-forward) end-to-end information transfer from user to user (source: ITU-T I.113).

**Core network:** An architectural term relating to the part of 3GPP System which is independent of the connection technology of the terminal (eg radio, wired).

**Core Network Operator:** Operator that offers core network services.

**Corporate code:** Code which when combined with the network and SP codes refers to a unique Corporate. The code is provided in the GID2 file on the (U)SIM (see Annex A.1.) and is correspondingly stored on the ME.

**Corporate code group** combination of the Corporate code and the associated SP and network codes.

**Corporate personalisation:** Allows a corporate customer to personalise MEs that he provides for his employees or customers use so that they can only be used with the company's own (U)SIMs.

**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:** Area over which a 3GPP System service is provided with the service probability above a certain threshold.

**Current directory:** The latest MF or DF selected on the UICC.

**Current EF:** The latest EF selected.

**Current serving cell:** This is the cell on which the MS is camped.

## D

**Data field:** Obsolete term for Elementary File.

**Data Object:** Information coded as TLV objects, i.e. consisting of a Tag, a Length and a Value part.

**Dedicated Channel:** A channel dedicated to a specific UE.

**De-personalisation:** Is the process of deactivating the personalisation so that the ME ceases to carry out the verification checks.

**Dedicated File (DF):** A file containing access conditions and, optionally, Elementary Files (EFs) or other Dedicated Files (DFs).

**Delivered QoS:** Actual QoS parameter values with which the content was delivered over the lifetime of a QoS session.

**Demand service:** A type of telecommunication service in which the communication path is established almost immediately, in response to a user request effected by means of user-network signalling (source: ITU-T I.112).

**Dependability:** A performance criterion that describes the degree of certainty (or surety) with which a function is performed regardless of speed or accuracy, but within a given observational interval (source: ITU-T I.350).

**Destination user:** Entity to which calls to the General Packet Radio Service (GPRS) are directed.

**Directory:** General term for the MF or a DF on the UICC.

**Directory Number:** A string consisting of one or more of the characters from the set {0, 1, 2, 3, 4, 5, 6, 7, 8, 9, \*, #, a, b, c} associated with a nature of address indicator and number plan indicator. When using the public MMI for the control of supplementary services however, \* and # cannot be part of any SC or SI field.

NOTE 1: No such restriction on the SC and SI fields exists when using other (e.g. menu-driven) MMI for the control of supplementary services.

NOTE 2: When using the public MMI, certain limitations on the use of one and two digit directory numbers may apply. The use of other MMI can remove these restrictions.

NOTE 3: This definition is not intended to require the support of all these characters in the MMI itself.

**Distribution service:** Service characterised by the unidirectional flow of information from a given point in the network to other (multiple) locations (source: ITU-T I.113).

**Domain:** The highest-level group of physical entities. Reference points are defined between domains.

**Domain Specific Access Control:** Access control functionality for access barring in either domain (i.e. CS domain or PS domain).

**Donor network:** The subscription network from which a number is ported in the porting process. This may or may not be the number range owner network.

**Downlink:** 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 UE 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.

## E

**Element Manager:** Provides a package of end-user functions for management of a set of closely related types of network elements. These functions can be divided into two main categories.

**Element Management Functions:** Set of functions for management of network elements on an individual basis. These are basically the same functions as supported by the corresponding local terminals.

**Elementary File (EF):** A file containing access conditions and data and no other files on the UICC.

**End-User:** An End-User is an entity (typically a user), associated with one or multiple subscriptions through identities (e.g. IMSIs, MSISDNs, IMPIs, IMPUs and application-specific identities). In the 3GPP system an End-User is characterised by an End-User Identity.

**End-User Identity (EUI):** An End-User Identity is an identity that uniquely characterises an End-User in the 3GPP system. An End-User Identity is mainly intended for administration purposes of the operator.

**Enterprise Systems:** Information Systems that are used in the telecommunication organisation but are not directly or essentially related to the telecommunications aspects (Call Centre's, Fraud Detection and Prevention Systems, Invoicing etc).

**Equivalent HPLMN:** Any of the PLMN entries contained in the Equivalent HPLMN list.

**Equivalent HPLMN list:** To allow provision for multiple HPLMN codes, PLMN codes that are present within this list shall replace the HPLMN code derived from the IMSI for PLMN selection purposes. This list is stored on the USIM and is known as the EHPLMN list. The EHPLMN list may also contain the HPLMN code derived from the IMSI. If the HPLMN code derived from the IMSI is not present in the EHPLMN list then it shall be treated as a Visited PLMN for PLMN selection purposes.

**Essential UE Requirement (Conditional):** Requirement which has to be implemented under certain Service conditions. e.g. AMR codec in UE which supports speech service

**Essential UE Requirement (Unconditional):** Requirement which has to be implemented in any 3G UE in order to exist in and communicate with 3G network (e.g. Chiprate of 3.84Mcps).

**Evolved Packet Core:** Is a framework for an evolution or migration of the 3GPP system to a higher-data-rate, lower-latency, packet-optimized system that supports, multiple RATs.

**Evolved Packet System:** Is an evolution of the 3G UMTS characterized by higher-data-rate, lower-latency, packet-optimized system that supports multiple RATs. The Evolved Packet System comprises the Evolved Packet Core together with the evolved radio access network (E-UTRA and E-UTRAN).

**Evolved UTRA:** Evolved UTRA is an evolution of the 3G UMTS radio-access technology towards a high-data-rate, low-latency and packet-optimized radio-access technology.

**Evolved UTRAN:** Evolved UTRAN is an evolution of the 3G UMTS radio-access network towards a high-data-rate, low-latency and packet-optimized radio-access network.

**Explicit Diversity Gain (dB):** The effective gain achieved using diversity techniques.

**Extra SDU delivery probability:** The ratio of total (unrequested) extra service data units (SDUs) to total service data units received by a destination user in a specified sample (source: ITU-T X.140).

NOTE: the term "user information unit" has been replaced by the term "service data unit".

## F

**File:** A named and hierarchically-classified data set on the UICC.

**File identifier (FID):** The 2-byte name of a file or a directory on the UICC.

**Fixed Network User Rate:** The user rate between IWF and the fixed network.

**FC (Flow Control):** A set of mechanisms used to prevent the network from becoming overloaded by regulating the input rate transmissions.

**Flexible Layer One (FLO):** GERAN feature that allows the channel coding of the layer one to be configured at call setup.

**Fixed Mobile Convergence (FMC):** In a given network configuration, the capabilities that provide service and application to the end-user irrespective of the fixed or mobile access technologies and independent of user's location. In the NGN environment, it means to provide NGN services to end-users regardless of the access technology.

**Framework:** A framework defines a set of Application Programming Interface (API) classes for developing applications and for providing system services to those applications.

**Functional group:** A set of functions that may be performed by a single equipment (source: ITU-T I.112).

## G

**Geographical routing:** The conversion of the PDU's geographical area definition, which specifies the area in which the PDU will be broadcast, into an equivalent radio coverage map.

**GERAN Radio Network Temporary Identifier (G-RNTI):** G-RNTI is an MS identifier which is allocated by the Serving BSC and is unique within this SBSC. It is allocated for all MSs having an RRC connection. The G-RNTI is always reallocated when the Serving BSC for the RRC connection is changed and deallocated when the RRC connection is released. The G-RNTI is also used at RLC/MAC during contention resolution.

**GPRS MS:** An MS capable of GPRS services is a GPRS MS.

**Group:** A set of members allowed to participate in the group call service. The group is defined by a set of rules that identifies a collection of members implicitly or explicitly. These rules may associate members for the purpose of participating in a group call, or may associate members who do not participate in data transfer but do participate in management, security, control, or accounting for the group.

**Group call:** The relationship that exists between the members of a group for the purpose of transferring data. More than one group call may exist in a group. A group call establishes an active group.

**Group call initiator:** A member (or third party) authorised to initiate a group call. More than one member may initiate group calls.

**Group call participant:** A member of a group participating in a particular group call at a given time.

**Group call server:** A logical entity that provides the group call service to the members.

**Group call service:** A PTM service in which a relationship exists between participants of the group, and in which a single data unit transmitted by a source participant is received by multiple destination participants; it is a one-in, many-out service.

**Group controller:** The member (or third party) responsible for the group creation and membership control.

**GSM/EDGE Radio Access Network:** GERAN is a conceptual term identifying that part of the network which consists of BSCs and BTSs between A/Gb or Iu and Um interfaces.

**GSM BSS:** refers in this specification to the GSM/GPRS access network.

**GSM core network:** refers in this specification to the GSM NSS and GPRS backbone infrastructure.

**GSM coverage:** an area where mobile cellular services are provided in accordance with GSM standards

**GSM session:** That part of the card session dedicated to the GSM operation.

**Guaranteed service:** A service model which provides highly reliable performance, with little or no variance in the measured performance criteria.

## H

**Handoff Gain/Loss (dB):** This is the gain/loss factor (+ or -) brought by handoff 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).

**Handover:** The process in which the radio access network changes the radio transmitters or radio access mode or radio system used to provide the bearer services, while maintaining a defined bearer service QoS.

**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.

**HE-VASP:** Home Environment Value Added Service Provider. This is a VASP that has an agreement with the Home Environment to provide services. The Home Environment provides services to the user in a managed way, possibly by collaborating with HE-VASPs, but this is transparent to the user. The same service could be provided by more than one HE-VASP and each HE-VASP can provide more than one service.

**Home Environment:** responsible for overall provision and control of the Personal Service Environment of its subscribers.

**Home PLMN:** This is a PLMN where the MCC and MNC of the PLMN identity match the MCC and MNC of the IMSI. Matching criteria are defined in TS 23.122.

|

**IC Card:** A card holding an Integrated Circuit containing subscriber, end user, authentication and/or application data for one or more applications.

**IC card SIM:** Obsolete term for ID-1 SIM.

**ICS proforma:** A document, in the form of a questionnaire, which when completed for an implementation or system becomes an ICS.

**ID-000 SIM:** A UICC having the form on an ID-000 card (see ISO 7816-1 [24]) that contains a SIM application.

**ID-1 SIM:** A UICC having the format of an ID-1 card (see ISO 7816-1 [24]) that contains a SIM.

**Idle mode:** The state of UE switched on but which does not have any established RRC connection.

**Implementation capability:** A capability that relates to a particular technical domain. Examples: a spreading factor of 128 (in the domain of the physical layer); the A5 algorithm; a 64 bit key length (in the domain of security); a power output of 21 dBm (in the domain of transmitter performance); support of AMR Codec (in the domain of the Codec); support of CHV1 (in the domain of the USIM).

**Implementation Conformance Statement (ICS):** A statement made by the supplier of an implementation or system claimed to conform to a given specification, stating which capabilities have been implemented. The ICS can take several forms: protocol ICS, profile ICS, profile specific ICS, information object ICS, etc.

**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 paging DRX cycle.

**Integrity:** (in the context of security) The avoidance of unauthorised modification of information.

**Inter-cell handover:** A handover between different cells. An inter-cell handover requires network connections to be altered.

**Inter PLMN handover:** Handover between different PLMNs, ie having different MCC-MNC.

**Inter system handover:** Handover between networks using different radiosystems , e.g. UMTS – GSM.

**Interactive service:** A service which provides the means for bi-directional exchange of information between users. Interactive services are divided into three classes of services: conversational services, messaging services and retrieval services (source: ITU-T I.113).

**Interface:** The common boundary between two associated systems (source: ITU-T I.112).

**International Mobile Station Equipment Identity (IMEI):** An "International Mobile Station Equipment Identity" is a unique number which shall be allocated to each individual mobile station equipment in the PLMN and shall be unconditionally implemented by the MS manufacturer.

**International mobile user number (IMUN):** The International Mobile User Number is a diallable number allocated to a 3GPP System user.

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

**Interpreter:** A software program that simulates a hypothetical computer by performing the operations defined by the instructions of this computer.(see also 'byte code' and 'virtual machine').

**Interworking WLAN (I-WLAN):** A WLAN that interworks with a 3GPP system.

**Intra-cell handover:** 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.

**Intra PLMN handover:** Handover within the same network, ie having the same MCC-MNC regardless of radio access system.

Note: this includes the case of UMTS <>GSM handover where MCC-MNC are the same in both cases.

**IP-Connectivity Access Network (IP-CAN):** The collection of network entities and interfaces that provides the underlying IP transport connectivity between the UE and the IMS entities. An example of an "IP-Connectivity Access Network" is GPRS.

**IP-Connectivity Access Network bearer (IP-CAN bearer):** The data communications bearer provided by the IP-Connectivity Access Network. When using GPRS, the IP-Connectivity Access Network bearers are provided by PDP Contexts.

**IRP Information Model:** An IRP Information Model consists of an IRP Information Service and a Network Resource Model (see below for definitions of IRP Information Service and Network Resource Model).

**IRP Information Service:** An IRP Information Service describes the information flow and support objects for a certain functional area, e.g. the alarm information service in the fault management area. As an example of support objects, for the Alarm IRP there is the alarm record and alarm list.

**IRP Solution Set:** An IRP Solution Set is a mapping of the IRP Information Service to one of several technologies (CORBA/IDL, SNMP/SMI, CMIP/GDMO, etc.). An IRP Information Service can be mapped to several different IRP Solution Sets. Different technology selections may be done for different IRPs.

**Inter System Change:** a change of radio access between different radio access technologies such as GSM and UMTS.

**IMS SIM (ISIM):** An application residing on the UICC that provides access to IP Multimedia Services.

**Iu:** Interconnection point between an RNC or a BSC and a 3G Core Network. It is also considered as a reference point.

**Iu-flex:** Routing functionality for intra domain connection of RAN nodes to multiple CN nodes.

**Iu mode:** mode of operation of the MS when <>connected to the Core Network via GERAN or UTRAN and the Iu interface.

**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 RNC, the physical realisation may not be a point to point link.

## J

<void>

## K

**Key pair:** Key pairs are matching private and public keys. If a block of data is encrypted using the private key, the public key from the pair can be used to decrypt it. The private key is never divulged to any other party, but the public key is available, e.g. in a certificate.



## L

**Local Service:** Services, which are provided by current roamed to network that are not HE services. The same service can be provided by a network as a local service to inbound roamers and as a HE service to the subscribers of this network.

**Localised Service Area (LSA):** A LSA is an operator-defined group of cells, 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.

**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 Channel (UICC):** A command/response communication context multiplexed on the physical channel between the ME and the UICC.

**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 signalling 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 exclusive access cell:** A UE may only camp on this cell if the cell belongs to the LSAs to which the user has subscribed. Nevertheless, if no other cells are available, the UE of non-LSA users may originate emergency calls from this cell.

**LSA only access:** When LSA only access applies to the user, the UE can only access cells that belong to the LSAs to which the user has subscribed. Outside the coverage area of the subscribed LSAs, the UE may camp on other cells and limited services apply.

**LSA preferential access cell:** A LSA preferential access cell is a cell which is part of the LSA. UEs of users that have subscribed to a LSA of a LSA-preferential-access cell have higher priority to resources than non-LSA users in the same cell.

## 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.

**Management Infrastructure:** The collection of systems (computers and telecommunications) a 3GPP System Organisation has in order to manage a 3GPP System.

**Mandatory UE Requirement:** Regulatory requirement which is applicable to 3G UEs. It is determined by each country/region and beyond the scope of 3GPP specification (e.g. spurious emission in UK).

**Master File (MF):** The root directory of the file system hierarchy on the UICC.

**Maximum output Power:** For UE, this is a measure of the maximum power supported by the UE (i.e. the actual power as would be measured assuming no measurement error) (TS 25.101). For FDD BS, the mean power level per carrier of the base station measured at the antenna connector in a specified reference condition (TS 25.104). For TDD

BS this refers to the measure of power when averaged over the transmit timeslot at the maximum power setting (TS 25.105).

**Maximum possible AIUR:** The highest possible AIUR that the multiple TCH/F can provide, e.g. 2 TCH/F using TCH/F9.6 provides a maximum possible AIUR of 19,2 kbit/s.

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

**Mean bit rate:** A measure of throughput. The average (mean) bit rate available to the user for the given period of time (source: ITU-T I.210).

**Mean transit delay:** The average transit delay experienced by a (typically) large sample of PDUs within the same service category.

**Medium Access Control:** A sub-layer of radio interface layer 2 providing unacknowledged data transfer service on logical channels and access to transport channels.

**Messaging service:** An interactive service which offers user-to-user communication between individual users via storage units with store-and-forward, mailbox and/or message handling, (e.g., information editing, processing and conversion) functions (source: ITU-T I.113).

**MExE Classmark:** A MExE classmark identifies a category of MExE UE supporting MExE functionality with a minimum level of processing, memory, display, and interactive capabilities. Several MExE classmarks may be defined to differentiate between the functionalities offered by different MExE UEs. A MExE application or applet defined as being of a specific MExE Classmark indicates that it is supportable by a MExE UE of that Classmark.

**MExE executable:** An executable is an applet, application, or executable content, which conforms to the MExE specification and may execute on the ME.

**MExE server:** A node supporting MExE services in the MExE service environment.

**MExE service:** a service enhanced (or made possible) by MExE technology.

**MExE service environment:** Depending on the configuration of the PLMN, the operator may be able to offer support to MExE services in various ways. Examples of possible sources are from traditional GSM nodes, IN nodes, operator-specific nodes, operator franchised nodes and services provider nodes, together with access to nodes external (i.e. vendor-specific) to the PLMN depending on the nature of the MExE service. These nodes are considered to constitute the MExE service environment. The MExE service environment shall support direct MExE UE to MExE UE interaction of MExE services.

**MExE service provider:** an organisation which delivers MExE services to the subscriber. This is normally the PLMN operator, but could be an organisation with MExE responsibility (which may have been delegated by the PLMN operator).

**MExE SIM:** A (U)SIM application that is capable of storing a security certificate that is accessible using standard mechanisms.

**MExE subscriber:** The owner of a subscription who has entered into an agreement with a MExE service provider for MExE services.

**Micro cells:** "Micro cells" are small cells.

**Minimum transmit power:** The minimum controlled output power of the TDD BS is when the power control setting is set to a minimum value. This is when the power control indicates a minimum transmit output power is required (TS 25.105).

**Mobile Equipment (ME):** The Mobile Equipment is functionally divided into several entities, i.e. one or more Mobile Terminations (MT) and one or more Terminal Equipments (TE).

**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 (MS):** A Mobile Station (MS) corresponds to a User Equipment (UE). See 3GPP TS 24.002.

**Mobile number portability:** The ability for a mobile subscriber to change subscription network within the same country whilst retaining their original MSISDN(s).

**Mobile Termination (MT):** The Mobile Termination is the component of the Mobile Equipment (ME) which supports functions specific to management of the PLMN access interface (3GPP or non-3GPP). The MT is realized as a single functional entity..

**Mobility:** The ability for the user to communicate whilst moving independent of location.

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

**Multi mode terminal:** UE that can obtain service from at least one UTRA radio access mode, and one or more different systems such as GSM bands or possibly other radio systems such as IMT-2000 family members.

**Multicast service:** A unidirectional PTM service in which a message is transmitted from a single source entity to all subscribers currently located within a geographical area. The message contains a group identifier indicating whether the message is of interest to all subscribers or to only the subset of subscribers belonging to a specific multicast group.

**Multipoint:** A value of the service attribute "communication configuration", which denotes that the communication involves more than two network terminations (source: ITU-T I.113).

**Multimedia service:** Services that handle several types of media such as audio and video in a synchronised way from the user's point of view. A multimedia service may involve multiple parties, multiple connections, and the addition or deletion of resources and users within a single communication session.

## N

**Name:** A name is an alpha numeric label used for identification of end users and may be portable.

**Negotiated QoS:** In response to a QoS request, the network shall negotiate each QoS attribute to a level that is in accordance with the available network resources. After QoS negotiation, the bearer network shall always attempt to provide adequate resources to support all of the negotiated QoS profiles.

**Network code:** MCC and MNC.

**Network code group:** Same as network code.

**Network connection:** An association established by a network layer between two users for the transfer of data, which provides explicit identification of a set of network data transmissions and agreement concerning the services to be provided by the set (source: ITU-T X.213 / ISO-IEC 8348).

**Network Element:** A discrete telecommunications entity which can be managed over a specific interface e.g. the RNC.

**Network Manager:** Provides a package of end-user functions with the responsibility for the management of a network, mainly as supported by the EM(s) but it may also involve direct access to the network elements. All communication with the network is based on open and well standardized interfaces supporting management of multi-vendor and multi-technology network elements.

**Network operator:** See PLMN operator.

**Network personalisation:** Allows the network operator to personalise a ME so that it can only be used with that particular network operator's (U)SIMs.

**Network Resource Model:** A protocol independent model describing managed objects representing network resources, e.g. an RNC or NodeB.

**Network service data unit (NSDU):** A unit of data passed between the user and the GPRS network across a Network Service Access Point (NSAP).

**Network subset code:** digits 6 and 7 of the IMSI.

**Network subset code group:** Combination of a network subset code and the associated network code.

**Network subset personalisation:** A refinement of network personalisation, which allows network operators to limit the usage of a ME to a subset of (U)SIMs

**Network termination:** A functional group on the network side of a user-network interface (source: ITU-T I.112).

**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.

**Nomadic Operating Mode:** Mode of operation where the terminal is transportable but being operated while stationary and may in addition require user co-operation (e.g. close to open spaces, antenna setup...).

**Nominal Maximum Output Power:** This is the nominal power defined by the UE power class.

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

**Normal GSM operation:** Relating to general, CHV related, GSM security related and subscription related procedures.

**Normal mode of operation:** The mode of operation into which the ME would have gone if it had no personalisation checks to process.

**NTDD:** Narrow TDD – the 1.28 Mcps chip rate UTRA-TDD option

**Number:** A string of decimal digits that uniquely indicates the public network termination point. The number contains the information necessary to route the call to this termination point.

A number can be in a format determined nationally or in an international format. The international format is known as the International Public Telecommunication Number which includes the country code and subsequent digits, but not the international prefix.

**Number portability:** A capability that allows a user to retain the same public telecommunication number when changing from one service provider to another. Additional regulatory constraints may apply in different regions.

**Number range owner network:** The network to which the number range containing the ported number has been allocated.

## O

**Off-Line charging:** A charging process where charging information does not affect, in real time, the service rendered.

**On-Line Charging:** A charging process where charging information can affect, in real time, the service rendered and therefore directly interacts with the session/service control.

**One Stop Billing:** One bill for all charges incurred using the 3GPP System.

**Open group:** A group that does not have a pre-defined set of members. Any user may participate in an open group.

**Open Service Access:** Concept for introducing a vendor independent means for introduction of new services.

**Operations System:** This abbreviation indicates a generic management system, independent of its location level within the management hierarchy.

**Optional UE Requirement:** Any other requirements than mandatory UE requirement, essential UE requirement (conditional), essential UE requirement (unconditional). It is totally up to individual manufacturer to decide whether it should be implemented or not (e.g. Network initiated MM connection establishment).

**Originating network:** The network where the calling party is located.

**Orthogonal Channel Noise Simulator** a mechanism used to simulate the users or control signals on the other orthogonal channels of a downlink

**OSA Interface:** Standardised Interface used by application/clients to access service capability features.

## P

**Packet:** An information unit identified by a label at layer 3 of the OSI reference model (source: ITU-T I.113). A network protocol data unit (NPDU).

**Packet data protocol (PDP):** Any protocol which transmits data as discrete units known as packets, e.g., IP, or X.25.

**Packet transfer mode:** Also known as packet mode. A transfer mode in which the transmission and switching functions are achieved by packet oriented techniques, so as to dynamically share network transmission and switching resources between a multiplicity of connections (source: ITU-T I.113).

**Padding:** One or more bits appended to a message in order to cause the message to contain the required number of bits or bytes.

**Paging:** The act of seeking a User Equipment.

**Paging DRX cycle:** The individual time interval between monitoring Paging Occasion for a specific UE

**Paging Block Periodicity (PBP):** The period of the occurrence of Paging Blocks. (For FDD, PBP = 1).

**Paging Message Receiving Occasion:** The frame where the UE receives actual paging message.

**Paging occasion:** The frame where the UE monitors in FDD or the paging block, which consists of several frames, for TDD. For Paging Blocks, the value of Paging Occasion is equal to the first frame of the Paging Block.

**Peak bit rate:** A measure of throughput. The maximum bit rate offered to the user for a given time period (to be defined) for the transfer of a bursty signal (source: ITU-T I.210). (The maximum user information transfer rate achievable by a user for a single service data unit transfer.)

**Performance:** The ability to track service and resource usage levels and to provide feedback on the responsiveness and reliability of the network.

**Personal Service Environment:** contains personalised information defining how subscribed services are provided and presented towards the user. Each subscriber of the Home Environment has her own Personal Service Environment. The Personal Service Environment is defined in terms of one or more User Profiles.

**Personalisation:** The process of storing information in the ME and activating the procedures which verify this information against the corresponding information stored in applications on the (U)SIM whenever the ME is powered up or when a UICC containing network access applications (SIM, USIM, etc.) is inserted, in order to limit the applications with which the ME will operate.

**Personalisation entity:** Network, network subset, SP, Corporate or (U)SIM to which the ME is personalised

**Phonebook:** A dataset of personal or entity attributes. The simplest form is a set of name-subscriber phone number pairs as supported by GSM (U)SIMs.

**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.

**PICH Monitoring Occasion:** The time instance where the UE monitors PICH within Paging Occasion.

**PLMN Area:** The PLMN area is the geographical area in which a PLMN provides communication services according to the specifications to mobile users. In the PLMN area, the mobile user can set up calls to a user of a terminating network. The terminating network may be a fixed network, the same PLMN, another PLMN or other types of PLMN. Terminating network users can also set up calls to the PLMN. The PLMN area is allocated to a PLMN. It is determined by the service and network provider in accordance with any provisions laid down under national law. In general the PLMN area is restricted to one country. It can also be determined differently, depending on the different telecommunication services, or type of MS. If there are several PLMNs in one country, their PLMN areas may overlap. In border areas, the PLMN areas of different countries may overlap. Administrations will have to take precautions to ensure that cross border coverage is minimised in adjacent countries unless otherwise agreed.

**PLMN Operator:** Public Land Mobile Network operator. The entity which offers telecommunications services over an air interface..

**Plug-in SIM:** A physical form factor of SIM (see ID-000 SIM).

**point-to-multipoint service:** A service type in which data is sent to 'all service subscribers or a pre-defined subset of all subscribers' within an area defined by the Service Requester.

**Point-to-point:** A value of the service attribute "communication configuration", which denotes that the communication involves only two network terminations.

**Point-to-point service:** A service type in which data is sent from a single network termination to another network termination.

**Ported number:** A MSISDN that has undergone the porting process.

**Ported subscriber:** The subscriber of a ported number.

**Porting process:** A description of the transfer of a number between network operators.

**Power control dynamic range:** The difference between the maximum and the minimum total transmit output power for a specified reference condition (TS 25.104).

**Predictive service:** A service model which provides reliable performance, but allowing a specified variance in the measured performance criteria.

**Prepay billing:** Billing arrangement between customer and operator/service provider where the customer deposits an amount of money in advance, which is subsequently used to pay for service usage.

**Postpay billing:** Billing arrangement between customer and operator/service provider where the customer periodically receives a bill for service usage in the past period.

**Proactive SIM:** A SIM, which is capable of issuing commands to the Terminal. Part of SIM Application Toolkit.

**Protocol:** A formal set of procedures that are adopted to ensure communication between two or more functions within the within the same layer of a hierarchy of functions (source: ITU-T I.112).

**Protocol data unit:** In the reference model for OSI, a unit of data specified in an (N)-protocol layer and consisting of (N)-protocol control information and possibly (N)-user data (source: ITU-T X.200 / ISO-IEC 7498-1).

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

## Q

**QoS profile:** a QoS profile comprises a number of QoS parameters. A QoS profile is associated with each QoS session. The QoS profile defines the performance expectations placed on the bearer network.

**QoS session:** Lifetime of PDP context. The period between the opening and closing of a network connection whose characteristics are defined by a QoS profile. Multiple QoS sessions may exist, each with a different QoS profile.

**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 Information Management:** Functionality supporting the exchange of information, via the Core Network, between peer application entities located in a GERAN or in a UTRAN access network.

**RAN sharing:** Two or more CN operators share the same RAN, i.e. a RAN node (RNC or BSC) is connected to multiple CN nodes (SGSNs and MSC/VLRs) belonging to different CN operators.

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

**Radio Access Network Operator:** Operator that offers radio access to one or more core network operators.

**Radio Access Technology:** UTRA, GERAN etc.

**Radio Bearer:** The service provided by the Layer 2 for transfer of user data between User Equipment and UTRAN.

**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 realisation 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:** A sublayer of radio interface layer 2 providing transparent, unacknowledged and acknowledged data transfer service.

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

**Radio Link Set:** A set of one or more Radio Links that has a common generation of Transmit Power Control (TPC) commands in the DL

**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 Signalling 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:** A Radio Network Temporary Identifier is a generic term of an identifier for a UE when an RRC connection exists. Following types of RNTI are defined: Cell RNTI (C-RNTI), Serving RNC RNTI (S-RNTI), UTRAN RNTI (U-RNTI) and GERAN RNTI (G-RNTI).

**Radio Resource Control:** A sublayer of radio interface Layer 3 existing in the control plane only which provides information transfer service to the non-access stratum. RRC is responsible for controlling the configuration of radio interface Layers 1 and 2.

**Radio system:** the selected 2<sup>nd</sup> or 3<sup>rd</sup> generation radio access technology, eg UTRAN or GERAN.

**Rated Output Power:** For FDD BS, rated output power is the mean power level per carrier that the manufacturer has declared to be available at the antenna connector. For TDD BS rated output power is the mean power level per carrier over an active timeslot that the manufacturer has declared to be available at the antenna connector.

**Real time:** Time, typically in number of seconds, to perform the on-line mechanism used for fraud control and cost control.

**Received Signal Code Power:** 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  $E_b/(N_o+I_o)$ .

**Recipient network:** The network which receives the number in the porting process. This network becomes the subscription network when the porting process is complete.

**Record:** A string of bytes within an EF handled as a single entity.

**Record number:** The number, which identifies a record within an EF.

**Record pointer:** The pointer, which addresses one record in an EF.

**Reference configuration:** A combination of functional groups and reference points that shows possible network arrangements (source: ITU-T I.112).

**Reference point:** A conceptual point at the conjunction of two non-overlapping functional groups (source: ITU-T I.112).

**Regionally Provided Service:** A service entitlement to only certain geographical part(s) of a PLMN, as controlled by the network operator.

**Registration:** This is the process of camping on a cell of the PLMN and doing any necessary LRs.

**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:** A particular version of the 3GPP System standards produced by the 3GPP project. Also: Release 4, Release 5, Release 6 etc..

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

**Requested QoS:** a QoS profile is requested at the beginning of a QoS session. QoS modification requests are also possible during the lifetime of a QoS session.

**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.

**Residual error rate:** A parameter describing service accuracy. The frequency of lost SDUs, and of corrupted or duplicated network SDUs delivered at the user-network interface.

**Retrieval service:** An interactive service which provides the capability of accessing information stored in data base centres. The information will be sent to the user on demand only. The information is retrieved on an individual basis, i.e., the time at which an information sequence is to start is under the control of the user (source ITU-T I.113).

**Roaming:** The ability for a user to function in a serving network different from the home network. The serving network could be a shared network operated by two or more network operator.

**Root directory:** Obsolete term for Master File.

**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

**SDU error probability:** The ratio of total incorrect service data units (SDUs) to total successfully transferred service data units plus incorrect service data units in a specified sample (source: ITU-T X.140).

NOTE: the source document term "user information unit" has been replaced by the term "service data unit".

**SDU loss probability:** The ratio of total lost service data units (SDUs) to total transmitted service data units in a specified sample (source: ITU-T X.140).

NOTE: the source document term "user information unit" has been replaced by the term "service data unit".

**SDU misdelivery probability:** The ratio of total misdelivered service data units (SDUs) to total service data units transferred between a specified source and destination user in a specified sample (source: ITU-T X.140).

NOTE: the source document term "user information unit" has been replaced by the term "service data unit".

**SDU transfer delay:** The value of elapsed time between the start of transfer and successful transfer of a specified service data unit (SDU) (source: ITU-T X.140).

NOTE: the source document term "user information unit" has been replaced by the term "service data unit".

**SDU transfer rate:** The total number of successfully transferred service data units (SDUs) in a transfer sample divided by the input/output time for that sample. The input/output time is the larger of the input time or the output time for the sample (source: ITU-T X.140).

NOTE: the source document term "user information unit" has been replaced by the term "service data unit".

**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.

**Secured Packet:** The information flow on top of which the level of required security has been applied. An Application Message is transformed with respect to a chosen Transport Layer and chosen level of security into one or more Secured Packets.

**Security:** The ability to prevent fraud as well as the protection of information availability, integrity and confidentiality.

**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:** a component of the portfolio of choices offered by service providers to a user, a functionality offered to a user.

**Service-less UE:** A UE that has only the Baseline capabilities.

**Service Access Point:** A conceptual point where a protocol layer offers access to its services to upper layer.

**Service Area:** The Service Area is defined in the same way as the Service Area according to ITU-T Recommendation Q.1001 [4]. In contrast to the PLMN area it is not based on the coverage of a PLMN. Instead it is based on the area in which a fixed network user can call a mobile user without knowing his location. The Service Area can therefore change when the signalling system is being extended, for example.

**Service attribute:** A specified characteristic of a telecommunication service (source: ITU-T I.112).

NOTE: the value(s) assigned to one or more service attributes may be used to distinguish that telecommunications service from others.

**Service bit rate:** The bit rate that is available to a user for the transfer of user information (source: ITU-T I.113).

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

**Service Capability Feature:** Functionality offered by service capabilities that are accessible via the standardised application interface

**Service Capability Server:** Network functionality providing open interfaces towards the functionality offered by 3GPP System service capabilities.

**Service category or service class:** A service offered to the users described by a set of performance parameters and their specified values, limits or ranges. The set of parameters provides a comprehensive description of the service capability.

**Service Continuity:** The uninterrupted user experience of a service that is using an active communication (e.g. an ongoing voice call) when a UE undergoes a radio access technology change or a CS/PS domain change without, as far as possible, the user noticing the change.

NOTE: In particular Service Continuity encompasses the possibility that after a RAT / domain change the user experience is maintained by a different telecommunication service (e.g. tele- or bearer service) than before the RAT / domain change.

**Service Control:** The ability of the user, home environment or serving environment to determine what a particular service does, for a specific invocation of that service, within the limitations of that service.

**Service Data Unit (SDU):** In the reference model for OSI, an amount of information whose identity is preserved when transferred between peer (N+1)-layer entities and which is not interpreted by the supporting (N)-layer entities (source: ITU-T X.200 / ISO-IEC 7498-1).

**Service delay:** The time elapsed from the invocation of the service request, to the corresponding service request indication at the Service Receiver, indicating the arrival of application data.

**Service Enabler:** a capability which may be used, either by itself or in conjunction with other service enablers, to provide a service to the end user.

**Service Execution Environment:** A platform on which an application or programme is authorised to perform a number of functionalities; examples of service execution environments are the user equipment, integrated circuit card and a network platform or any other server.

**Service Feature:** Functionality that a 3GPP System shall offer to enable provision of services. Services, are made up of different service features.

**Service Implementation Capabilities:** Set of implementation capabilities, in each technical domain, required to enable a UE to support a set of UE Service Capabilities.

**Service model:** A general characterisation of services based upon a QoS paradigm, without specifying the actual performance targets.

**Service Provider:** A Service Provider is either a network operator or an other entity that provides services to a subscriber (e.g. a MVNO)

**Service receiver:** The entity which receives the service request indication primitive, containing the SDU.

**Service relationship:** The association between two or more entities engaged in the provision of services.

**Service request:** This is defined as being one invocation of the service through a service request primitive.

**Service requester:** The entity which requests the initiation of a GPRS operation, through a service request.

**Service Specific Entities:** Entities dedicated to the provisioning of a given (set of) service(s). The fact that they are implemented or not in a given PLMN should have limited impact on all the other entities of the PLMN.

**Service subscriber:** Entity which subscribes to the General Packet Radio Service (GPRS) service.

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

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

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

**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 connection.

**Settlement:** Payment of amounts resulting from the accounting process.

**Shared Channel:** A radio resource (transport channel or physical channel) that can be shared dynamically between several UEs.

**Shared Network:** When two or more network operator sharing network elements.

**Short File Identifier (SFI):** A 5-bit abbreviated name for a file in a directory on the UICC.

**Short time:** Time, typically in number of minutes, to perform the off-line mechanism used for accounting.

**Signalling:** The exchange of information specifically concerned with the establishment and control of connections, and with management, in a telecommunications network (source: ITU-T I.112).

**Signalling 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.

**Signalling link:** Provides an acknowledged-mode link layer to transfer the UE-UTRAN signalling messages as well as UE - Core Network signalling messages (using the signalling connection).

**SIM application toolkit procedures:** The portion of the communication protocol between the ME and the UICC that enables applications on the UICC to send commands to the ME.

**SIM code:** Code which when combined with the network and NS codes refers to a unique SIM. The code is provided by the digits 8 to 15 of the IMSI

**(U)SIM code group:** Combination of the (U)SIM code and the associated network subset and network codes (it is equivalent to the IMSI).

**(U)SIM personalisation:** Enables a user to personalise a ME so that it may only be used with particular (U)SIM(s).

**Simultaneous use of services:** The concurrent use of a circuit-mode service (voice or data) and packet-mode services (GPRS) by a single mobile station.

**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.

**SP code:** code which when combined with the network code refers to a unique SP. The code is provided in the GID1 file on the SIM (see Annex A.1.) and is correspondingly stored on the ME.

**SP code group:** Combination of the SP code and the associated network code.

**SP personalisation:** Allows the service provider to personalise a ME so that it can only be used with that particular service provider's (U)SIMs.

**Speed:** A performance criterion that describes the time interval required to perform a function or the rate at which the function is performed. (The function may or may not be performed with the desired accuracy.) (source: ITU-T I.350).

**SRNC Radio Network Temporary Identifier (S-RNTI):** S-RNTI is UE identifier which is allocated by the Serving RNC and unique within this SRNC. It is allocated for all UEs having a RRC connection. S-RNTI is reallocated always when the Serving RNC for the RRC connection is changed and deallocated when the RRC connection is released.

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

**Stratum:** Grouping of protocols related to one aspect of the services provided by one or several domains.

**Steering of Roaming:** A technique whereby a roaming UE is encouraged to roam to a preferred VPLMN by the HPLMN.

**Sub Network Management Functions:** Set of functions that are related to a network model for a set of network elements constituting a clearly defined sub-network, which may include relations between the network elements. This

model enables additional functions on the sub-network level (typically in the areas of network topology presentation, alarm correlation, service impact analysis and circuit provisioning).

**Subscribed QoS:** The network will not grant a QoS greater than the subscribed. The QoS profile subscription parameters are held in the HLR. An end user may have several QoS subscriptions. For security and the prevention of damage to the network, the end user cannot directly modify the QoS subscription profile data.

**Subscriber:** A Subscriber is an entity (associated with one or more users) that is engaged in a Subscription with a service provider. The subscriber is allowed to subscribe and unsubscribe services, to register a user or a list of users authorised to enjoy these services, and also to set the limits relative to the use that associated users make of these services.

**Subscription:** A subscription describes the commercial relationship between the subscriber and the service provider.

**Subscription Management (SuM):** set of capabilities that allow Operators, Service Providers, and indirectly subscribers, to provision, control, monitor the Subscription Profile.

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

**Supplementary service:** 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.

**System Area:** The System Area is defined as the group of PLMN areas accessible by MSs. Interworking of several PLMNs and interworking between PLMNs and fixed network(s) permit public land mobile communication services at international level.

## T

**Telection service:** A type of telecommunication service that uses short messages, requiring a low transmission rate, between the user and the network (source: ITU-T I.112).

**Telecommunication service:** What is offered by a PLMN operator or service provider to its customers in order to satisfy a specific telecommunication requirement. (source: ITU-T I.112). Telecommunication services are divided into two broad families: bearer services and teleservices (source: ITU-T I.210).

**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 3GPP System services to users, either alone or in conjunction with a UICC.

**Terminal Equipment (TE):** Equipment that provides the functions necessary for the operation of the access protocols by the user. A functional group on the user side of a user-network interface (source: ITU-T I.112).

**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.

**Text conversation:** Real time transfer of text between users in at least two locations.

**Text Telephony:** An audiovisual conversation service providing bi-directional real time transfer of text and optionally audio between users in two locations. Audio may be transmitted alternating with text or simultaneously with text. (Source ITU-T F.703)

**Throughput:** A parameter describing service speed. The number of data bits successfully transferred in one direction between specified reference points per unit time (source: ITU-T I.113).

**Toolkit applet:** An application on the UICC that generates proactive commands to the ME.

**Total Conversation:** An audiovisual conversation service providing bi-directional symmetric real-time transfer of motion video, text and voice between users in two or more locations. (source ITU-T F.703)

**Total power dynamic range:** The difference between the maximum and the minimum total transmit output power for a specified reference condition (TS25.104).

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

**Transit delay:** A parameter describing service speed. The time difference between the instant at which the first bit of a protocol data unit (PDU) crosses one designated boundary (reference point), and the instant at which the last bit of the PDU crosses a second designated boundary (source: ITU-T I.113).

**Transmission Time Interval:** Transmission Time Interval is defined as the inter-arrival time of Transport Block Sets, i.e. the time it shall 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 data unit exchanged between L1 and MAC. 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 exchanged between L1 and 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 UE, 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 UE.

**Transport Format Combination Indicator (TFCI):** A Transport Format Combination Indicator is a representation of the current Transport Format Combination.

**Transport Format Identification (TFI in UTRAN, TFIN in GERAN):** 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

**UE Service Capabilities:** Capabilities that can be used either singly or in combination to deliver services to the user. The characteristic of UE Service Capabilities is that their logical function can be defined in a way that is independent of the implementation of the 3GPP System (although all UE Service Capabilities are of course constrained by the implementation of the 3GPP System). Examples: a data bearer of 144 kbps; a high quality speech teleservice; an IP teleservice; a capability to forward a speech call.

**UICC:** a physically secure device, an IC card (or 'smart card'), that can be inserted and removed from the terminal equipment. It may contain one or more applications. One of the applications may be a USIM.

**Universal Subscriber Identity Module (USIM):** An application residing on the UICC used for accessing services provided by mobile networks, which the application is able to register on with the appropriate security.

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

**Usage Parameter Control (UPC):** Set of actions taken by the network to monitor and control the offered traffic and the validity of the connection with respect to the traffic contract negotiated between the user and the network.

**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:** An entity, not part of the 3GPP System, which uses 3GPP System services. Example: a person using a 3GPP System mobile station as a portable telephone.

**User-network interface:** The interface between the terminal equipment and a network termination at which interface the access protocols apply (source: ITU-T I.112).

**User-user protocol:** A protocol that is adopted between two or more users in order to ensure communication between them (source: ITU-T I.112).

**User access or user network access:** The means by which a user is connected to a telecommunication network in order to use the services and/or facilities of that network (source: ITU-T I.112).

**User Equipment (UE):** Allows a user access to network services. For the purpose of 3GPP specifications the interface between the UE and the network is the radio interface. A User Equipment can be subdivided into a number of domains, the domains being separated by reference points. Currently the User Equipment is subdivided into the UICC domain and the ME Domain. The ME Domain can further be subdivided into one or more Mobile Termination (MT) and Terminal Equipment (TE) components showing the connectivity between multiple functional groups.

In the context of Fixed Broadband Access to IMS, TISPAN defines the term UE in ETSI TR180 000 [5].

**User Interface Profile:** Contains information to present the personalised user interface within the capabilities of the terminal and serving network.

**User Services Profile:** Contains identification of subscriber services, their status and reference to service preferences.

**UTRA Radio access mode:** the selected UTRA radio access mode ie UTRA-FDD;UTRA-TDD.

**UTRA-NTDD:** Time Division Duplex UTRA access mode 1.28 Mcps option

**UTRA-TDD:** Time Division Duplex UTRA Radio access mode (Includes UTRA-NTDD and UTRA-WTDD)

**UTRA-WTDD:** Time Division Duplex UTRA access mode 3.84 Mcps option

**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.

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

**UTRAN Radio Network Temporary Identifier:** The U-RNTI is a unique UE identifier that consists of two parts, an SRNC identifier and a C-RNTI. U-RNTI is allocated to an UE having a RRC connection. It identifies the UE within UTRAN and is used as an UE identifier in cell update, URA update, RRC connection reestablishment and (UTRAN originated) paging messages and associated responses on the radio interface.

**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).

**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.

**Variable bit rate service:** A type of telecommunication service characterised by a service bit rate specified by statistically expressed parameters which allow the bit rate to vary within defined limits (source: ITU-T I.113).

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

**Virtual Machine:** A software program that simulates a hypothetical computer central processing unit. The programs executed by a virtual machine are represented as byte codes, which are primitive operations for this hypothetical computer.

**Visited PLMN:** This is a PLMN different from the HPLMN (if the EHPLMN list is not present or is empty) or different from an EHPLMN (if the EHPLMN list is present).

**Visited PLMN of home country:** This is a Visited PLMN where the MCC part of the PLMN identity is the same as the MCC of the IMSI.

## W

**WTDD:** Wide TDD – the 3.84 Mcps chip rate UTRA-TDD option.

**WLAN UE: WLAN User Equipment:** – a UE (equipped with UICC card including (U)SIM) utilized by a subscriber capable of accessing a WLAN network. A WLAN UE may include entities whose configuration, operation and software environment are not under the exclusive control of the 3GPP system operator, such as a laptop computer or PDA with a WLAN card, UICC card reader and suitable software applications.

## X

<void>

## Y

<void>

## Z

<void>

---

# 4 Abbreviations

## 0-9

|       |                                      |
|-------|--------------------------------------|
| 2G    | 2 <sup>nd</sup> Generation           |
| 3G    | 3 <sup>rd</sup> Generation           |
| 3GPP  | Third Generation Partnership Project |
| 8-PSK | 8-state Phase Shift Keying           |

## A

|        |   |
|--------|---|
| A-SGW  | Access Signalling Gateway   |
| A3     | Authentication algorithm A3   |
| A38    | A single algorithm performing the functions of A3 and A8                                      |
| A5/1   | Encryption algorithm A5/1   |
| A5/2   | Encryption algorithm A5/2   |
| A5/X   | Encryption algorithm A5/0-7   |
| A8     | Ciphering key generating algorithm A8   |
| AAL    | ATM Adaptation Layer  |
| AAL2   | ATM Adaptation Layer type 2   |
| AAL5   | ATM Adaptation Layer type 5   |
| AB     | Access Burst  |
| AC     | Access Class (C0 to C15)  |
|        | Access Condition  |
|        | Application Context   |
|        | Authentication Centre   |
| ACC    | Automatic Congestion Control  |
| ACELP  | Algebraic Code Excited Linear Prediction  |
| ACCH   | Associated Control Channel  |
| ACIR   | Adjacent Channel Interference Ratio   |
| ACK    | Acknowledgement   |
| ACL    | APN Control List  |
| ACLR   | Adjacent Channel Leakage Power Ratio  |
| ACM    | Accumulated Call Meter  |
|        | Address Complete Message  |
| ACMmax | ACM (Accumulated Call Meter) maximal value  |
| ACS    | Adjacent Channel Selectivity  |
| ACU    | Antenna Combining Unit  |
| ADC    | Administration Centre   |
|        | Analogue to Digital Converter   |
| ADCH   | Associated Dedicated CHannel  |
| ADF    | Application Dedicated File  |
| ADM    | Access condition to an EF which is under the control of the authority which creates this file |
| ADN    | Abbreviated Dialling Numbers  |
| ADPCM  | Adaptive Differential Pulse Code Modulation   |
| AE     | Application Entity  |
| AEC    | Acoustic Echo Control   |
| AEF    | Additional Elementary Functions   |
| AESA   | ATM End System Address  |
| AFC    | Automatic Frequency Control   |
| AGCH   | Access Grant CHannel  |
| Ai     | Action indicator  |
| AI     | Acquisition Indicator   |
| AICH   | Acquisition Indicator Channel   |
| AID    | Application IDentifier  |
| AIUR   | Air Interface User Rate   |
| AK     | Anonymity Key   |
| AKA    | Authentication and Key Agreement  |
| AKI    | Asymmetric Key Index  |
| ALCAP  | Access Link Control Application Protocol  |
| ALSI   | Application Level Subscriber Identity   |
| ALW    | ALWays  |
| AM     | Acknowledged Mode   |
| AMF    | Authentication Management Field   |
| AMR    | Adaptive Multi Rate   |
| AMR-WB | Adaptive Multi Rate Wide Band   |
| AN     | Access Network  |
| ANP    | Access Network Provider   |
| AoC    | Advice of Charge  |
| AoCC   | Advice of Charge Charging   |



|            |   |
|------------|---|
| AoCI       | Advice of Charge Information            |
| AP         | Access preamble                         |
| APDU       | Application Protocol Data Unit          |
| API        | Application Programming Interface       |
| APN        | Access Point Name                       |
| ARFCN      | Absolute Radio Frequency Channel Number |
| ARP        | Address Resolution Protocol             |
| ARQ        | Automatic Repeat ReQuest                |
| ARR        | Access Rule Reference                   |
| AS         | Access Stratum                          |
| ASC        | Access Service Class                    |
| ASCI       | Advanced Speech Call Items              |
| ASE        | Application Service Element             |
| ASN.1      | Abstract Syntax Notation One            |
| AT command | ATtention Command                       |
| ATM        | Asynchronous Transfer Mode              |
| ATR        | Answer To Reset                         |
| ATT (flag) | Attach                                  |
| AU         | Access Unit                             |
| AuC        | Authentication Centre                   |
| AUT(H)     | Authentication                          |
| AUTN       | Authentication token                    |
| AWGN       | Additive White Gaussian Noise           |

## B

|           |  |
|-----------|--|
| B-ISDN    | Broadband ISDN   |
| BA        | BCCH Allocation  |
| BAIC      | Barring of All Incoming Calls  |
| BAOC      | Barring of All Outgoing Calls  |
| BCC       | Base Transceiver Station (BTS) Colour Code   |
| BCCH      | Broadcast Control Channel  |
| BCD       | Binary Coded Decimal   |
| BCF       | Base station Control Function  |
| BCFE      | Broadcast Control Functional Entity  |
| BCH       | Broadcast Channel  |
| BCIE      | Bearer Capability Information Element  |
| BDN       | Barred Dialling Number   |
| BER       | Bit Error Ratio  |
|           | Basic Encoding Rules (of ASN.1)  |
| BFI       | Bad Frame Indication   |
| BG        | Border Gateway   |
| BGT       | Block Guard Time   |
| BI        | all Barring of Incoming call   |
| BIC       | Baseline Implementation Capabilities   |
| BIC-Roam  | Barring of Incoming Calls when Roaming outside the home PLMN country                   |
| BID       | Binding Identity   |
| BLER      | Block Error Ratio  |
| Bm        | Full-rate traffic channel  |
| BMC       | Broadcast/Multicast Control  |
| BN        | Bit Number   |
| BO        | all Barring of Outgoing call   |
| BOC       | Bell Operating Company   |
| BOIC      | Barring of Outgoing International Calls  |
| BOIC-exHC | Barring of Outgoing International Calls except those directed to the Home PLMN Country |
| BPSK      | Binary Phase Shift Keying  |
| BS        | Base Station   |
|           | Basic Service (group)  |
|           | Bearer Service   |
| BSG       | Basic Service Group  |

|            |   |
|------------|---|
| BSC        | Base Station Controller   |
| BSIC       | Base transceiver Station Identity Code                            |
| BSIC-NCELL | BSIC of an adjacent cell  |
| BSS        | Base Station Subsystem  |
| BSSAP      | Base Station Subsystem Application Part                           |
| BSSGP      | Base Station Subsystem GPRS Protocol                              |
| BSSMAP     | Base Station Subsystem Management Application Part                |
| BSSOMAP    | Base Station Subsystem Operation and Maintenance Application Part |
| BTFD       | Blind Transport Format Detection                                  |
| BTS        | Base Transceiver Station  |
| BVC        | BSS GPRS Protocol Virtual Connection                              |
| BVCI       | BSS GPRS Protocol Virtual Connection Identifier                   |
| BWT        | Block Waiting Time  |

## C

|        |   |
|--------|---|
| C      | Conditional   |
| C-     | Control-  |
| C-APDU | Command APDU  |
| C-RNTI | Cell Radio Network Temporary Identity   |
| C-TPDU | Command TPDU  |
| CA     | Capacity Allocation<br>Cell Allocation<br>Certification Authority   |
| CAA    | Capacity Allocation Acknowledgement   |
| CAD    | Card Acceptance Device  |
| CAI    | Charge Advice Information   |
| CAMEL  | Customised Application for Mobile network Enhanced Logic  |
| CAP    | CAMEL Application Part  |
| CB     | Cell Broadcast  |
| CBC    | Cell Broadcast Centre<br>Cipher Block Chaining  |
| CBCH   | Cell Broadcast CHannel  |
| CBMI   | Cell Broadcast Message Identifier   |
| CBR    | Constant Bit Rate   |
| CBS    | Cell Broadcast Service  |
| CC     | Call Control<br>Country Code<br>Cryptographic Checksum  |
| CC/PP  | Composite Capability/Preference Profiles  |
| CCBS   | Completion of Calls to Busy Subscriber  |
| CCCH   | Common Control Channel  |
| CCF    | Call Control Function   |
| CCH    | Control Channel   |
| CCI    | Capability / Configuration Identifier   |
| CCITT  | Comité Consultatif International Télégraphique et Téléphonique (The International Telegraph and Telephone Consultative Committee) |
| CCK    | Corporate Control Key   |
| CCM    | Certificate Configuration Message<br>Current Call Meter   |
| CCP    | Capability/Configuration Parameter  |
| CCPCH  | Common Control Physical Channel   |
| Cct    | Circuit   |
| CCTrCH | Coded Composite Transport Channel   |
| CD     | Capacity Deallocation<br>Collision Detection  |
| CDA    | Capacity Deallocation Acknowledgement   |
| CDCH   | Control-plane Dedicated CHannel   |
| CDMA   | Code Division Multiple Access   |
| CDR    | Charging Data Record  |
| CDUR   | Chargeable DURation   |

|          |   |
|----------|---|
| CED      | called station identifier   |
| CEIR     | Central Equipment Identity Register   |
| CEND     | end of charge point   |
| CEPT     | Conférence des administrations Européennes des Postes et Telecommunications |
| CF       | Conversion Facility<br>all Call Forwarding services                         |
| CFB      | Call Forwarding on mobile subscriber Busy                                   |
| CFN      | Connection Frame Number   |
| CFNRc    | Call Forwarding on mobile subscriber Not Reachable                          |
| CFNRy    | Call Forwarding on No Reply   |
| CFU      | Call Forwarding Unconditional   |
| CGI      | Common Gateway Interface<br>Cell Global Identifier                          |
| CHAP     | Challenge Handshake Authentication Protocol                                 |
| CHP      | CHarging Point  |
| CHV      | Card Holder Verification information  |
| CI       | Cell Identity<br>CUG index  |
| CIM      | Common Information Model  |
| CIR      | Carrier to Interference Ratio   |
| CK       | Cipher Key  |
| CKSN     | Ciphering Key Sequence Number   |
| CLA      | CLAss   |
| CLI      | Calling Line Identity   |
| CLIP     | Calling Line Identification Presentation                                    |
| CLIR     | Calling Line Identification Restriction                                     |
| CLK      | Clock   |
| CM       | Connection Management   |
| CMD      | Command   |
| CMIP     | Common Management Information Protocol                                      |
| CMISE    | Common Management Information Service                                       |
| CMM      | Channel Mode Modify   |
| CN       | Core Network<br>Comfort Noise   |
| CNAP     | Calling Name Presentation   |
| CNG      | Calling Tone  |
| CNL      | Co-operative Network List   |
| CNTR     | Counter   |
| CLNP     | Connectionless network protocol   |
| CLNS     | Connectionless network service  |
| COLI     | COnnected Line Identity   |
| COLP     | COnnected Line identification Presentation                                  |
| COLR     | COnnected Line identification Restriction                                   |
| COM      | COMplete  |
| CONNACK  | Connect Acknowledgement   |
| CONS     | Connection-oriented network service   |
| CORBA    | Common Object Request Broker Architecture                                   |
| CP-Admin | Certificate Present (in the MExE SIM)-Administrator                         |
| CP-TP    | Certificate Present (in the MExE SIM)-Third Party                           |
| CPBCCH   | COMPACT Packet BCCH   |
| CPICH    | Common Pilot Channel  |
| CPCH     | Common Packet Channel   |
| CPCS     | Common Part Convergence Sublayer  |
| CPS      | Common Part Sublayer  |
| CPU      | Central Processing Unit   |
| C/R      | Command/Response field bit  |
| CRC      | Cyclic Redundancy Check   |
| CRE      | Call Ree-establishment procedure  |
| CRNC     | Controlling Radio Network Controller  |
| CS-GW    | Circuit Switched Gateway  |
| CS       | Circuit Switched<br>Coding Scheme   |

|       |   |
|-------|---|
| CSCF  | Call Server Control Function            |
| CSD   | Circuit Switched Data                   |
| CSE   | Camel Service Environment               |
| CSPDN | Circuit Switched Public Data Network    |
| CT    | Call Transfer supplementary service     |
|       | Channel Tester                          |
|       | Channel Type                            |
| CTCH  | Common Traffic Channel                  |
| CTDMA | Code Time Division Multiple Access      |
| CTFC  | Calculated Transport Format Combination |
| CTM   | Cellular Text telephone Modem           |
| CTR   | Common Technical Regulation             |
| CTS   | Cordless Telephony System               |
| CUG   | Closed User Group                       |
| CW    | Call Waiting                            |
|       | Continuous Wave (unmodulated signal)    |
| CWI   | Character Waiting Integer               |
| CWT   | Character Waiting Time                  |

## D

|           |  |
|-----------|--|
| DAC       | Digital to Analog Converter                                  |
| DAD       | Destination Address  |
| DAM       | DECT Authentication Module                                   |
| DB        | Dummy Burst  |
| DC        | Dedicated Control (SAP)                                      |
| DCA       | Dynamic Channel Allocation                                   |
| DCCH      | Dedicated Control Channel                                    |
| DCE       | Data Circuit terminating Equipment                           |
| DCF       | Data Communication Function                                  |
| DCH       | Dedicated Channel  |
| DCK       | Depersonalisation Control Key                                |
| DCN       | Data Communication Network                                   |
| DCS       | Data Coding Scheme   |
| DCS1800   | Digital Cellular Network at 1800MHz                          |
| DDI       | Direct Dial In   |
| DECT      | Digital Enhanced Cordless Telecommunications                 |
| DET       | Detach   |
| DES       | Data Encryption Standard                                     |
| DF        | Dedicated File   |
| DHCP      | Dynamic Host Configuration Protocol                          |
| DHO       | Diversity Handover   |
| diff-serv | Differentiated services                                      |
| DISC      | Disconnect   |
| DL        | Data Layer   |
|           | Downlink (Forward Link)                                      |
| DLCI      | Data Link Connection Identifier                              |
| DLD       | Data Link Discriminator                                      |
| Dm        | Control channel (ISDN terminology applied to mobile service) |
| DMR       | Digital Mobile Radio   |
| DMTF      | Distributed Management Task Force                            |
| DN        | Destination Network  |
| DNIC      | Data Network Identifier                                      |
| DNS       | Directory Name Service                                       |
| DO        | Data Object  |
| DP        | Dial/Dialled Pulse   |
| DPCCCH    | Dedicated Physical Control Channel                           |
| DPCH      | Dedicated Physical Channel                                   |
| DPDCH     | Dedicated Physical Data Channel                              |
| DRAC      | Dynamic Resource Allocation Control                          |

|         |   |
|---------|---|
| DRNC    | Drift Radio Network Controller                |
| DRNS    | Drift RNS                                     |
| DRX     | Discontinuous Reception                       |
| DS-CDMA | Direct-Sequence Code Division Multiple Access |
| DSAC    | Domain Specific Access Control                |
| DSCH    | Downlink Shared Channel                       |
| DSE     | Data Switching Exchange                       |
| DSI     | Digital Speech Interpolation                  |
| DSS1    | Digital Subscriber Signalling No1             |
| DTAP    | Direct Transfer Application Part              |
| DTCH    | Dedicated Traffic Channel                     |
| DTE     | Data Terminal Equipment                       |
| DTMF    | Dual Tone Multiple Frequency                  |
| DTX     | Discontinuous Transmission                    |

## E

|           |  |
|-----------|--|
| E-GGSN    | Enhanced GGSN  |
| E-HLR     | Enhanced HLR   |
| EA        | External Alarms  |
| EBSG      | Elementary Basic Service Group                                   |
| ECB       | Electronic Code-book   |
| ECC       | Emergency Call Code<br>Elliptic Curve Cryptography               |
| ECM       | Error Correction Mode (facsimile)                                |
| $E_c/N_0$ | Ratio of energy per modulating bit to the noise spectral density |
| ECSD      | Enhanced CSD   |
| ECT       | Explicit Call Transfer supplementary service                     |
| ECTRA     | European Committee of Telecommunications Regulatory Affairs      |
| EDC       | Error Detection Code byte  |
| EDGE      | Enhanced Data rates for GSM Evolution                            |
| EEL       | Electric Echo Loss   |
| EF        | Elementary File (on the UICC)                                    |
| EFR       | Enhanced Full Rate   |
| EFS       | Error free seconds   |
| EGPRS     | Enhanced GPRS  |
| EHPLMN    | Equivalent Home PLMN   |
| EIR       | Equipment Identity Centre<br>Equipment Identity Register         |
| EIRP      | Equivalent Isotropic Radiated Power                              |
| EL        | Echo Loss  |
| EF        | Elementary File  |
| EM        | Element Manager  |
| EMC       | ElectroMagnetic Compatibility                                    |
| eMLPP     | enhanced Multi-Level Precedence and Pre-emption                  |
| EMMI      | Electrical Man Machine Interface                                 |
| EPC       | Enhanced Power Control   |
| E-UTRA    | Evolved UTRA   |
| E-UTRAN   | Evolved UTRAN  |
| EPS       | Evolved Packet System  |
| EPCCH     | Enhanced Power Control Channel                                   |
| EPROM     | Erasable Programmable Read Only Memory                           |
| ERP       | Ear Reference Point<br>Equivalent Radiated Power                 |
| ERR       | Error  |
| ETNS      | European Telecommunications Numbering Space                      |
| ETR       | ETSI Technical Report  |
| ETS       | European Telecommunication Standard                              |
| ETSI      | European Telecommunications Standards Institute                  |
| etu       | elementary time unit   |

EUI End-User Identity

## F

FA Full Allocation  
 Fax Adaptor  
 FAC Final Assembly Code  
 FACCH Fast Associated Control CHannel  
 FACCH/F Fast Associated Control Channel/Full rate  
 FACCH/H Fast Associated Control Channel/Half rate  
 FACH Forward Access Channel  
 FAUSCH Fast Uplink Signalling Channel  
 FAX Facsimile  
 FB Frequency correction Burst  
 FBI Feedback Information  
 FCCH Frequency Correction CHannel  
 FCI File Control Information  
 FCP File Control Parameter  
 FCS Frame Check Sequence  
 FDD Frequency Division Duplex  
 FDM Frequency Division Multiplex  
 FDMA Frequency Division Multiple Access  
 FDN Fixed Dialling Number  
 FDR False transmit format Detection Ratio  
 FEC Forward Error Correction  
 FER Frame Erasure Rate, Frame Error Rate  
 FFS For Further Study  
 FH Frequency Hopping  
 FLO Flexible Layer One  
 FM Fault Management  
 FMC Fixed Mobile Convergence  
 FN Frame Number  
 FNUR Fixed Network User Rate  
 FP Frame Protocol  
 FPLMN Forbidden PLMN  
 FR Full Rate  
 FTAM File Transfer Access and Management  
 ftn forwarded-to number

## G

G-RNTI GERAN Radio Network Temporary Identity  
 GC General Control (SAP)  
 GCR Group Call Register  
 GERAN GSM EDGE Radio Access Network  
 GGSN Gateway GPRS Support Node  
 GID1 Group Identifier (level 1)  
 GID2 Group Identifier (level 2)  
 GMLC Gateway Mobile Location Centre  
 GMM GPRS Mobility Management  
 GMSC Gateway MSC  
 GMSK Gaussian Minimum Shift Keying  
 GP Guard Period  
 GPA GSM PLMN Area  
 GPRS General Packet Radio Service  
 GRA GERAN Registration Area  
 GSA GSM System Area  
 GSIM GSM Service Identity Module  
 GSM Global System for Mobile communications  
 GSN GPRS Support Nodes  
 GT Global Title

|       |  |
|-------|--|
| GTP   | GPRS Tunneling Protocol                |
| GTP-U | GPRS Tunneling Protocol for User Plane |
| GTT   | Global Text Telephony                  |
| GUP   | 3GPP Generic User Profile              |

## H

|          |   |
|----------|---|
| H-CSCF   | Home CSCF   |
| HANDOVER | Handover  |
| HCS      | Hierarchical Cell Structure   |
| HDLC     | High Level Data Link Control  |
| HE       | Home Environment  |
| HE-VASP  | Home Environment Value Added Service Provider                                   |
| HF       | Human Factors   |
| HFN      | HyperFrame Number   |
| HHO      | Hard Handover   |
| HLC      | High Layer Compatibility  |
| HLR      | Home Location Register  |
| HN       | Home Network  |
| HO       | Handover  |
| HOLD     | Call hold   |
| HPLMN    | Home Public Land Mobile Network   |
| HPS      | Handover Path Switching   |
| HPU      | Hand Portable Unit  |
| HR       | Half Rate   |
| HRR      | Handover Resource Reservation   |
| HSCSD    | High Speed Circuit Switched Data  |
| HSN      | Hopping Sequence Number   |
| HSS      | Home Subscriber Server  |
| HTTP     | Hyper Text Transfer Protocol  |
| HTTPS    | Hyper Text Transfer Protocol Secure (https is http/1.1 over SSL, i.e. port 443) |
| HU       | Home Units  |

## I

|          |  |
|----------|--|
| I-Block  | Information Block                            |
| I-ETS    | Interim European Telecommunications Standard |
| I/O      | Input/Output                                 |
| I        | Information frames (RLP)                     |
| IA       | Incoming Access (closed user group SS)       |
| IAM      | Initial Address Message                      |
| IC       | Integrated Circuit                           |
|          | Interlock Code (CUG SS)                      |
| IC(pref) | Interlock Code of the preferential CUG       |
| ICB      | Incoming Calls Barred (within the CUG)       |
| ICC      | Integrated Circuit Card                      |
| ICCID    | Integrated Circuit Card IDentification       |
| ICGW     | Incoming Call Gateway                        |
| ICI      | Incoming Call Information                    |
| ICM      | In-Call Modification                         |
| ICMP     | Internet Control Message Protocol            |
| ICT      | Incoming Call Timer                          |
| ID       | Identifier                                   |
| IDL      | Interface Definition Language                |
| IDN      | Integrated Digital Network                   |
| IDNNS    | Intra Domain NAS Node Selector               |
| IE       | Information Element                          |
| IEC      | International Electrotechnical Commission    |
| IED      | Information Element Data                     |
| IEI      | Information Element Identifier               |
| IEIDL    | Information Element Identifier Data Length   |

|          |  |
|----------|--|
| IETF     | Internet Engineering Task Force                |
| IF       | Infrastructure                                 |
| IFD      | Interface Device                               |
| IFS      | Information Field Sizes                        |
| IFSC     | Information Field Size for the UICC            |
| IFSD     | Information Field Size for the Terminal        |
| IHOSS    | Internet Hosted Octet Stream Service           |
| IIOOP    | Internet Inter-ORB Protocol                    |
| IK       | Integrity key                                  |
| IM       | Intermodulation<br>IP Multimedia               |
| IMA      | Inverse Multiplexing on ATM                    |
| IMEI     | International Mobile Equipment Identity        |
| IMGI     | International mobile group identity            |
| IMPI     | IP Multimedia Private Identity                 |
| IMPU     | IP Multimedia PUBLIC identity                  |
| IMS      | IP Multimedia Subsystem                        |
| IMSI     | International Mobile Subscriber Identity       |
| IMT-2000 | International Mobile Telecommunications 2000   |
| IMUN     | International Mobile User Number               |
| IN       | Intelligent Network<br>Interrogating Node      |
| INAP     | Intelligent Network Application Part           |
| INF      | INformation field                              |
| IP       | Internet Protocol                              |
| IP-CAN   | IP-Connectivity Access Network                 |
| IP-M     | IP Multicast                                   |
| IPv4     | Internet Protocol Version 4                    |
| IPv6     | Internet Protocol Version 6                    |
| IR       | Infrared                                       |
| IRP      | Integration Reference Point                    |
| ISC      | International Switching Centre                 |
| ISCP     | Interference Signal Code Power                 |
| ISDN     | Integrated Services Digital Network            |
| ISIM     | IM Services Identity Module                    |
| ISO      | International Organisation for Standardisation |
| ISP      | Internet Service Provider                      |
| ISUP     | ISDN User Part                                 |
| ITC      | Information Transfer Capability                |
| ITU      | International Telecommunication Union          |
| IUI      | International USIM Identifier                  |
| IUT      | Implementation Under Test                      |
| IWF      | InterWorking Function                          |
| I-WLAN   | Interworking WLAN                              |
| IWMSC    | InterWorking MSC                               |
| IWU      | Inter Working Unit                             |

## J

|          |  |
|----------|--|
| JAR file | Java Archive File                                |
| JCRE     | Java Card™ Run Time Environment                  |
| JD       | Joint Detection                                  |
| JNDI     | Java Naming Directory Interface                  |
| JP       | Joint Predistortion                              |
| JPEG     | Joint Photographic Experts Group                 |
| JTAPI    | Java Telephony Application Programming Interface |
| JVM      | Java™ Virtual Machine                            |

## K

|   |              |
|---|--------------|
| k | Windows size |
|---|--------------|



|       |  |
|-------|--|
| K     | Constraint length of the convolutional code<br>USIM Individual key |
| kbps  | kilo-bits per second   |
| Kc    | Ciphering key  |
| Ki    | Individual subscriber authentication key                           |
| KSI   | Key Set Identifier   |
| ksp/s | kilo-symbols per second  |

## L

|         |  |
|---------|--|
| L1      | Layer 1 (physical layer)                                 |
| L2      | Layer 2 (data link layer)                                |
| L2ML    | Layer 2 Management Link                                  |
| L2R     | Layer 2 Relay  |
| L2R BOP | L2R Bit Orientated Protocol                              |
| L2R COP | L2R Character Orientated Protocol                        |
| L3      | Layer 3 (network layer)                                  |
| LA      | Location Area  |
| LAC     | Link Access Control<br>Location Area Code                |
| LAI     | Location Area Identity                                   |
| LAN     | Local Area Network                                       |
| LAPB    | Link Access Protocol Balanced                            |
| LAPDm   | Link Access Protocol on the Dm channel                   |
| LATA    | Local Access and Transport Area                          |
| LAU     | Location Area Update                                     |
| LCD     | Low Constrained Delay                                    |
| LCN     | Local Communication Network                              |
| LCP     | Link Control Protocol                                    |
| LCS     | Location Services  |
| LCSC    | LCS Client   |
| LCSS    | LCS Server   |
| LE      | Local Exchange   |
| LEN     | LENgth   |
| LI      | Language Indication<br>Length Indicator<br>Line Identity |
| LLC     | Logical Link Control<br>Low Layer Compatibility          |
| Lm      | Traffic channel with capacity lower than a Bm            |
| LMSI    | Local Mobile Station Identity                            |
| LMU     | Location Measurement Unit                                |
| LN      | Logical Name   |
| LND     | Last Number Dialed                                       |
| LNS     | L2TP Network Server                                      |
| LPLMN   | Local PLMN   |
| LR      | Location Register<br>Location Registration               |
| LSA     | Localised Service Area                                   |
| LSB     | Least Significant Bit                                    |
| LSTR    | Listener SideTone Rating                                 |
| LTE     | Local Terminal Emulator                                  |
| LTZ     | Local Time Zone  |
| LU      | Local Units<br>Location Update                           |
| LV      | Length and Value   |

## M

|   |           |
|---|-----------|
| M | Mandatory |
|---|-----------|

|        |   |
|--------|---|
| M      | Mandatory   |
| MA     | Mobile Allocation<br>Multiple Access  |
| MAC    | Medium Access Control (protocol layering context)<br>Message authentication code (encryption context) |
| MAC-A  | MAC used for authentication and key agreement (TSG T WG3 context)                                     |
| MAC-I  | MAC used for data integrity of signalling messages (TSG T WG3 context)                                |
| MACN   | Mobile Allocation Channel Number  |
| MAF    | Mobile Additional Function  |
| MAH    | Mobile Access Hunting supplementary service   |
| MAHO   | Mobile Assisted Handover  |
| MAI    | Mobile Allocation Index   |
| MAIO   | Mobile Allocation Index Offset  |
| MAP    | Mobile Application Part   |
| MCC    | Mobile Country Code   |
| MCI    | Malicious Call Identification supplementary service   |
| MCML   | Multi-Class Multi-Link PPP  |
| Mcps   | Mega-chips per second   |
| MCS    | Modulation and Coding Scheme  |
| MCU    | Media Control Unit  |
| MD     | Mediation Device  |
| MDL    | (mobile) Management (entity) - Data Link (layer)  |
| MDS    | Multimedia Distribution Service   |
| ME     | Maintenance Entity<br>Mobile Equipment  |
| MEF    | Maintenance Entity Function   |
| MEHO   | Mobile evaluated handover   |
| MER    | Message Error Ratio   |
| MExE   | Mobile Execution Environment  |
| MF     | Master File<br>MultiFrame   |
| MGCF   | Media Gateway Control Function  |
| MGCP   | Media Gateway Control Part  |
| MGT    | Mobile Global Title   |
| MGW    | Media GateWay   |
| MHEG   | Multimedia and Hypermedia Information Coding Expert Group   |
| MHS    | Message Handling System   |
| MIB    | Management Information Base   |
| MIC    | Mobile Interface Controller   |
| MIM    | Management Information Model  |
| MIP    | Mobile IP   |
| MIPS   | Million Instructions Per Second   |
| MLC    | Mobile Location Centre  |
| MM     | Man Machine<br>Mobility Management<br>Multimedia  |
| MME    | Mobile Management Entity  |
| MMI    | Man Machine Interface   |
| MNC    | Mobile Network Code   |
| MNP    | Mobile Number Portability   |
| MO     | Mobile Originated   |
| MO-LR  | Mobile Originating Location Request   |
| MO-SMS | Mobile Originated Short Message Service   |
| MOHO   | Mobile Originated Handover  |
| MOS    | Mean Opinion Score  |
| MoU    | Memorandum of Understanding   |
| MP     | Multi-link PPP  |
| MPEG   | Moving Pictures Experts Group   |
| MPH    | (mobile) Management (entity) - PPhysical (layer) [primitive]  |
| MPTY   | MultiParTY  |
| MRF    | Media Resource Function   |
| MRP    | Mouth Reference Point   |

|        |   |
|--------|---|
| MS     | Mobile Station                          |
| MSB    | Most Significant Bit                    |
| MSC    | Mobile Switching Centre                 |
| MSCM   | Mobile Station Class Mark               |
| MSCU   | Mobile Station Control Unit             |
| MSE    | MExE Service Environment                |
| MSID   | Mobile Station Identifier               |
| MSIN   | Mobile Station Identification Number    |
| MSISDN | Mobile Subscriber ISDN Number           |
| MSP    | Multiple Subscriber Profile             |
| MSRN   | Mobile Station Roaming Number           |
| MT     | Mobile Terminated<br>Mobile Termination |
| MT-LR  | Mobile Terminating Location Request     |
| MT-SMS | Mobile Terminated Short Message Service |
| MTM    | Mobile-To-Mobile (call)                 |
| MTP    | Message Transfer Part                   |
| MTP3-B | Message Transfer Part level 3           |
| MTU    | Maximum Transfer Unit                   |
| MU     | Mark Up                                 |
| MUI    | Mobile User Identifier                  |
| MUMS   | Multi User Mobile Station               |
| MVNO   | Mobile Virtual Network Operator         |

## N

|       |   |
|-------|---|
| NACC  | Network Assisted Cell Change                      |
| NAD   | Node Address byte                                 |
| NAI   | Network Access Identifier                         |
| NAS   | Non-Access Stratum                                |
| NBAP  | Node B Application Part                           |
| NB    | Normal Burst                                      |
| NCELL | Neighbouring (of current serving) Cell            |
| NBAP  | Node B Application Part                           |
| NBIN  | A parameter in the hopping sequence               |
| NCC   | Network (PLMN) Colour Code                        |
| NCH   | Notification CHannel                              |
| NCK   | Network Control Key                               |
| NCP   | Network Control Protocol                          |
| NDC   | National Destination Code                         |
| NDUB  | Network Determined User Busy                      |
| NE    | Network Element                                   |
| NEF   | Network Element Function                          |
| NEHO  | Network evaluated handover                        |
| NET   | NETwork<br>Norme Europeenne de Télécommunications |
| NEV   | NEVer   |
| NF    | Network Function                                  |
| NI-LR | Network Induced Location Request                  |
| NIC   | Network Independent Clocking                      |
| NITZ  | Network Identity and Time Zone                    |
| NM    | Network Manager                                   |
| NMC   | Network Management Centre                         |
| NMR   | Network Measurement Results                       |
| NMO   | Network Mode of Operation                         |
| NMS   | Network Management Subsystem                      |
| NMSI  | National Mobile Station Identifier                |
| NNI   | Network-Node Interface                            |
| NO    | Network Operator                                  |
| NP    | Network Performance                               |
| NPA   | Numbering Plan Area                               |

|       |   |
|-------|---|
| NPI   | Numbering Plan Identifier               |
| NRI   | Network Resource Identifier             |
| NRM   | Network Resource Model                  |
| NRT   | Non-Real Time                           |
| NSAP  | Network Service Access Point            |
| NSAPI | Network Service Access Point Identifier |
| NSCK  | Network Subset Control Key              |
| NSDU  | Network service data unit               |
| NSS   | Network Sub System                      |
| Nt    | Notification (SAP)                      |
| NT    | Network Termination                     |
|       | Non Transparent                         |
| NTAAB | New Type Approval Advisory Board        |
| NTDD  | Narrow-band Time Division Duplexing     |
| NUA   | Network User Access                     |
| NUI   | National User / USIM Identifier         |
|       | Network User Identification             |
| NUP   | National User Part (SS7)                |
| NW    | Network                                 |

## O

|           |  |
|-----------|--|
| O         | Optional   |
| O&M       | Operations & Maintenance                                       |
| OA        | Outgoing Access (CUG SS)                                       |
| OACSU     | Off-Air-Call-Set-Up  |
| OCB       | Outgoing Calls Barred within the CUG                           |
| OCCCH     | ODMA Common Control Channel                                    |
| OCF       | Open Card Framework  |
| OCI       | Outgoing Call Information                                      |
| OCNS      | Orthogonal Channel Noise Simulator                             |
| OCT       | Outgoing Call Timer  |
| OD        | Optional for operators to implement for their aim              |
| ODB       | Operator Determined Barring                                    |
| ODCCH     | ODMA Dedicated Control Channel                                 |
| ODCH      | ODMA Dedicated Channel   |
| OLR       | Overall Loudness Rating  |
| ODMA      | Opportunity Driven Multiple Access                             |
| ODTCH     | ODMA Dedicated Traffic Channel                                 |
| OID       | Object Identifier  |
| OFM       | Operational Feature Monitor                                    |
| OMC       | Operation and Maintenance Centre                               |
| OML       | Operations and Maintenance Link                                |
| OPLMN     | Operator Controlled PLMN (Selector List)                       |
| OR        | Optimal Routeing   |
| ORACH     | ODMA Random Access CHannel                                     |
| ORLCF     | Optimal Routeing for Late Call Forwarding                      |
| OS        | Operations System  |
| OSA       | Open Service Access  |
| OSI       | Open System Interconnection                                    |
| OSI RM    | OSI Reference Model  |
| OSP       | Octet Stream Protocol  |
| OSP:IHOSS | Octet Stream Protocol for Internet Hosted Octet Stream Service |
| OTA       | Over-The-Air   |
| OTP       | One Time Password  |
| OVSF      | Orthogonal Variable Spreading Factor                           |

## P

|         |   |
|---------|---|
| P-CCPCH | Primary Common Control Physical Channel |
| P-CPIH  | Primary Common Pilot Channel            |

|        |   |
|--------|---|
| P-TMSI | Packet TMSI   |
| PABX   | Private Automatic Branch eXchange                       |
| PACCH  | Packet Associated Control Channel                       |
| PAD    | Packet Assembler/Disassembler                           |
| PAGCH  | Packet Access Grant Channel                             |
| PAP    | Password Authentication Protocol                        |
| PAR    | Peak to Average Ratio                                   |
| PBID   | PhoneBook IDentifier                                    |
| PBCCH  | Packet Broadcast Control Channel                        |
| PBP    | Paging Block Periodicity                                |
| PBX    | Private Branch eXchange                                 |
| PC     | Power Control<br>Personal Computer                      |
| PCB    | Protocol Control Byte                                   |
| PCCC   | Parallel Concatenated Convolutional Code                |
| PCCCH  | Packet Common Control Channel                           |
| PCCH   | Paging Control Channel                                  |
| PCDE   | Peak Code Domain Error                                  |
| PCG    | Project Co-ordination Group                             |
| PCH    | Paging Channel  |
| PCK    | Personalisation Control Key                             |
| PCM    | Pulse Code Modulation                                   |
| PCMCIA | Personal Computer Memory Card International Association |
| PCPCH  | Physical Common Packet Channel                          |
| PCS    | Personal Communication System                           |
| PCU    | Packet Control Unit                                     |
| PD     | Protocol Discriminator<br>Public Data                   |
| PDCP   | Packet Data Convergence Protocol                        |
| PDCH   | Packet Data Channel                                     |
| PDH    | Plesiochronous Digital Hierarchy                        |
| PDN    | Public Data Network<br>Packet Data Network              |
| PDP    | Packet Data Protocol                                    |
| PDSCH  | Physical Downlink Shared Channel                        |
| PDTCH  | Packet Data Traffic Channel                             |
| PDU    | Protocol Data Unit                                      |
| PG     | Processing Gain   |
| PH     | Packet Handler<br>PHysical (layer)                      |
| PHF    | Packet Handler Function                                 |
| PHI    | Packet Handler Interface                                |
| PHS    | Personal Handyphone System                              |
| PHY    | Physical layer  |
| PhyCH  | Physical Channel  |
| PI     | Page Indicator<br>Presentation Indicator                |
| PICH   | Page Indicator Channel                                  |
| PICS   | Protocol Implementation Conformance Statement           |
| PID    | Packet Identification                                   |
| PIN    | Personal Identification Number                          |
| PIXT   | Protocol Implementation eXtra information for Testing   |
| PKCS   | Public-Key Cryptography Standards                       |
| PL     | Preferred Languages                                     |
| PLMN   | Public Land Mobile Network                              |
| PMD    | Physical Media Dependent                                |
| PN     | Pseudo Noise  |
| PNE    | Présentation des Normes Européennes                     |
| PNP    | Private Numbering Plan                                  |
| POI    | Point Of Interconnection (with PSTN)                    |
| PoR    | Proof of Receipt  |
| POTS   | Plain Old Telephony Service                             |

|          |   |
|----------|---|
| PP       | Point-to-Point                                      |
| PPCH     | Packet Paging Channel                               |
| PPE      | Primitive Procedure Entity                          |
| PPF      | Paging Proceed Flag                                 |
| PPM      | Parts Per Million                                   |
| PPP      | Point-to-Point Protocol                             |
| PPS      | Protocol and Parameter Select (response to the ATR) |
| PRACH    | Physical Random Access Channel                      |
|          | Packet Random Access Channel                        |
| Pref CUG | Preferential CUG                                    |
| PS       | Packet Switched                                     |
|          | Location Probability                                |
| PSC      | Primary Synchronisation Code                        |
| PSCH     | Physical Shared Channel                             |
| PSE      | Personal Service Environment                        |
| PSPDN    | Packet Switched Public Data Network                 |
| PSTN     | Public Switched Telephone Network                   |
| PTCCH    | Packet Timing advance Control Channel               |
| PTM      | Point-to-Multipoint                                 |
| PTM-G    | PTM Group Call                                      |
| PTM-M    | PTM Multicast                                       |
| PTP      | Point to point                                      |
| PU       | Payload Unit  |
| PUCT     | Price per Unit Currency Table                       |
| PUK      | PIN Unblocking Key                                  |
| PUSCH    | Physical Uplink Shared Channel                      |
| PVC      | Permanent Virtual Circuit                           |
| PW       | Pass Word   |

## Q

|      |  |
|------|--|
| QA   | Q (Interface) - Adapter                    |
| QAF  | Q - Adapter Function                       |
| QoS  | Quality of Service                         |
| QPSK | Quadrature (Quaternary) Phase Shift Keying |

## R

|         |   |
|---------|---|
| R       | Value of Reduction of the MS transmitted RF power relative to the maximum allowed output power of the highest power class of MS (A) |
| R-APDU  | Response APDU   |
| R-Block | Receive-ready Block   |
| R-SGW   | Roaming Signalling Gateway  |
| R-TPDU  | Response TPDU   |
| R99     | Release 1999  |
| RA      | Routing Area  |
|         | Random mode request information field   |
| RAB     | Radio Access Bearer   |
|         | Random Access Burst   |
| RAC     | Routing Area Code   |
| RACH    | Random Access Channel   |
| RADIUS  | Remote Authentication Dial In User Service  |
| RAI     | Routing Area Identity   |
| RAN     | Radio Access Network  |
| RANAP   | Radio Access Network Application Part   |
| RAND    | RANDom number (used for authentication)   |
| RAT     | Radio Access Technology   |
| RAU     | Routing Area Update   |
| RB      | Radio Bearer  |
| RBER    | Residual Bit Error Ratio  |

|         |   |
|---------|---|
| RDF     | Resource Description Format   |
| RDI     | Restricted Digital Information  |
| REC     | RECommendation  |
| REJ     | REJect(ion)   |
| REL     | RELease   |
| Rel-4   | Release 4   |
| Rel-5   | Release 5   |
| REQ     | REQuest   |
| RES     | user RESponse<br>64-bit signed RESponse that is the output of the function f2 in a 3G AKA |
| RF      | Radio Frequency   |
| RFC     | Request For Comments<br>Radio Frequency Channel   |
| RFCH    | Radio Frequency CHannel   |
| RFE     | Routing Functional Identity   |
| RFN     | Reduced TDMA Frame Number   |
| RFU     | Reserved for Future Use   |
| RIM     | RAN Information Management  |
| RL      | Radio Link  |
| RLC     | Radio Link Control  |
| RLCP    | Radio Link Control Protocol   |
| RLP     | Radio Link Protocol   |
| RLR     | Receiver Loudness Rating  |
| RLS     | Radio Link Set  |
| RMS     | Root Mean Square (value)  |
| RNC     | Radio Network Controller  |
| RNS     | Radio Network Subsystem   |
| RNSAP   | Radio Network Subsystem Application Part  |
| RNTABLE | Table of 128 integers in the hopping sequence   |
| RNTI    | Radio Network Temporary Identity  |
| RPLMN   | Registered Public Land Mobile Network   |
| RPOA    | Recognised Private Operating Agency   |
| RR      | Radio Resources   |
| RRC     | Radio Resource Control  |
| RRM     | Radio Resource Management   |
| RSA     | Algorithm invented by Rivest, Adleman and Shamir  |
| RSCP    | Received Signal Code Power  |
| RSE     | Radio System Entity   |
| RSL     | Radio Signalling Link   |
| RSSI    | Received Signal Strength Indicator  |
| RST     | Reset   |
| RSVP    | Resource ReserVation Protocol   |
| RSZI    | Regional Subscription Zone Identity   |
| RT      | Real Time   |
| RTE     | Remote Terminal Emulator  |
| RTP     | Real Time Protocol  |
| RU      | Resource Unit   |
| RWB     | Resolution Bandwidth  |
| RX      | Receive   |
| RXLEV   | Received signal level   |
| RXQUAL  | Received Signal Quality   |

## S

|         |   |
|---------|---|
| S-Block | Supervisory Block                         |
| S-CCPCH | Secondary Common Control Physical Channel |
| S-CPICH | Secondary Common Pilot Channel            |
| S-CSCF  | Serving CSCF                              |
| S-RNTI  | SRNC Radio Network Temporary Identity     |
| SAAL    | Signalling ATM Adaptation Layer           |

|          |   |
|----------|---|
| SABM     | Set Asynchronous Balanced Mode  |
| SACCH    | Slow Associated Control Channel   |
| SACCH/C4 | Slow Associated Control CHannel/SDCCH/4   |
| SACCH/C8 | Slow Associated Control CHannel/SDCCH/8   |
| SACCH/T  | Slow Associated Control CHannel/Traffic channel   |
| SACCH/TF | Slow Associated Control CHannel/Traffic channel Full rate   |
| SACCH/TH | Slow Associated Control CHannel/Traffic channel Half rate   |
| SAD      | Source ADdress  |
| SAP      | Service Access Point  |
| SAPI     | Service Access Point Identifier   |
| SAR      | Segmentation and Reassembly   |
| SAT      | SIM Application Toolkit   |
| SB       | Synchronization Burst   |
| SBLP     | Service Based Local Policy  |
| SBSC     | Serving Base Station Controller   |
| SBSS     | Serving Base Station Subsystem  |
| SC       | Service Centre (used for SMS)<br>Service Code   |
| SCCH     | Synchronisation Control Channel   |
| SCCP     | Signalling Connection Control Part  |
| SCF      | Service Control Function (IN context), Service Capability Feature (VHE/OSA context)                         |
| SCH      | Synchronisation Channel   |
| SCI      | Subscriber Controlled Input   |
| SCN      | Sub-Channel Number  |
| SCP      | Service Control Point   |
| SCTP     | S Common Transport Protocol   |
| SCUDIF   | Service Change and UDI/RDI Fallback   |
| SDCCH    | Stand-Alone Dedicated Control Channel   |
| SDH      | Synchronous Digital Hierarchy   |
| SDL      | Specification Description Language  |
| SDN      | Service Dialling Number   |
| SDP      | Service Discovery Protocol (Bluetooth related)<br>Session Description Protocol                              |
| SDT      | SDL Development Tool  |
| SDU      | Service Data Unit   |
| SE       | Security Environment<br>Sending Entity<br>Support Entity  |
| SEF      | Support Entity Function   |
| SF       | Spreading Factor  |
| SFH      | Slow Frequency Hopping  |
| SFI      | Short EF Identifier   |
| SFN      | System Frame Number   |
| SGSN     | Serving GPRS Support Node   |
| SHCCH    | Shared Channel Control Channel  |
| SI       | Screening Indicator<br>Service Interworking<br>Supplementary Information (SIA=Supplemenatary Information A) |
| SIC      | Service Implementation Capabilities   |
| SID      | SIlence Descriptor  |
| SIM      | GSM Subscriber Identity Module  |
| SIP      | Session Initiated Protocol  |
| SIR      | Signal-to-Interference Ratio  |
| SLA      | Service Level Agreement   |
| SLPP     | Subscriber LCS Privacy Profile  |
| SLR      | Send Loudness Rating  |
| SLTM     | Signalling Link Test Message  |
| SM       | Session Management<br>Short Message   |
| SMDS     | Switched Multimegabit Data Service  |
| SME      | Short Message Entity  |
| SMG      | Special Mobile Group  |



|          |   |
|----------|---|
| SMI      | Structure of Management Information (RFC 1155)                                      |
| SMLC     | Serving Mobile Location Centre  |
| SMS      | Short Message Service   |
| SMS-CB   | SMS Cell Broadcast  |
| SMS-PP   | Short Message Service/Point-to-Point  |
| SMS-SC   | Short Message Service - Service Centre  |
| Smt      | Short message terminal  |
| SN       | Serial Number   |
|          | Serving Network   |
|          | Subscriber Number   |
| SNDCP    | Sub-Network Dependent Convergence Protocol  |
| SNMP     | Simple Network Management Protocol  |
| SNR      | Serial Number   |
| SOA      | Suppress Outgoing Access (CUG SS)   |
| SoLSA    | Support of Localised Service Area   |
| SoR      | Steering of Roaming   |
| SP       | Switching Point   |
|          | Service Provider  |
| SPC      | Signalling Point Code   |
|          | Suppress Preferential CUG   |
| SPCK     | Service Provider Control Key  |
| SPI      | Security Parameters Indication  |
| SQN      | Sequence number   |
| SRB      | Signalling Radio Bearer   |
| SRES     | Signed RESponse (authentication value returned by the SIM or by the USIM in 2G AKA) |
| SRNC     | Serving Radio Network Controller  |
| SRNS     | Serving RNS   |
| SS       | Supplementary Service   |
|          | System Simulator  |
| SS7      | Signalling System No. 7   |
| SSC      | Secondary Synchronisation Code  |
|          | Supplementary Service Control string  |
| 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   |
| SSE      | Service Specific Entities   |
| SSF      | Service Switching Function  |
| SSN      | Sub-System Number   |
| SSSAR    | Service Specific Segmentation and Re-assembly sublayer                              |
| STC      | Signalling Transport Converter  |
| STMR     | SideTone Masking Rating   |
| STP      | Signalling Transfer Point   |
| STTD     | Space Time Transmit Diversity   |
| SuM      | Subscription Management   |
| SVC      | Switched virtual circuit  |
| SVN      | Software Version Number   |
| SW       | Status Word   |
|          | Software  |
| SW1/SW2  | Status Word 1/Status Word 2   |

## T

|       |                              |
|-------|------------------------------|
| T-SGW | Transport Signalling Gateway |
| T     | Timer                        |
|       | Transparent                  |
|       | Type only                    |
| TA    | Terminal Adaptation          |
|       | Timing Advance               |
| TAC   | Type Approval Code           |

|          |  |
|----------|--|
| TAF      | Terminal Adaptation Function                                       |
| TAR      | Toolkit Application Reference                                      |
| TB       | Transport Block  |
| TBF      | Temporary Block Flow   |
| TBR      | Technical Basis for Regulation                                     |
| TC       | Transaction Capabilities<br>TransCoder<br>Transmission Convergence |
| TCH      | Traffic Channel  |
| TCH/F    | A full rate TCH  |
| TCH/F2,4 | A full rate data TCH ( $\leq 2,4$ kbit/s)                          |
| TCH/F4,8 | A full rate data TCH (4,8 kbit/s)                                  |
| TCH/F9,6 | A full rate data TCH (9,6 kbit/s)                                  |
| TCH/FS   | A full rate Speech TCH   |
| TCH/H    | A half rate TCH  |
| TCH/H2,4 | A half rate data TCH ( $\leq 2,4$ kbit/s)                          |
| TCH/H4,8 | A half rate data TCH (4,8 kbit/s)                                  |
| TCH/HS   | A half rate Speech TCH   |
| TC-TR    | Technical Committee Technical Report                               |
| TCI      | Transceiver Control Interface                                      |
| TCP      | Transmission Control Protocol                                      |
| TD-CDMA  | Time Division-Code Division Multiple Access                        |
| TDD      | Time Division Duplex   |
| TDMA     | Time Division Multiple Access                                      |
| TDoc     | Temporary Document   |
| TE       | Terminal Equipment   |
| TE9      | Terminal Equipment 9 (ETSI sub-technical committee)                |
| Tei      | Terminal endpoint identifier                                       |
| TEID     | Tunnel End Point Identifier  |
| TF       | Transport Format   |
| TFA      | TransFer Allowed   |
| TFC      | Transport Format Combination                                       |
| TFCI     | Transport Format Combination Indicator                             |
| TFCS     | Transport Format Combination Set                                   |
| TFI      | Transport Format Indicator<br>Temporary Flow Identity              |
| TFIN     | Transport Format INdicator   |
| TFP      | TransFer Prohibited  |
| TFS      | Transport Format Set   |
| TFT      | Traffic Flow Template  |
| TI       | Transaction Identifier   |
| TLLI     | Temporary Logical Link Identity                                    |
| TLS      | Transport Layer Security   |
| TLV      | Tag Length Value   |
| TM       | Telecom Management   |
| TMF      | Telecom Management Forum   |
| TMN      | Telecom Management Network   |
| TMSI     | Temporary Mobile Subscriber Identity                               |
| TN       | Termination Node<br>Timeslot Number                                |
| TO       | Telecom Operations Map   |
| TOA      | Time of Arrival  |
| TON      | Type Of Number   |
| TP       | Third Party  |
| TPC      | Transmit Power Control   |
| TPDU     | Transfer Protocol Data Unit  |
| TR       | Technical Report   |
| TRAU     | Transcoder and Rate Adapter Unit                                   |
| TrCH     | Transport Channel  |
| TRX      | Transceiver  |
| TS       | Technical Specification<br>Teleservice                             |

|       |   |
|-------|---|
|       | Time Slot   |
| TSC   | Training Sequence Code  |
| TSDI  | Transceiver Speech & Data Interface   |
| TSG   | Technical Specification Group   |
| TSTD  | Time Switched Transmit Diversity  |
| TTCN  | Tree and Tabular Combined Notation  |
| TTI   | Transmission Timing Interval  |
| TUP   | Telephone User Part (SS7)   |
| TV    | Type and Value  |
| TX    | Transmit  |
| TXPWR | Transmit PoWeR; Tx power level in the MS_TXPWR_REQUEST and MS_TXPWR_CONF parameters |

## U

|                 |  |
|-----------------|--|
| U-RNTI          | UTRAN Radio Network Temporary Identity           |
| UARFCN          | UTRA Absolute Radio Frequency Channel Number     |
| UARFN           | UTRA Absolute Radio Frequency Number             |
| UART            | Universal Asynchronous Receiver and Transmitter  |
| UCS2            | Universal Character Set 2                        |
| UDD             | Unconstrained Delay Data                         |
| UDI             | Unrestricted Digital Information                 |
| UDP             | User Datagram Protocol                           |
| UDUB            | User Determined User Busy                        |
| UDCH            | User-plane Dedicated CHannel                     |
| UE              | User Equipment                                   |
| UE <sub>R</sub> | User Equipment with ODMA relay operation enabled |
| UI              | User Interface                                   |
|                 | Unnumbered Information (Frame)                   |
| UIA             | 3G Integrity Algorithm                           |
| UIC             | Union Internationale des Chemins de Fer          |
| UL              | Uplink (Reverse Link)                            |
| UM              | Unacknowledged Mode                              |
| UML             | Unified Modelling Language                       |
| UMS             | User Mobility Server                             |
| UMSC            | UMTS Mobile Services Switching Centre            |
| UMTS            | Universal Mobile Telecommunications System       |
| UNI             | User-Network Interface                           |
| UP              | User Plane                                       |
| UPCMI           | Uniform PCM Interface (13-bit)                   |
| UPD             | Up to date                                       |
| UPT             | Universal Personal Telecommunication             |
| URA             | User Registration Area                           |
|                 | UTRAN Registration Area                          |
| URAN            | UMTS Radio Access Network                        |
| URB             | User Radio Bearer                                |
| URI             | Uniform Resource Identifier                      |
| URL             | Uniform Resource Locator                         |
| USAT            | USIM Application Toolkit                         |
| USB             | Universal Serial Bus                             |
| USC             | UE Service Capabilities                          |
| USCH            | Uplink Shared Channel                            |
| USF             | Uplink State Flag                                |
| USIM            | Universal Subscriber Identity Module             |
| USSD            | Unstructured Supplementary Service Data          |
| UT              | Universal Time                                   |
| UTRA            | Universal Terrestrial Radio Access               |
| UTRAN           | Universal Terrestrial Radio Access Network       |
| UUI             | User-to-User Information                         |

UUS            Uu Stratum  
User-to-User Signalling

## V

V            Value only  
VA            Voice Activity factor  
VAD           Voice Activity Detection  
VAP           Videotex Access Point  
VASP          Value Added Service Provider  
VBR           Variable Bit Rate  
VBS           Voice Broadcast Service  
VC            Virtual Circuit  
VGCS          Voice Group Call Service  
VHE           Virtual Home Environment  
VLR           Visitor Location Register  
VMSC          Visited MSC  
VoIP          Voice Over IP  
VPLMN        Visited Public Land Mobile Network  
VPN           Virtual Private Network  
VSC           Videotex Service Centre  
V(SD)        Send state variable  
VTX host      The components dedicated to Videotex service

## W

WAE           Wireless Application Environment  
WAP           Wireless Application Protocol  
WBEM          Web Based Enterprise Management  
WCDMA        Wideband Code Division Multiple Access  
WDP           Wireless Datagram Protocol  
WG            Working Group  
WIM           Wireless Identity Module  
WIN            Wireless Intelligent Network  
WLAN          Wireless Local Area Network  
WLAN UE      WLAN User Equipment  
WPA           Wrong Password Attempts (counter)  
WS            Work Station  
WSP           Wireless Session Protocol  
WTA           Wireless Telephony Applications  
WTAI          Wireless Telephony Applications Interface  
WTDD         Wideband Time Division Duplexing  
WTLS          Wireless Transport Layer Security  
WTP           Wireless Transaction Protocol  
WTX           Waiting Time eXtension  
WWT          Work Waiting Time  
WWW          World Wide Web

## X

XID           eXchange IDentifier  
XMAC          exXpected Message Authentication Code (calculated by the USIM application in 3G AKA)  
XML           eXtensible Markup Language  
XRES          EXpected user RESponse

## Y

<void>

# Z

ZC

Zone Code

## 5 Equations

|                             |  |
|-----------------------------|--|
| $\frac{CPICH\_E_c}{I_{or}}$ | The ratio of the received energy per PN chip of the CPICH to the total transmit power spectral density at the Node_B (SS) antenna connector.   |
| $DPCH\_E_c$                 | Average energy per PN chip for DPCH.   |
| $\frac{DPCH\_E_c}{I_{or}}$  | The ratio of the transmit energy per PN chip of the DPCH to the total transmit power spectral density at the Node_B antenna connector.   |
| $\frac{DPCCH\_E_c}{I_{or}}$ | The ratio of the transmit energy per PN chip of the DPCCH to the total transmit power spectral density at the Node B antenna connector.  |
| $\frac{DPDCH\_E_c}{I_{or}}$ | The ratio of the transmit energy per PN chip of the DPDCH to the total transmit power spectral density at the Node B antenna connector.  |
| $E_c$                       | 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.   |
| $I_{oac}$                   | The power spectral density of the adjacent frequency channel as measured at the UE antenna connector.  |
| $I_{oc}$                    | The power spectral density of a band limited white noise source (simulating interference from cells, which are not defined in a test procedure) as measured at the UE antenna connector. 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 down link at the base station Node_B antenna connector.   |
| $\hat{I}_{or}$              | The received power spectral density of the down link as measured at the UE antenna connector.  |
| $I_{ouw}$                   | Unwanted signal power level.   |
| $OCNS\_E_c$                 | 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.  |
| $P-CCPCH\_E_c$              | Average* energy per PN chip for P-CCPCH.   |

|                                |   |
|--------------------------------|---|
| $P-CCPCH \frac{E_c}{I_o}$      | The ratio of the received P-CCPCH energy per chip to the total received power spectral density at the UE antenna connector.                                 |
| $\frac{P-CCPCH-E_c}{I_{or}}$   | The ratio of the average* transmit energy per PN chip for the P-CCPCH to the total transmit power spectral density.   |
| $P-CPICH-E_c$                  | Average* energy per PN chip for P-CPICH.  |
| $PICH-E_c$                     | Average* energy per PN chip for PICH.   |
| $\frac{PICH-E_c}{I_{or}}$      | The ratio of the received energy per PN chip of the PICH to the total transmit power spectral density at the <u>Node B</u> (SS) antenna connector.          |
| $PCCPCH \frac{E_c}{I_o}$       | 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.   |
| $\frac{\sum DPCH-E_c}{I_{or}}$ | The ratio of the sum DPCH_Ex for one service in case of multicode to the total transmit power spectral density of the downlink at the BS antenna connector. |
| $S-CCPCH-E_c$                  | Average energy per PN chip for S-CCPCH.   |
| $S-CPICH-E_c$                  | Average* energy per PN chip for S-CPICH.  |
| $SCH-E_c$                      | Average* energy per PN chip for SCH.  |
| $SCCPCH-E_c$                   | Average energy per PN chip for SCCPCH.  |

\*Note: Averaging period for energy/power of discontinuously transmitted channels should be defined.

## Annex A (informative): Change history

| TSG SA# | SA Doc.   | SA1 Doc   | Spec   | CR   | Rev | Rel   | Cat | Subject/Comment   | Old   | New   | WI      |
|---------|-----------|-----------|--------|------|-----|-------|-----|---|-------|-------|---------|
| SP-07   | -         | -         | 21.905 | -    | -   | -     | -   | Approved at SA#07 as version 3.0.0  |       | 3.0.0 |         |
| SP-08   | SP-000209 | S1-000369 | 21.905 | 0001 |     | R99   | B   | New Abbreviations and Definitions for R99, language alignment and editorial changes                   | 3.0.0 | 3.1.0 |         |
| 08/2000 | -         | -         | 21.905 | -    | -   | -     | -   | MCC correction of CR001 implementation; editorial update.   | 3.1.0 | 3.1.1 |         |
| SP-09   | SP-000380 | S1-000477 | 21.905 | 0002 |     | R99   | D   | New Abbreviations and Definitions for R99   | 3.1.1 | 3.2.0 |         |
| SP-09   | SP-000381 | S1-000627 | 21.905 | 0003 |     | R4    | D   | Change of Name of MExE  | 3.1.1 | 4.0.0 |         |
| SP-10   | SP-000659 | S1-000731 | 21.905 | 0004 |     | Rel-4 | B   | Introduces ASCII definition   | 4.0.0 | 4.1.0 | ASCII   |
| SP-10   | SP-000659 | S1-000736 | 21.905 | 0005 | 1   | Rel-4 | B   | Inclusion of GSM 01.04 v 7.0.0 acronyms and abbreviations in the vocabulary                           | 4.0.0 | 4.1.0 | CORRECT |
| SP-11   | SP-010038 | S1-010233 | 21.905 | 0006 |     | Rel-4 | D   | Editorial changes and new definitions   | 4.1.0 | 4.2.0 | Vocab   |
| SP-11   | SP-010038 | S1-010234 | 21.905 | 0007 |     | Rel-4 | B   | Inclusion of commonly used definition contained in 23.122   | 4.1.0 | 4.2.0 | Vocab   |
| SP-12   | SP-010256 | S1-010366 | 21.905 | 0008 |     | Rel-4 | F   | Corrections to the vocabulary requested by RAN-4  | 4.2.0 | 4.3.0 | Vocab   |
| SP-12   | SP-010256 | S1-010582 | 21.905 | 0009 |     | Rel-4 | F   | CR to 21.905 on Definitions in 22.101 subscription and service provider                               | 4.2.0 | 4.3.0 | Vocab   |
| SP-12   | SP-010258 | S1-010537 | 21.905 | 0010 |     | Rel-5 | D   | Addition of definition of Service Provider and Subscription. Modification of definition of Subscriber | 4.3.0 | 5.0.0 | Vocab   |
| SP-13   | SP-010430 | S1-010649 | 21.905 | 0013 |     | Rel-5 | B   | CR to 21.905v5.0.0 (Rel-5) on Alignment of definitions requested by RAN 4                             | 5.0.0 | 5.1.0 | Vocab   |
| SP-13   | SP-010431 | S1-010838 | 21.905 | 0016 |     | Rel-5 | B   | CR to 21.905 version 5.0.0 Nomenclature for GTT   | 5.0.0 | 5.1.0 | GTT     |
| SP-14   | SP-010671 | S1-011276 | 21.905 | 0021 | 1   | Rel-5 | F   | Defintion of Local Services   | 5.1.0 | 5.2.0 | IMS     |
| SP-15   | SP-020046 | S1-020393 | 21.905 | 0030 |     | Rel-5 | B   | CR to 21.905: new definition of the term 'service'  | 5.2.0 | 5.3.0 | TEI     |
| SP-15   | SP-020063 | S1-020431 | 21.905 | 0031 |     | Rel-5 | B   | CR 21.905 Rel. 5 Introduction of new abbreviations derived of the approval of 3GPP TS 23.236          | 5.2.0 | 5.3.0 | PSS-E   |
| SP-15   | SP-020046 | S1-020452 | 21.905 | 0032 |     | Rel-5 | B   | CR 21.905 Rel.5 B Introduction of the definitions of 'pre-pay' and 'post-pay' billing                 | 5.2.0 | 5.3.0 | TEI     |
| SP-15   | SP-020046 | S1-020526 | 21.905 | 0033 |     | Rel-5 | F   | CR to 21.905: Replacement of the term UMTS with 3GPP system   | 5.2.0 | 5.3.0 | TEI     |
| SP-15   | SP-020046 | S1-020527 | 21.905 | 0034 |     | Rel-5 | B   | CR to 21.905: missing abbreviations   | 5.2.0 | 5.3.0 | TEI     |
| SP-15   | SP-020046 | S1-020528 | 21.905 | 0035 |     | Rel-5 | B   | CR to 21.905: new definition of the term 'application'  | 5.2.0 | 5.3.0 | TEI     |
| SP-15   | SP-020046 | S1-020617 | 21.905 | 0036 |     | Rel-5 | B   | CR to 21905: definitions of online and offline charging   | 5.2.0 | 5.3.0 | TEI     |
| SP-15   | SP-020046 | S1-020620 | 21.905 | 0037 |     | Rel-5 | B   | CR to 21.905: Improved definition of the term 'application'   | 5.2.0 | 5.3.0 | TEI     |
| SP-16   | SP-020243 | S1-020973 | 21.905 | 0038 |     | Rel-5 | F   | CR to 21.905 5.3.0 - removal of obsolete reference  | 5.3.0 | 5.4.0 | Vocab   |
| SP-17   | SP-020596 |           | 21.905 | 0039 | 1   | Rel-5 | F   | Addition of GERAN definitions and abbreviations   | 5.4.0 | 5.5.0 | TEI     |
| SP-17   | SP-020596 |           | 21.905 | 0040 | 1   | Rel-5 | F   | Addition of missing GSM/GPRS abbreviations  | 5.4.0 | 5.5.0 | TEI     |
| SP-17   | SP-020555 | S1-021762 | 21.905 | 0041 |     | Rel-6 | B   | CR to 21.905 definitions from TR 22.951   | 5.4.0 | 6.0.0 | TEI     |
| SP-17   | SP-020555 | S1-021715 | 21.905 | 0042 |     | Rel-6 | F   | Enhancement of the definition of the 'Subscriber'   | 5.4.0 | 6.0.0 | TEI     |
| SP-18   | SP-020654 | S1-022223 | 21.905 | 0043 |     | Rel-6 | D   | Update to 3GPP TR 21.905, Vocabulary for 3GPP Specifications  | 6.0.0 | 6.1.0 | TEI6    |



|       |           |           |        |      |   |       |   |   |       |        |         |
|-------|-----------|-----------|--------|------|---|-------|---|---|-------|--------|---------|
| SP-18 | SP-020666 | S1-022264 | 21.905 | 0044 |   | Rel-6 | B | CR to 21.905 to introduce WLAN terminology  | 6.0.0 | 6.1.0  | WLAN    |
| SP-19 | SP-030012 | S1-030238 | 21.905 | 0046 | - | Rel-6 | A | CR on Entities of the mobile system   | 6.1.0 | 6.2.0  | OAM-AR  |
| SP-20 | SP-030247 | S1-030391 | 21.905 | 0047 | - | Rel-6 | B | Addition of the definition and acronym of 3GPP Generic User Profile   | 6.2.0 | 6.3.0  | GUP     |
| SP-20 | SP-030240 | S1-030576 | 21.905 | 0050 | - | Rel-6 | A | Correction of acronyms in TR21.905  | 6.2.0 | 6.3.0  | TEI4    |
| SP-21 | SP-030456 | S1-030971 | 21.905 | 0052 | - | Rel-6 | A | Correction of the Defintion of CDR  | 6.3.0 | 6.4.0  | OAM-CH  |
| SP-22 | SP-030694 | S1-031145 | 21.905 | 0053 | - | Rel-6 | F | Terminology addtions for IP-CAN and IP-CAN bearer   | 6.4.0 | 6.5.0  | TEI6    |
| SP-22 | SP-030694 | S1-031311 | 21.905 | 0054 | - | Rel-6 | F | Modified base station definition  | 6.4.0 | 6.5.0  | Vocab   |
| SP-23 | SP-040087 | S1-040115 | 21.905 | 0055 | - | Rel-6 | B | Acronyms for the Flexible Layer One   | 6.5.0 | 6.6.0  | FLOGGER |
| SP-23 | SP-040107 | S5-042112 | 21.905 | 0056 | - | Rel-6 | F | Add Subscription Management (SuM) Definition and Abbreviation to SA1's 21.905 - Align with SA5's 32.140/1, 32.171/2/... & 3GPP Work Plan (WI Acronym) | 6.5.0 | 6.6.0  | SuM     |
| SP-24 | SP-040286 | S1-040507 | 21.905 | 0057 | - | Rel-6 | F | Inclusion of ANP abbreviation as requested by SA3   | 6.6.0 | 6.7.0  | Vocab   |
| SP-24 | SP-040476 | -         | 21.905 | 0058 | 2 | Rel-6 | F | TR 21.905 Addition WLAN UE definition and classes of equipment and abbreviation   | 6.6.0 | 6.7.0  | WLAN    |
| SP-27 | SP-050055 | S1-050143 | 21.905 | 0061 | - | Rel-6 | A | Introduction of RAN Information Management  | 6.7.0 | 6.8.0  | TEI5    |
| SP-28 | SP-050213 | S1-050487 | 21.905 | 0062 | - | Rel-6 | F | Correction of OSA acronym   | 6.8.0 | 6.9.0  | Vocab   |
| SP-29 | SP-050509 | S1-050780 | 21.905 | 0065 | - | Rel-6 | A | Abbreviation for SCUDIF   | 6.9.0 | 6.10.0 | Vocab   |
| SP-29 | SP-050515 | S1-050781 | 21.905 | 0066 | - | Rel-6 | F | Definition and abbreviation for DSAC  | 6.9.0 | 6.10.0 | Vocab   |
| SP-29 | SP-050524 | S1-050828 | 21.905 | 0067 | - | Rel-7 | B | Introduction of SBLP abbreviation   | 6.9.0 | 7.0.0  | Vocab   |
| SP-31 | SP-060033 | S1-060266 | 21.905 | 0068 | - | Rel-7 | F | Correction of terminology   | 7.0.0 | 7.1.0  | NSP-CR  |
| SP-32 | SP-060428 | -         | 21.905 | 0069 | 1 | Rel-7 | F | TISPAN UE definition  | 7.1.0 | 7.2.0  | FBI     |
| SP-35 | SP-070231 | -         | 21.905 | 0071 | 3 | Rel-7 | F | Terminology clarification for User Equipment and User Equipment components  | 7.2.0 | 7.3.0  | Vocab   |
| SP-35 | SP-070135 | S1-070248 | 21.905 | 0072 | - | Rel-8 | D | Adding FMC to terms and abbreviations   | 7.3.0 | 8.0.0  | Vocab   |
| SP-36 | SP-070475 | S1-070442 | 21.905 | 0074 | 1 | Rel-8 | A | Addition of "Steering of Roaming" to definitions and abbreviations  | 8.0.0 | 8.1.0  | TEI     |
| SP-37 | SP-070562 | S1-070949 | 21.905 | 76   |   | Rel-8 | B | To define 'Service Continuity' in the vocabulary  | 8.1.0 | 8.2.0  | TEI8    |
| SP-37 | SP-070562 | S1-070986 | 21.905 | 77   |   | Rel-8 | B | Proposal to add E-UTRA and E-UTRAN  | 8.1.0 | 8.2.0  | TEI8    |
| SP-37 | SP-070562 | S1-071102 | 21.905 | 75   | 1 | Rel-8 | B | Proposal to add Evolved Packet System Evolved Packet Core   | 8.1.0 | 8.2.0  | TEI8    |
| SP-37 | SP-070562 | S1-071233 | 21.905 | 78   | 2 | Rel-8 | C | NP definition   | 8.1.0 | 8.2.0  | TEI8    |
| SP-38 | SP-070848 | S1-071893 | 21.905 | 0079 | 1 | Rel-8 | B | Addition of definitions of an End-User and End-User Identity  | 8.2.0 | 8.3.0  | EUI     |

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# History

| <b>Document history</b> |              |             |
|-------------------------|--------------|-------------|
| V8.2.0                  | January 2008 | Publication |
| V8.3.0                  | January 2008 | Publication |
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