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# Foreword

This Technical Specification has been produced by the 3<sup>rd</sup> Generation Partnership Project (3GPP).

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

# 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.

# 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] TS 25.990: "Technical Specification Group (TSG) RAN; Vocabulary ".
- [3] 'The Path towards UMTS Technologies for the Information Society' Report #2, UMTS Forum.

# 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  $5V\pm 10\%$ .

#### Α

**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.

#### В

**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 setup, 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

**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).

**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.

**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).

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.

**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, manyout 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.

#### Н

**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:** PLMN where the Mobile Country Code (MCC) and Mobile Network Code (MNC) of the PLMN identity are the same as the MCC and MNC of the IMSI.

# ı

**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. Thei si when the power control indicates a minimum transmit output power is required (TS 25.105).

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

**Mobile termination:** the mobile termination is the component of the mobile station which supports functions specific to management of the radio interface (Um).

**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 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:** Where the provision of diallable numbers is independent of home environment and/or serving network.

**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.

#### Р

**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 decared 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 Eb/(No+Io).

**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 Eb/(No+Io) (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 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 unctions 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.

**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.

#### Т

**Teleaction 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:** 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:** A device allowing 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 defined domains are the USIM and ME Domains. The ME Domain can further be subdivided into several components showing the connectivity between multiple functional groups. These groups can be implemented in one or more hardware devices. An example of such a connectivity is the TE – MT interface. Further, an occurrence of a User Equipment is an MS for GSM as defined in GSM TS 04.02.

**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.



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



**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.



<void>



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# Ζ

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#### 4 **Abbreviations**

#### 0 - 9

2<sup>nd</sup> Generation 2G 3<sup>rd</sup> Generation 3G

Third Generation Partnership Project 3GPP

8-state Phase Shift Keying 8-PSK

#### Α

A-SGW Access Signalling Gateway Authentication algorithm A3 A3

A single algorithm performing the functions of A3 and A8 A38

Encryption algorithm A5/1 A5/1Encryption algorithm A5/2 A5/2A5/X Encryption algorithm A5/0-7

Ciphering key generating algorithm A8 A8

ATM Adaptation Layer AAL ATM Adaptation Layer type 2 AAL2 AAL5 ATM Adaptation Layer type 5

ABAccess Burst

AC Access Class (C0 to C15)

> Access Condition **Application Context Authentication Centre**

ACC **Automatic Congestion Control** 

Algebraic Code Excited Linear Prediction **ACELP** 

Associated Control Channel **ACCH** 

Adjacent Channel Interference Ratio **ACIR** 

Acknowledgement ACK APN Control List **ACL** 

**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 Associated Dedicated CHannel

**ADCH Application Dedicated File ADF** 

**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

**Application Entity** AΕ Acoustic Echo Control **AEC** 

**AEF** Additional Elementary Functions ATM End System Address **AESA AFC** Automatic Frequency Control Access Grant CHannel **AGCH** 

Ai Action indicator ΑI **Acquisition Indicator AICH** 

**Acquisition Indicator Channel Application IDentifier AID AIUR** Air Interface User Rate AK Anonymity Key

Authentication and Key Agreement **AKA** 

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 Automatic Repeat ReQuest **ARQ** Access Rule Reference **ARR** AS Access Stratum **ASC** Access Service Class **ASCI** Advanced Speech Call Items **Application Service Element ASE** Abstract Syntax Notation One ASN.1

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

# В

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

BOC 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
Basic Service Group
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

**BSG** 

**BSC** 

C Conditional Control-

C-APDU Command APDU

C-RNTI Cell Radio Network Temporary Identity

C-TPDU Command TPDU
CA Capacity Allocation
Cell Allocation
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
Cipher Block Chaining
CBCH Cell Broadcast CHannel

CBMI Cell Broadcast Message Identifier

CBR Constant Bit Rate
CBS Cell Broadcast Service

CC Call Control Country Code

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

Current Call Meter

CCP Capability/Configuration Parameter CCPCH Common Control Physical Channel

Cct Circuit

CCTrCH Coded Composite Transport Channel

CD Capacity Deallocation

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

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

Cell Global Identifier

CHAP Challenge Handshake Authentication Protocol

CHP CHarging Point

CHV Card Holder Verification information

CI Cell Identity 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

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 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 ADress

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

DPCCH 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

Domain Specific Access Control DSAC Downlink Shared Channel **DSCH DSE** Data Switching Exchange Digital Speech Interpolation DSI Digital Subscriber Signalling No1 DSS1 **DTAP Direct Transfer Application Part DTCH Dedicated Traffic Channel** DTE **Data Terminal Equipment Dual Tone Multiple Frequency DTMF** Discontinuous Transmission DTX

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

Elliptic Curve Cryptography

ECM Error Correction Mode (facsimile)

Ec/No 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

EIR Equipment Identity Centre
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

EPCCH Enhanced Power Control Channel

EPROM Erasable Programmable Read Only Memory

ERP Ear Reference Point

**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

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
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 Tunnelling Protocol for User Plane

GTT Global Text Telephony
GUP 3GPP Generic User Profile

#### Н

H-CSCF Home CSCF HANDO 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

ı

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

IIOP Internet Inter-ORB Protocol

IK Integrity key
IM Intermodulation
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

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

IUIInternational USIM IdentifierIUTImplementation Under TestIWFInterWorking FunctionI-WLANInterworking WLANIWMSCInterWorking MSCIWUInter Working Unit

J

JAR file Java Archive File

JCRE Java Card<sup>TM</sup> 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<sup>TM</sup> Virtual Machine

K

k Windows size

K Constraint length of the convolutional code

USIM Individual key

kbps kilo-bits per second Kc Ciphering key

Ki Individual subscriber authentication key

KSI Key Set Identifier ksps 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
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

LCS Cheft
LCS LCS Server
LE Local Exchange
LEN LENgth

LI Language Indication

Length Indicator Line Identity

LLC Logical Link Control

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 Dialled
LNS L2TP Network Server

LPLMN Local PLMN
LR Location Register
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
Location Update

LV Length and Value

#### M

M Mandatory
M Mandatory
MA Mobile Allocation

Multiple Access

MAC Medium Access Control (protocol layering context)

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
Mobile Equipment

MEF Maintenance Entity Function MEHO Mobile evaluated handover MER Message Error Ratio

MExE Mobile Execution Environment

MF Master File 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

Mobility Management

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) - PHysical (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

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

**NBAP** 

NACC Network Assisted Cell Change

NAD Node Address byte
NAI Network Access Identifier
NAS Non-Access Stratum

NB Normal Burst

NCELL Neighbouring (of current serving) Cell

Node B Application Part

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

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

#### 0

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

#### Р

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 Assember/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

Personal Computer Protocol Control Byte

PCB Protocol Control Byte

PCCC Parallel Concentrated Convolutions

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

Public Data

PDCP Packet Data Convergence Protocol

PDCH Packet Data Channel

PDH Plesiochronous Digital Hierarchy

PDN Public Data Network 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

PHysical (layer)

PHF Packet Handler Function
PHI Packet Handler Interface
PHS Personal Handyphone System

PHY Physical layer PhyCH Physical Channel PI Page Indicator

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 Primative 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 Routing Area Code

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

64-bit signed RESponse that is the output of the function f2 in a 3G AKA

RF Radio Frequency
RFC Request For Comments
Redio Frequency Change

Radio Frequency Channel 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

SIR

S-Block Supervisory Block Secondary Common Control Physical Channel S-CCPCH Secondary Common Pilot Channel S-CPICH Serving CSCF S-CSCF S-RNTI SRNC Radio Network Temporary Identity Signalling ATM Adaptation Layer SAAL **SABM** Set Asynchronous Balanced Mode Slow Associated Control Channel SACCH SACCH/C4 Slow Associated Control CHannel/SDCCH/4 SACCH/C8 Slow Associated Control CHannel/SDCCH/8 Slow Associated Control CHannel/Traffic channel SACCH/T Slow Associated Control CHannel/Traffic channel Full rate SACCH/TF Slow Associated Control CHannel/Traffic channel Half rate SACCH/TH Source ADdress SAD Service Access Point SAP **SAPI** Service Access Point Identifier SAR Segmentation and Reassembly SAT SIM Application Toolkit SBSynchronization Burst **SBLP** Service Based Local Policy **SBSC** Serving Base Station Controller Serving Base Station Subsystem **SBSS** SC Service Centre (used for SMS) 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 Subscriber Controlled Input SCI **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 Synchronous Digital Hierarchy SDH Specification Description Language **SDL SDN** Service Dialling Number Service Discovery Protocol (Bluetooth related) SDP Session Description Protocol **SDT** SDL Development Tool **SDU** Service Data Unit Security Environment SE Sending Entity Support Entity SEF **Support Entity Function Spreading Factor** SF SFH Slow Frequency Hopping Short EF Identifier SFI System Frame Number SFN Serving GPRS Support Node **SGSN SHCCH** Shared Channel Control Channel Screening Indicator SI Service Interworking Supplementary Information (SIA=Supplementary Information A) SIC Service Implementation Capabilities SIlence Descriptor SID GSM Subscriber Identity Module SIM Session Initiated Protocol SIP

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

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

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

#### Т

TO

TOA

T-SGW Transport Signalling Gateway Timer Transparent Type only TA **Terminal Adaptation** Timing Advance TAC Type Approval Code **TAF Terminal Adaptation Function** Toolkit Application Reference **TAR** Transport Block TB **TBF** Temporary Block Flow **TBR** Technical Basis for Regulation Transaction Capabilities TC TransCoder Transmission Convergence TCH Traffic Channel TCH/F A full rate TCH TCH/F2,4 A full rate data TCH (≤2,4kbit/s) TCH/F4,8 A full rate date TCH (4,8kbit/s) TCH/F9,6 A full rate data TCH (9,6kbit/s) TCH/FS A full rate Speech TCH TCH/H A half rate TCH TCH/H2,4 A half rate data TCH (<2,4kbit/s) TCH/H4.8 A half rate data TCH (4.8kbit/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) Terminal endpoint identifier Tei Tunnel End Point Identifier **TEID** TF Transport Format **TFA** TransFer Allowed **Transport Format Combination** TFC **Transport Format Combination Indicator TFCI TFCS Transport Format Combination Set** TFI Transport Format Indicator Temporary Flow Identity **TFIN** Transport Format INdicator **TFP** TransFer Prohibited **TFS** Transport Format Set **TFT** Traffic Flow Template ΤI Transaction Identifier **TLLI** Temporary Logical Link Identity **Transport Layer Security** TLS TLV Tag Length Value TMTelecom Management **TMF** Telecom Management Forum Telecom Management Network **TMN TMSI** Temporary Mobile Subscriber Identity TNTermination Node Timeslot Number

Telecom Operations Map

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

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

TTI Transmission Timing Interv 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

**URAN** 

UPT Universal Personal Telecommunication

URA User Registration Area

UTRAN Registration Area
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 eXtenstion
WWT Work Waiting Time
WWW World Wide Web

Χ

XID eXchange IDentifier

exXpected Message Authentication Code (calculated by the USIM application in 3G AKA) eXtensible Markup Language XMAC

XML **XRES** EXpected user RESponse

Y

<void>

Z

ZCZone 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.							
DPDCH_E <sub>c</sub>	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 <sub>uw</sub>	Frequency of unwanted signal							
$I_o$	The total received power spectral density, including signal and interference, as measured at the UE antenna connector.							
I <sub>oac</sub>	The power spectral density of the adjacent frequency channel as measurat 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 <sub>or</sub>	The total transmit power spectral density of the Forward down link at the base stationNode_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 <sub>c</sub>	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 <sub>c</sub>	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 Node B (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 tramsmit power spectral density of the downlink at the BS antenna connector.
S - CCPCH _E <sub>c</sub>	Average energy per PN chip for S-CCPCH.
$S-CPICH_{-}E_{c}$	Average* energy per PN chip for S-CPICH.
SCH_E <sub>c</sub>	Average* energy per PN chip for SCH.
SCCPCH _ E <sub>c</sub>	Average energy per PN chip for SCCPCH.

<sup>\*</sup>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	001		R99	В	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	002		R99	D	New Abbreviations and Definitions for R99	3.1.1	3.2.0	
SP-09	SP-000381	S1-000627	21.905	003		R4	D	Change of Name of MExE	3.1.1	4.0.0	
SP-10	SP-000659	S1-000731	21.905	004		Rel-4	В	Introduces ASCI definition	4.0.0	4.1.0	ASCI
SP-10	SP-000659	S1-000736	21.905	005	1	Rel-4	В	Inclusion of GSM 01.04 v 7.0.0 acronyms and abbreviations in the vocabulary	4.0.0	4.1.0	CORREC T
SP-11	SP-010038	S1-010233	21.905	006		Rel-4	D	Editorial changes and new definitions	4.1.0	4.2.0	Vocab
SP-11	SP-010038	S1-010234	21.905	007		Rel-4	В	Inclusion of commonly used definition contained in 23.122	4.1.0	4.2.0	Vocab
SP-12	SP-010256		21.905	800		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	009		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	010		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	013		Rel-5	В	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	016		Rel-5	В	CR to 21.905 version 5.0.0 Nomenclature for GTT	5.0.0	5.1.0	GTT
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SP-15	SP-020046		21.905	030		Rel-5	В	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	031		Rel-5	В	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	032		Rel-5	В	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	033		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	034		Rel-5	В	CR to 21.905: missing abbreviations	5.2.0	5.3.0	TEI
SP-15	SP-020046	S1-020528	21.905	035		Rel-5	В	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	036		Rel-5	В	CR to 21905: definitions of online and offline charging	5.2.0	5.3.0	TEI
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### History

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