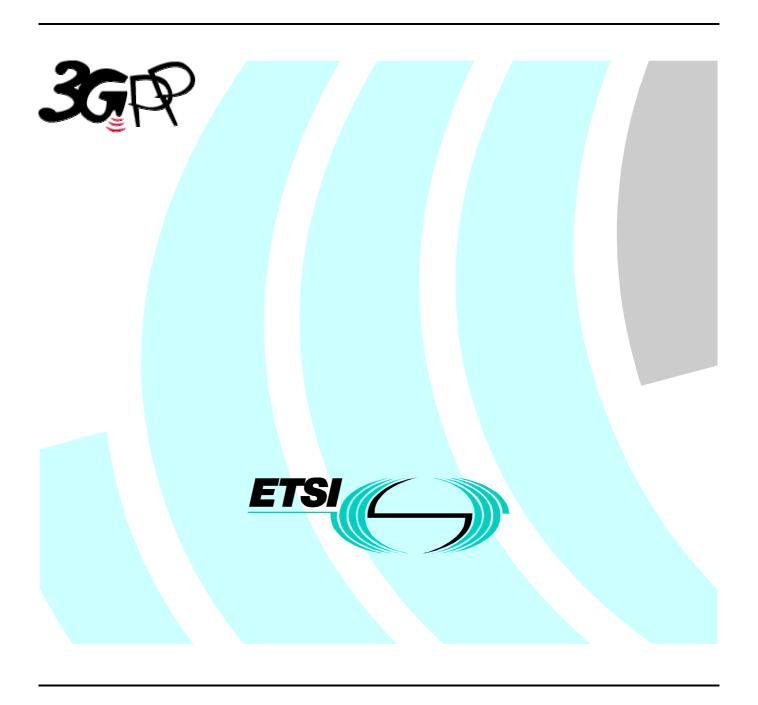
# ETSI TR 121 905 V3.2.0 (2000-10)

Technical Report

Universal Mobile Telecommunications System (UMTS); Vocabulary for 3GPP Specifications (3GPP TR 21.905 version 3.2.0 Release 1999)



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#### **ETSI**

650 Route des Lucioles F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C Association à but non lucratif enregistrée à la Sous-Préfecture de Grasse (06) N° 7803/88

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#### **Foreword**

This Technical Specification has been produced by the 3GPP.

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- 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.
- [1] 3GPP TS 01.04: "Digital cellular telecommunication system (Phase 2+); Abbreviations and acronyms".
- [2] 3GPP TS 25.990: "Technical Specification Group Radio Access Networks; Vocabulary".

#### 3 Terms and definitions

#### 0 - 9

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

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

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

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

#### Α

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.

**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 consists of a set of security mechanisms, files, data and protocols (excluding transmission protocols).

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

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

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

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

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

#### В

**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.

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

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 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).

#### 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).

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

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

**Capability Class:** A piece of information which indicates general UMTS 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.

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 UMTS which is independent of the connection technology of the terminal (eg radio, wired).

**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 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 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 UMTS service is provided with the service probability above a certain threshold.

Current directory: The latest MF or DF selected.

Current EF: The latest EF selected.

#### $\Box$

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: GSM 01.04, 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 MF and DF.

**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.

**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.

#### Ε

**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:** A file containing access conditions and data and no other files.

**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 directory or an organised set of bytes or records in the SIM.

File identifier: The 2 bytes, which address a file in the SIM

**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.

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.

**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 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.

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

**Home PLMN:** 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.

#### Ī

**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.

**ID-1 SIM:** The SIM having the format of an ID-1 card (see ISO 7816-1 [24]).

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).

**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: GSM 01.04, 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 UMTS user.

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

**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.

**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.

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

**Iub:** Interface between an RNC and a Node B.

**Iur:** A logical interface between two RNC. Whilst logically representing a point to point link between 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:** A service, which can be exclusively provided in the current serving network by a Value added Service Provider.

**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 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 UMTS Organisation has in order to manage UMTS.

**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 unique mandatory file containing access conditions and optionally DFs and/or EFs.

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

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

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

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

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

**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 SIM 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.

**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:** A 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 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 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...).

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.

**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.

#### 0

One Stop Billing: One bill for all charges incurred using UMTS.

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

Open Service Architecture: 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.

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

**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. 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 the SIM whenever the ME is powered up or a SIM is inserted, in order to limit the SIMs with which the ME will operate.

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

**Phonebook:** A dataset of personal or entity attributes. The simplest form is a set of name-subscriber pairs as supported by GSM 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 a GPRS.

**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.

**Plug-in SIM:** A Second format of SIM (specified in clause 4).

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

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

**Proactive SIM:** A SIM, which is capable of issuing commands to the Terminal. Part of SIM Application Toolkit (see clause 11).

**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.

#### O

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

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) and UTRAN RNTI (U-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.

**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 (see clause 6).

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: GSM 01.04, ITU-T I.112).

**Reference point:** A conceptual point at the conjunction of two non-overlapping functional groups (source: GSM 01.04, 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.

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 UMTS standards produced by the 3GPP project. Also: release 00, release 01, release 02 etc.

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

**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.

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.

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:** Set of functions offered to a user by an organisation.

**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 UMTS 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 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 UMTS 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 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 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 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.

**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.

**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:** Defined in GSM 11.14 [27].

**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

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

**SIM personalisation:** Enables a user to personalise a ME so that it may only be used with particular 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 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:** The responsibility for payment of charges incurred by one or more users may be undertaken by another entity designated as a subscriber. This division between use of and payment for services has no impact on standardisation.

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

**Supplementary service:** 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:** That which is offered by a PLMN operator or service provider to its customers in order to satisfy a specific telecommunication requirement. (source: GSM 01.04, 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 UMTS 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 (source: GSM 01.04). 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.

**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).

**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**): 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 UMTS system (although all UE Service Capabilities are of course constrained by the implementation of UMTS). Examples: a data bearer of 144 kbps; a high quality speech teleservice; an IP teleservice; a capability to forward a speech call.

**UMTS core network:** refers in this specification to an evolved GSM core network infrastructure or any new UMTS core network infrastructures, integrating circuit and packet switched traffic..

UMTS coverage: an area where mobile cellular services are provided in accordance with UMTS standards.

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

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

**UMTS network:** Network operated by a single network operator and consisting of UTRAN access networks (WCDMA and/or TD-CDMA), optionally GSM BSS access networks, an UMTS core network.

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

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

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

**UPC** (**Usage Parameter Control**): 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 UMTS, which uses UMTS services. Example: a person using a UMTS 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: GSM 01.04, ITU-T I.112).

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

**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.

**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).

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

Uu: The Radio interface between UTRAN and the User Equipment.



Value Added Service Provides: 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.

**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.

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#### Z

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#### 4 Abbreviations

#### 0 - 9

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

3GPP Third Generation Partnership Project

#### Α

A-SGW Access Signalling Gateway
AAL ATM Adaptation Layer
AAL2 ATM Adaptation Layer type 2
AAL5 ATM Adaptation Layer type 5

AC Access Condition
Authentication Centre

ACCH Associated Control Channel

ACIR Adjacent Channel Interference Ratio

ACK Acknowledgement

ACLR Adjacent Channel Leakage Power Ratio

ACS Adjacent Channel Selectivity
ADF Application Dedicated File

ADM Access condition to an EF which is under the control of the authority which creates this file

**ADN** Abbreviated Dialling Numbers **AESA** ATM End System Address **AGCH** Access Grant CHannel ΑI Acquisition Indicator **AICH** Acquisition Indicator Channel **AID Application IDentifier AIUR** Air Interface User Rate Anonymity key AK

ALCAP Access Link Control Application Protocol
ALSI Application Level Subscriber Identity

ALW ALWays

AM Acknowledged Mode

AMF Authentication Management Field

AMR Adaptive Multi Rate
AN Access Network
AP Access preamble

APDU Application Protocol Data Unit API Application Programming Interface

APN Access Point Name

ARP Address Resolution Protocol ARO Automatic Repeat Request

AS Access Stratum
ASC Access Service Class

ASN.1 Abstract Syntax Notation One

AT command **ATtention Command** 

Asynchronous Transfer Mode ATM

Answer To Reset **ATR Authentication Centre** AuC **AUTN** Authentication token

Additive White Gaussian Noise **AWGN** 

#### B

**B-ISDN Broadband ISDN** 

**BCCH Broadcast Control Channel** 

**Broadcast Control Functional Entity BCFE** 

**BCH Broadcast Channel BER** Bit Error Rate Border Gateway BG **Block Guard Time BGT** 

BIC **Baseline Implementation Capabilities** 

Binding Identity **BID Block Error Rate BLER** 

**BMC** Broadcast/Multicast Control **BOC Bell Operating Company** Binary Phase Shift Keying **BPSK** 

BS **Base Station** 

**BSC Base Station Controller** BSS Base Station System Base Transceiver Station BTS **BWT Block Waiting Time** 

#### C

C-Control-

C-APDU Command APDU

C-RNTI Cell Radio Network Temporary Identity

C-TPDU Command TPDU CA Capacity Allocation Certification Authority

Capacity Allocation Acknowledgement CAA

**CAMEL** Customised Application for Mobile network Enhanced Logic

CAP **CAMEL Application Part** 

Cell Broadcast CB

Cell Broadcast CHannel **CBCH CBR** Constant Bit Rate **CBS** Cell Broadcast Service CC

Call Control

CC/PP Composite Capability/Preference Profiles Completion of Calls to Busy Subscriber **CCBS** 

**CCCH** Common Control Channel Call Control Function **CCF CCH** Control Channel Corporate Control Key CCK

Certificate Configuration Message CCM Common Control Physical Channel **CCPCH CCTrCH Coded Composite Transport Channel** 

Capacity Deallocation CD

Collision Detection

Capacity Deallocation Acknowledgement CDA

**CDMA** Code Division Multiple Access

Call Detail Record **CDR** 

CFN Connection Frame Number CGI Common Gateway Interface

CHAP Challenge Handshake Authentication Protocol

CI Cell Identity

CIM Common Information Model

CLA CLAss CLK Clock

CM Connection Management

CMIP Common Management Information Protocol
CMISE Common Management Information Service

CN Core Network

CNAP Calling Name Presentation
CNL Co-operative Network List
CLNP Connectionless network protocol
CLNS Connectionless network service
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

CPICH Common Pilot Channel CPCH Common Packet Channel

CPCS Common Part Convergence Sublayer

CPS Common Part Sublayer
CPU Central Processing Unit
CRC Cyclic Redundancy Check

CRNC Controlling Radio Network Controller

CS-GW Circuit Switched Gateway

CS Circuit Switched

CSCF Call Server Control Function
CSD Circuit Switched Data
CSE Camel Service Environment
CTCH Common Traffic Channel

CTDMA Code Time Division Multiple Access

CTS Cordless Telephony System

SCTP S Common Transport Protocol CHECK WITH wg3

CW Continuous Wave (unmodulated signal)

CWI Character Waiting Integer CWT Character Waiting Time

#### D

DAD Destination ADress

DAM DECT Authentication Module
DC Dedicated Control (SAP)
DCA Dynamic Channel Allocation
DCCH Dedicated Control Channel

DCH Dedicated Channel
DDI Direct Dial In

DECT Digital Enhanced Cordless Telecommunications

DF Dedicated File

DHCP Dynamic Host Configuration Protocol

DHO Diversity Handover
diff-serv Differentiated services
DL Downlink (Forward Link)

DMTF Distributed Management Task Force

DN Destination Network
DNS Directory Name Service

DO Data Object

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

DSCH Downlink Shared Channel
DTCH Dedicated Traffic Channel
DTMF Dual Tone Multiple Frequency
DTX Discontinuous Transmission

#### Ε

E-GGSN Enhanced GGSN E-HLR Enhanced HLR ECSD Enhanced CSD

ECTRA European Committee of Telecommunications Regulatory Affairs

EDC Error Detection Code byte

EDGE Enhanced Data rates for GSM Evolution

EFS Error free seconds
EGPRS Enhanced GPRS

EIR Equipment Identity Centre

EIRP Equivalent Isotropic Radiated Power

EF Elementary File EM Element Manager

eMLPP enhanced Multi-Level Precedence and Pre-emption ETNS European Telecommunications Numbering Space ETSI European Telecommunications Standards Institute

etu elementary time unit

#### F

FACCH Fast Associated Control CHannel

FACH Forward Access Channel FAUSCH Fast Uplink Signalling Channel

FAX Facsimile

FBI Feedback Information

FCCH Frequency Correction CHannel
FCI File Control Information
FCS Frame Check Sequence
FDD Frequency Division Duplex

FDMA Frequency Division Multiple Access

FEC Forward Error Correction

FER Frame Erasure Rate, Frame Error Rate

FFS For Further Study
FM Fault Management
FN Frame Number

FNUR Fixed Network User Rate

FP Frame Protocol

FTAM File Transfer Access and Management

#### G

GC General Control (SAP)

GERAN GSM/EDGE Radio Access Network GGSN Gateway GPRS Support Node GID1 Group Identifier (level 1) GID2 Group Identifier (level 2) GMM GPRS Mobility Management

GMSC Gateway MSC

GMSK Gaussian Minimum Shift Keying

GP Guard Period

GSIM GSM Service Identity Module GPRS General Packet Radio Service

GSM Global System for Mobile communications

GSN GPRS Support Nodes GTP GPRS Tunneling Protocol

GTP-U GPRS Tunnelling Protocol for User Plane

#### Н

H-CSCF Home CSCF

HCS Hierarchical Cell Structure HDLC High Level Data Link Control

HE-VASP Home Environment Value Added Service Provider

HF Human Factors HHO Hard Handover

HLR Home Location Register

HN Home Network HO Handover

HPLMN Home Public Land Mobile Network

HPS Handover Path Switching
HRR Handover Resource Reservation
HSCSD High Speed Circuit Switched Data
HSS Home Subscriber Server

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)

#### ı

I-Block Information Block
I/O Input/Output
IC Integrated Circuit
ICC Integrated Circuit Card
ICGW Incoming Call Gateway

ICMP Internet Control Message Protocol

ID Identifier

IDL Interface Definition Language

IE Information Element

IEC International Electrotechnical Commission

IEI Information Element Identifier
IETF Internet Engineering Task Force

IF Infrastructure

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

IMA Inverse Multiplexing on ATM

IMEI International Mobile Equipment Identity
 IMGI International mobile group identity
 IMSI International Mobile Subscriber Identity
 IMT-2000 International Mobile Telecommunications 2000

IMUN International Mobile User Number

IN Intelligent Network

INAP Intelligent Network Application Part

INF INFormation field IP Internet Protocol IP-M IP Multicast

IPv4 Internet Protocol Version 4 IPv6 Internet Protocol Version 6

IR Infrared

IRP Integration Reference Point
ISCP Interference Signal Code Power
ISDN Integrated Services Digital Network

ISO International Organisation for Standardisation

ISP Internet Service Provider

ISUP ISDN User Part

ITU International Telecommunication Union

IUI International USIM Identifier

IWU Inter Working Unit

#### J

JAR file Java Archive File JD Joint Detection

JNDI Java Naming Directory Interface

JP Joint Predistortion

JPEG Joint Photographic Experts Group

JTAPI Java Telephony Application Programming Interface

#### K

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

L1 Layer 1 (physical layer) L2 Layer 2 (data link layer) L3 Layer 3 (network layer)

LA Location Area
LAC Link Access Control
LAI Location Area Identity
LAN Local Area Network

LAPB Link Access Protocol Balanced LATA Local Access and Transport Area

LAU Location Area Update
LCD Low Constrained Delay
LCP Link Control Protocol
LCS Location Services

LEN LENgth

LLC Logical Link Control LN Logical Name

LNS L2TP Network Server
LSA Localised Service Area
LSB Least Significant Bit
LTZ Local Time Zone

#### M

MA Multiple Access

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)

MAC Medium Access Control (protocol layering context)
MAC Message authentication code (encryption context)

MAHO Mobile Assisted Handover
MAP Mobile Application Part
MCC Mobile Country Code
MCML Multi-Class Multi-Link PPP
Mcps Mega-chips per second
MCU Media Control Unit

MDS Multimedia Distribution Service

ME Mobile Equipment

MEHO Mobile evaluated handover MER Message Error Rate

MExE Mobile Execution Environment

MF Master File

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

MIB Management Information Base
MIM Management Information Model

MIP Mobile IP

MIPS Million Instructions Per Second

MM Mobility Management
MMI Man Machine Interface
MNC Mobile Network Code
MNP Mobile Number Portability

MO Mobile Originated
MOHO Mobile Originated Handover

MOS Mean Opinion Score MP Multi-link PPP

MPEG Moving Pictures Experts Group MRF Media Resource Function

MS Mobile Station
MSB Most Significant Bit
MSC Mobile Switching Centre
MSE MEXE Service Environment
MSID Mobile Station Identifier

MSIN Mobile Station Identification Number
MSISDN Mobile Subscriber ISDN Number
MSP Multiple Subscriber Profile

MT Mobile Terminated
MTP Message Transfer Part
MTP3-B Message Transfer Part level 3
MTU Maximum Transfer Unit
MUI Mobile User Identifier

#### Ν

**NAD** Node Address byte NAI Network Access Identifier Non-Access Stratum NAS **NBAP** Node B Application Part **NCH** Notification CHannel **NCK** Network Control Key Network Control Protocol **NCP NDC** National Destination Code **NDUB** Network Determined User Busy

NE Network Element

NEHO Network evaluated handover

NEV NEVer

NITZ Network Identity and Time Zone

NM Network Manager

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
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 Non Transparent

NUI National User / USIM Identifier

NW Network

#### O

O&M Operations and Maintenance OCCCH ODMA Common Control Channel

OCF Open Card Framework
ODB Operator Determined Barring
ODCCH ODMA Dedicated Control Channel
ODCH ODMA Dedicated Channel

ODMA Opportunity Driven Multiple Access
ODTCH ODMA Dedicated Traffic Channel
OMC Operation and Maintenance Centre
ORACH ODMA Random Access CHannel

OS Operations System
OSA Open Service Architecture
OSP Octet Stream Protocol

OSP:IHOSS Octet Stream Protocol for Internet Hosted Octet Stream Service

OVSF Orthogonal Variable Spreading Factor

#### P

**PCB** 

P-TMSI Packet TMSI

PAD Packet Assember/Disassembler
PAP Password Authentication Protocol

PBP Paging Block Periodicity
PBX Private Branch eXchange

PC Power Control

Personal Computer Protocol Control Byte

PCCC Parallel Concatenated Convolutional Code

PCCH Paging Control Channel PCG Project Co-ordination Group

PCH Paging Channel

PCK Personalisation Control Key

PCMCIA Personal Computer Memory Card International Association

PCPCH Physical Common Packet Channel

PCCPCH Primary Common Control Physical Channel

PCS Personal Communication System

PCU Packet Control Unit PD Protocol Discriminator

PDCP Packet Data Convergence Protocol PDH Plesiochronous Digital Hierarchy

PDN Public Data Network

Packet Data Network Packet Data Protocol

PDSCH Physical Downlink Shared Channel

PDU Protocol Data Unit PG Processing Gain

**PDP** 

PHF Packet Handler Function
PHS Personal Handyphone System

PHY Physical layer
PhyCH Physical Channel
PI Page Indicator
PICH Page Indicator Channel
PID Packet Identification

PIN Personal Identification Number PLMN Public Land Mobile Network PMD Physical Media Dependent

PN Pseudo Noise

PNP Private Numbering Plan
POTS Plain Old Telephony Service
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

PS Packet Switched

PSC Primary Synchronisation Code
PSCH Physical Shared Channel
PSE Personal Service Environment
PSTN Public Switched Telephone Network

PTM Point-to-Multipoint
PTM-G PTM Group Call
PTM-M PTM Multicast
PTP Point to point
PU Payload Unit

PUSCH Physical Uplink Shared Channel PVC Permanent Virtual Circuit

#### Q

QoS Quality of Service

QPSK Quadrature (Quaternary) Phase Shift Keying

#### R

R-APDU Response APDU Receive-ready Block

R-SGW Roaming Signalling Gateway

R-TPDU Response TPDU
R00 Release 2000
R99 Release 1999
RA Routing Area
RAB Radio Access Bearer
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

RAU Routing Area Update

RB Radio Bearer

RDF Resource Description Format

RF Radio Frequency
RFC Request For Comments
RFE Routing Functional Identity
RFU Reserved for Future Use

RL Radio Link

RLC Radio Link Control

RLCP Radio Link Control Protocol

RLS Radio Link Set

RNC Radio Network Controller RNS Radio Network Subsystem

RNSAP Radio Network Subsystem Application Part
RNTI Radio Network Temporary Identity
RPLMN Registered Public Land Mobile Network

RR Radio Resources
RRC Radio Resource Control
RRM Radio Resource Management
RSCP Received Signal Code Power
RSSI Received Signal Strength Indicator

RST Reset

RSVP Resource ReserVation Protocol

RT Real Time

RTP Real Time Protocol RU Resource Unit RX Receive

#### S

S-Block Supervisory Block S-CSCF Serving CSCF

S-RNTI SRNC Radio Network Temporary Identity
SAAL Signalling ATM Adaptation Layer
SACCH Slow Associated Control Channel

SAD Source ADdress SAP Service Access Point

SAPI Service Access Point Identifier SAR Segmentation and Reassembly SAT SIM Application Toolkit

SCCH Synchronisation Control Channel

SCCPCH Secondary Common Control Physical Channel

SCF Service Control Function (IN context), Service Capability Feature (VHE/OSA context)

SCH Synchronisation Channel
SCI Subscriber Controlled Input
SCP Service Control Point

SCTP S Common Transport Protocol CHECK WITH wg3

SDCCH Stand-Alone Dedicated Control Channel

SDH Synchronous Digital Hierarchy

SDU Service Data Unit
SE Security Environment
SF Spreading Factor
SFI Short EF Identifier
SFN System Frame Number
SGSN Serving GPRS Support Node
SHCCH Shared Channel Control Channel

SIC Service Implementation Capabilities
SIM GSM Subscriber Identity Module
SIP Session Initiated Protocol
SIR Signal-to-Interference Ratio

SMDS Switched Multimegabit Data Service

SMG Special Mobile Group

SMI Structure of Management Information (RFC 1155)

SLA Service Level Agreement
SMS Short Message Service
SMS-CB SMS Cell Broadcast
SN Serving Network

SNDCP Sub-Network Dependent Convergence Protocol

SNMP Simple Network Management Protocol SoLSA Support of Localised Service Area

SP Switching Point

Service Provider

SPCK Service Provider Control Key

SQN Sequence number

SRNC Serving Radio Network Controller

SRNS Serving RNS

SS7 Signalling System No. 7
SSC Secondary Synchronisation Code

SSCOP Service Specific Connection Oriented Protocol SSCF Service Specific Co-ordination Function

SSCF-NNI Service Specific Coordination Function – Network Node Interface

SSCS Service Specific Convergence Sublayer SSDT Site Selection Diversity Transmission

SSF Service Switching Function

SSSAR Service Specific Segmentation and Re-assembly sublayer

STC Signalling Transport Converter STTD Space Time Transmit Diversity SVC Switched virtual circuit

SW Status Word

#### Т

T-SGW Transport Signalling Gateway

T Transparent

TA Terminal Adaptation
TBF Temporary Block Flow

TC TransCoder

Transmission Convergence

TCH Traffic Channel

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)

TEID Tunnel End Point Identifier

TF Transport Format

TFC Transport Format Combination

TFCI Transport Format Combination Indicator
TFCS Transport Format Combination Set

TFI Transport Format Indicator
TFS Transport Format Set
TFT Traffic Flow Template
TI Transaction Identifier

TLLI Temporary Link Level Identity

TLS Transport Layer Security
TLV Tag Length Value
TM Telecom Management
TMF Telecom Management Forum
TMN Telecom Management Network
TMSI Temporary Mobile Subscriber Identity

TN Termination Node
TO Telecom Operations Map

TP Third Party

TPC Transmit Power Control
TPDU Transfer Protocol Data Unit

TR Technical Report
TrCH Transport Channel
TS Technical Specification
TSG Technical Specification Group
TSTD Time Switched Transmit Diversity
TTI Transmission Timing Interval

TX Transmit

#### 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
UDP User Datagram Protocol

UE User Equipment

UE<sub>R</sub> User Equipment with ODMA relay operation enabled

UI User Interface

UICC Universal Integrated Circuit Card

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

UPT Universal Personal Telecommunication

URA User Registration Area UTRAN Registration Area

URAN UMTS Radio Access Network
URI Uniform Resource Identifier
URL Uniform Resource Locator
USB Universal Serial Bus
USC UE Service Capabilities
USCH Uplink Shared Channel

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

#### ٧

VA Voice Activity factor

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

VoIP Voice Over IP

VPLMN Visited Public Land Mobile Network

VPN Virtual Private Network

#### W

WAE Wireless Application Environment
WAP Wireless Application Protocol
WBEM Web Based Enterprise Management
WCDMA Wideband Code Division Multiple Access

WG Working Group

WDP Wireless Datagram Protocol
WIN Wireless Intelligent Network
WSP Wireless Session Protocol
WTA Wireless Telephony Applications

WTAI Wireless Telephony Applications Interface

WTLS Wireless Transport Layer Security
WTP Wireless Transaction Protocol
WTX Waiting Time eXtenstion
WWT Work Waiting Time
WWW World Wide Web

#### X

XRES EXpected user RESponse

#### Y

<void>

#### Ζ

<void>

# 5 Equations

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

## Annex A: Change history

	Change history									
TSG SA#	SA Doc.	SA1 Doc	Spec	CR	Rev	Rel	Cat	Subject/Comment	Old	New
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,	3.0.0	3.1.0
								language alignment and editorial changes		
08/2000	-	-	21.905	-	-	-	-	MCC correction of CR001 implementation;	3.1.0	3.1.1
								editorial update.		
SP-09	SP-000380	S1-000477	21.905	002		R99	D	New Abbreviations and Definitions for R99	3.1.1	3.2.0

## History

Document history						
V3.0.0	March 2000	Publication				
V3.1.1	August 2000	Publication				
V3.2.0	October 2000	Publication				