International Telecommunication Union

ITU-R
Radiocommunication Sector of ITU

Recommendation ITU-R M.1224-1
(03/2012)

Vocabulary of terms for International Mobile Telecommunications (IMT)

M Series

Mobile, radiodetermination, amateur and related satellite services

International Telecommunication Union

Foreword

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SM	Spectrum management
SNG	Satellite news gathering
TF	Time signals and frequency standards emissions
V	Vocabulary and related subjects

Note: *This ITU-R Recommendation was approved in English under the procedure detailed in Resolution ITU-R 1.*

Electronic Publication
Geneva, 2012

 ITU 2012

RECOMMENDATION ITU-R M.1224-1

Vocabulary of terms for International Mobile Telecommunications (IMT)

(1997-2012)

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1   Introduction

International Mobile Telecommunications (IMT) systems are mobile systems that provide access to a wide range of telecommunication services including advanced mobile services, supported by mobile and fixed networks, which are increasingly packet-based.

IMT systems support low to high mobility applications and a wide range of data rates in accordance with user and service demands in multiple user environments. IMT also has capabilities for high quality multimedia applications within a wide range of services and platforms, providing a significant improvement in performance and quality of service.

Key features

−   a high degree of commonality of functionality worldwide while retaining the flexibility to support a wide range of services and applications in a cost efficient manner;

−   compatibility of services within IMT and with fixed networks;

−   capability of interworking with other radio access systems;

−   high quality mobile services;

−   user equipment suitable for worldwide use;

−   user-friendly applications, services and equipment;

−   worldwide roaming capability;

−   enhanced peak data rates to support advanced services and applications.

These features enable IMT to address evolving user needs and the capabilities of IMT systems are being continuously enhanced in line with user trends and technology developments.

IMT will operate in the worldwide bands identified in the Radio Regulations. IMT is defined by a set of interdependent ITU Recommendations and Reports of which this one is a member. This Recommendation contains definitions of terms and abbreviations used in the ITU Recommendations and Reports on IMT.

2   Scope

This Recommendation consists primarily of those terms and definitions that are considered essential to the understanding and application of the principles of IMT.

Although these terms may already be defined in other ITU Recommendations, the definitions given here were drawn from the essential Recommendations and Reports related to IMT. Nevertheless, the terms defined below are not necessarily exclusive to IMT, and so far as they are relevant, may also apply to other communication systems and services.

3   Structure of the Recommendation

Definition of Terms

Section 4.1 contains the definitions of terms used in IMT Recommendations and Reports.

List of abbreviations and acronyms

Section 4.2 contains a list of abbreviations and acronyms which are used in IMT Recommendations and Reports.

4   Recommendation

For the purposes of Recommendations and Reports related to IMT, the following terms, definitions, abbreviations and acronyms are recommended to be used with the meanings defined below.

These terms, definitions, abbreviations and acronyms are not necessarily exclusive to IMT, and so far as they are relevant, may also apply to other communication systems and services. It is further noted that these terms, definitions, abbreviations and acronyms are defined within a specific context as indicated in the sections below and thus may be found in more than one section of this Recommendation.

4.1 Definitions of terms in IMT Recommendations and Reports

4.1.1 Definitions of terms related to IMT-2000[1]

Access control for service profile data: A feature by which there are restrictions in the access to the personal service profile of an IMT-2000 user or subscriber stored in the network.

Access control for subscription data: A feature by which there are restrictions in the access to the personal data of an IMT-2000 user or subscriber stored in the network.

Accounting: A function which apportions the revenue obtained by the service providers to network operators in line with commercial arrangements.

Adaptive terminal: Terminal equipment with the capability of adapting to more than one type of network.

NOTE 1 – Adapting to different networks could be accomplished by using a combination of techniques such as analogue-to-digital/digital-to-analogue conversion, multiband antennas and/or software radio architectures.

Advice-of-charge (AoC): A supplementary service offering the possibility for a mobile user to reach charging information related to the used telecommunications services.

NOTE 1 – This service may include one or more of the following cases:

– charging information at the end of the call;
– charging information during a call;
– charging information at call set-up time.

Anonymity: The process of hiding a user's identity, and location.

Asynchronous transfer mode (ATM): A transfer mode in which the information is organized into cells; it is asynchronous in the sense that the recurrence of cells depends on the required or instantaneous bit rate. Statistical and deterministic values may also be used to qualify the transfer mode.

Authentication: The process of verifying the identity of a user, terminal, or service provider.

Authentication algorithm: A sequence of security information known by the user, or maintained in an access device. It is used to provide secure access to the service. This may involve complex algorithms.

Authentication response: The resultant bit pattern obtained through the operation by the mobile station using the authentication random number.

Availability performance: The ability of an item to be in a state to perform a required function at a given instant of time or at any instant of time within a given time interval.

Base station (BS): The common name for all the radio equipment located at one and the same place used for serving one or several cells.

Bearer capability: A transmission function which the mobile station requests to the network.

Bearer service: A type of telecommunication service that provides the capability for the transmission of information between user-network interfaces.

NOTE 1 – The ISDN connection type used to support a bearer service may be identical to that used to support other types of telecommunication services.

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[1] See also § 5.X.2 of Recommendation ITU-R M.1457.

Billing: A function whereby charging information generated by the charging function is transformed into bills requiring payment. Billing also includes collecting payments from the subscribers.

Broadcast call: A point-to-multipoint call in which the same information is transmitted simultaneously by the calling user to all intended users.

Broadcast control channel (BCCH): The BCCH provides the broadcast capability for a variety of information streams from base stations to mobile stations, including information necessary for the MS to register in the system.

Call: The use, or possible use, of one or more connections set up between two or more users and/or services.

Call control (CC): A function in layer 3 which carries out call processing.

NOTE 1 – The term "layer" refers to the OSI (Open Systems Interconnection) reference model.

Call forwarding (CF): A supplementary service or a service feature which allows the user to have his incoming calls addressed to another number.

Call hold (CH): A supplementary service which allows a served mobile user to interrupt communication on an existing active call and then subsequently, if desired, re-establish communication.

Call transfer (CT): A supplementary service or a service feature which enables the served mobile user to transfer an established incoming or outgoing call to a third party.

Call waiting (CW): A supplementary service or a service feature which permits the possibility for a mobile user to be notified of an incoming call while the termination is in the busy state. Subsequently, the subscriber can either answer, reject, or ignore the incoming call.

Calling party identification presentation (CPIP): A supplementary service which allows a UPT user to specify that the identity of the calling user or terminal access shall be announced on the alerting terminal in the case of an incoming UPT call. The identity of terminal access must never be presented if the calling party is a UPT user.

Capability: The ability of an item to meet a service demand of given quantitative characteristics under given internal conditions.

Cell: The radio coverage area of a satellite spot beam or a base station, or of a subsystem (e.g. sector antenna) of that base station corresponding to a specific logical identification on the radio path, whichever is smaller.

NOTE 1 – Every mobile station in a cell may be reached by the corresponding radio equipment.

Charging: A function, whereby information is gathered, recorded or transferred in order to make it possible to determine and to collate usage for which the subscriber may be billed.

Circuit transfer mode: A transfer mode in which transmission and switching functions are achieved by permanent or quasi-permanent allocation of channels, bandwidth or codes between identified points of a connection.

Closed user group (CUG): A supplementary service or a service feature which allows users to form groups to and from which access is restricted. A specific user may be a member of more than one CUG. Members of a specific CUG can communicate among themselves but not, in general, with users outside the group.

NOTE 1 – Specific users of a CUG may have additional capabilities or additional restrictions that apply.

Code excited linear prediction (CELP): A type of speech coding system where voice wave forms are analysed into parameters before they are transmitted.

Colour code: A code which is assigned to each cluster (frequency repetition unit) to discern signals sent from a station which is causing interference.

Common access channel (CAC): A channel which is composed of BCCH, PCH, SCCH and UPCH. One physical channel is commonly used by several users.

Common control channel (CCCH): A point-to-multipoint, bidirectional control channel. A CCCH is primarily intended to support signalling information for call control, mobility management and RF transmission management.

Common platform: A function for which CC, MM and RT information are sent simultaneously on one signal in order to increase signal transfer efficiency on layer 3.

NOTE 1 – The term "layer" refers to the OSI (Open Systems Interconnection) reference model.

Compatibility: A degree of transparency sufficient to support an acceptable grade of service with respect to a connection between system entities. Full compatibility implies full transparency.

Completion of calls to busy subscriber (CCBS): A supplementary service which allows a calling user to be informed upon encountering a busy destination and to complete the call when that destination becomes free, without re-dialling.

Confidentiality: A property by which information relating to an entity or party is not made available or disclosed to unauthorized individuals, entities or processes.

Connectionless service: A service which allows the transfer of information among users without the need for end-to-end calls establishment procedures. Connectionless services may be used to support both interactive and distribution services.

Conversational service: An interactive service which provides bidirectional communication by means of real-time (no store-and-forward) end-to-end information transfer from user to user or between user and host.

Credit card calling (CCC): A supplementary service which allows the caller to have the call charged to the account specified by the CCC number.

Customized ringing (CRG): A service feature offering the invocation of distinct ringing cadences based upon origin of call. This is used to give an indication of where the call comes from.

Data integrity: The property that the data has not been altered or destroyed in an unauthorized manner.

Dependability: The collective term used to describe the availability performance and its influencing factors, such as, reliability performance, maintainability performance and maintenance support performance. Dependability is used only for general descriptions in non-quantitative terms.

Distribution service: A service characterized by the unidirectional flow of information from a given point in the network to the other (multiple) locations. Distribution service are subdivided into two classes:

– without user individual presentation control;

– with user individual presentation control.

Downlink (satellite): A radio transmission link in the direction of space-to-Earth.

Downlink (terrestrial): A unidirectional radio pathway for the transmission of signals from one base station to one or more mobile stations.

Emergency service: A telecommunication service, which is used to access a public emergency centre, characterized by a locally significant access number, high priority, and distinctive feature interactions.

Encryption: A function used to transform data so as to hide its information content to prevent it's unauthorized use.

Evolution: A process of change and development of a mobile radio system towards enhanced capabilities.

Evolution towards IMT-2000: A process of change and development of a mobile radio system towards the capabilities and functionalities of IMT-2000.

Feeder link (satellite): A radio transmission link between land earth station and space station.

Frame: A block of variable length identified by a label at layer 2 of the OSI reference model, i.e. an HDLC block.

NOTE 1 – The terms "layer" and "HDLC" refer to the OSI (Open Systems Interconnection) reference model.

Frame synchronization word: The bits which are used for synchronization of the frame. Several words are used within one frame to identify the slot to be used in the carrier.

Freephone (FPH): A supplementary service which allows a subscriber to offer a call free of charge to a caller at the subscriber's expense for that call.

Functional architecture: A functional configuration which identifies and defines network entities and the functional interfaces between these network entities.

Functional entity: A grouping of service providing functions at a single location. It is a subset of the total set of functions required to provide the service.

Functional interface: The application layer protocol between a pair of network entities.

Functional model: A model which identifies and defines functional entities and relationships between these functional entities.

Geostationary satellite orbit (GSO): The orbit of a geosynchronous satellite whose circular and direct orbit lies in the plane of the Earth's equator.

Global service area: Worldwide service area.

Handover: The action of switching a call in progress from one cell to another (intercell) or between radio channels in the same cell (intracell) without interruption of the call.

NOTE 1 – Handover is used to allow established calls to continue when mobile stations move from one cell to another (or as a method to minimize co-channel interference).

Highly inclined elliptical orbit (HEO): An elliptical orbit most typically with a perigee of 500 km or more and a apogee of 50 000 km or less altitude above the Earth's surface with an inclination angle greater than 40° from the equatorial plane.

Home location registers (HLR): The location database to which a mobile station is assigned for record purposes such as the service profile information of a subscriber or user.

Identification: A step in a procedure used to identify a user or terminal to a service provider for the purposes of broad prevention.

IMT-2000: Those systems that conform to the corresponding series of ITU Recommendations and Radio Regulations.

IMT-2000 access provider: A person or entity that provides IMT-2000 radio access to a telecommunication network in order that some or all of the services provided by that network may be available to users.

IMT-2000 network operator: A legal person or entity ultimately responsible for providing complete IMT-2000 network functionality to IMT-2000 user. Parts of the complete IMT-2000 network functionality may however, be provided by other parties.

IMT-2000 radio interface: The means of realizing the wireless electromagnetic interconnection between an IMT-2000 mobile station (or mobile earth station) and an IMT-2000 base station (or space station).

NOTE 1 – The IMT-2000 radio interface specification consists of a statement of the form and content of the signals transmitted from stations. The specification contains the definition of functional characteristics, common radio (physical) interconnection characteristics, signal characteristics, and other characteristics, as appropriate.

IMT-2000 service profile: A record containing the information related to an IMT-2000 user in order to provide that user with the IMT-2000 service.

NOTE 1 – Each IMT-2000 service profile is associated with a single IMT-2000 number.

IMT-2000 service provider: A legal person or entity responsible for providing IMT-2000 subscriptions to IMT-2000 subscriber.

IMT-2000 subscriber: A legal person or entity associated with the IMT-2000 subscription and responsible for the charges incurred by his associated IMT-2000 user.

NOTE 1 – IMT-2000 subscriber may be responsible for several IMT-2000 users.

IMT-2000 user: A person, entity or process actually using the IMT-2000 services. An IMT-2000 user is associated with a unique user identity.

Indication primitive: A service primitive which is used by the service-provider to notify the service-user of a request for a service or action initiated by the service-provider.

Information capacity: The total number of user-channel information bits that can be supported by a single cell (or spot beam) which is part of an infinite set of identical cells (or large number of satellite spot beams) in a uniform two-dimensional (or three-dimensional) pattern.

NOTE 1 – The information capacity, typically measured in "Mbit/s/cell or Mbit/s/satellite spot beam", must be specified at a stated spectrum allocation, quality and grade of service, assuming an appropriate propagation model. This metric is valuable for comparing systems with identical user channel requirements.

Information flow: An interaction between functional entities required to support their joint operation. The complete set of "information flows" between a pair of functional entities describes fully and sufficiently the relationship between them.

Integration: The act or process or an instance of forming, coordinating, or blending into a functioning or unified whole.

Integrity: A property by which the information contents of an object is prevented from being modified.

Intelligent network (IN): A telecommunication network based on an architecture that provides flexibility for facilitating the introduction of new capabilities and services, including those under customer control.

Interactive service: A service which provides the means for the bidirectional exchange of information between users or between users and hosts.

NOTE 1 – Interactive services are subdivided into three classes of services: conversational services, messaging services and retrieval services.

Intercell handover: (See "Handover".)

International mobile user identity (IMUI): The unique identifier allocated to each IMT-2000 user which is used to identify the user to the IMT-2000 operator.

Interoperability: The ability of multiple entities in different networks or systems to operate together without the need for additional conversion or mapping of states and protocols.

Interworking: The means of supporting communications and interactions between entities in different networks or systems.

Interworking functions: Mechanisms which mask the differences in physical, link, and network technologies by converting or mapping states and protocols into consistent network and user services.

Intracell handover: (See "Handover".)

Land earth station (LES): A part of the feeder-link system of a satellite network which provides for traffic and signalling connections between the space and terrestrial infrastructure segments of the satellite system.

NOTE 1 – Generally, the LES does not operate within the IMT-2000 frequency bands 1 885-2 200 MHz.

Location confidentiality: A function by which the information about the location of an entity is accessible only to the authorized parties.

Location service: A particular mobility service in which location information can be provided to authorized users or to relevant authorities in case of emergency calls or for vehicular traffic management.

Logical channel: An information stream dedicated to the transmission of a type of information supported by a radio bearer connection. Multiple logical channels can be mapped onto a single physical channel. One logical channel can also be mapped or duplicated on multiple physical channels.

Low-Earth orbit (LEO): A circular or elliptical orbit of about 700 to 3 000 km altitude above the Earth's surface.

Macro cells: Cells with a large cell radius, typically several tens of km. (Radius of 35 km.)

NOTE 1 – The radius of a cell can be extended by the use of directional antennas.

NOTE 2 – Macro cells are characterized by low-to-medium traffic density, support for moderate mobile station speeds and narrow band services.

NOTE 3 – A typical macro cell may be situated in a rural or suburban environment, with moderate building blockage, and, depending on terrain, significant foliage blockage.

Macro diversity: A family of diversity techniques where diversity is provided by using multiple physical channels forming in the general case a point-to-multipoint RF connection in the uplink and a multipoint-to-point connection in the downlink carrying a single data transmission.

NOTE 1 – Such techniques include base station diversity, soft hand-off, simulcast, etc. At the mobile terminal side, macro-diversity and micro-diversity reception may in certain cases be similar.

Malicious call identification (MCI): A supplementary service which allows the user to request that the source of an incoming call be identified and presented to an authorized entity.

Mediation function (MF): The MF block acts on information passing between an OSF and NEF (or QAF) to ensure that the information conforms to the expectations of the functional blocks attached to the MF. This may be necessary as the scope of the same reference point can differ. Mediation functional blocks may store, adapt, filter, threshold and condense information.

Mega (satellite) cells: Cells which provide coverage to large areas and are particularly useful for remote areas with low traffic density. Due to their size, mega cells will provide coverage in many kinds of environment, from remote to urban, in areas without access to terrestrial telecommunications networks and in developing countries (even in urban areas) where this may be the only cell type available.

NOTE 1 – Currently, mega cells can only be practically provided by satellite (the term "satellite cell" is sometimes used interchangeably with mega cell); however, it may be possible in the future for satellites to provide macro cell coverage.

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 conversation) functions.

Micro cells: Cells with low antenna sites, predominantly in urban areas, with a typical cell radius of up to 1 km.

NOTE 1 – Micro cells are characterized by medium-to-high traffic density, low mobile station speeds and narrow-band services.

NOTE 2 – Blockage by man-made structures may be significant in a micro cell environment.

Micro diversity: Is a family of diversity techniques which can be implemented on top of a single point-to-point RF transmission using a single physical channel. Such techniques include: antenna diversity, polarization diversity, multipath diversity, etc.

Migration to IMT-2000: Movement of users and/or service delivery from existing telecommunication networks to IMT-2000.

Mobile earth station (MES): An entity capable of accessing a set of IMT-2000 satellite services. This entity may be stationary or in motion within the IMT-2000 service area while accessing IMT-2000 satellite services and may simultaneously serve one or more user.

NOTE 1 – A user of a mobile earth station may also have several simultaneous connections with the network.

Mobile services switching centre (MSC): In an automatic system, the MSC constitutes the interface between the radio system and the public switched telephone network. The MSC performs all necessary signalling functions in order to establish calls to and from mobile stations.

Mobile station (MS): A station in the mobile service intended to be used while in motion or during halts at unspecified points.

Mobile termination (MT): The part of the mobile station which terminates the radio path at the mobile side and adapts the capabilities of the radio path to the capabilities of the terminal equipment.

Mobility management (MM): A function in the layer 3 which carries out registration and authentication for the mobile station.

NOTE 1 – The term "layer" refers to the OSI (Open Systems Interconnection) reference model.

Mobility manager: A repository of information and its associated processes accessed by personal mobility management or terminal mobility management.

NOTE 1 – A mobility manager is used for location management, terminal registration and personal registration. A mobility manager is a functional concept which may be implemented in different ways, for example, as a database or in a signalling transfer point.

Mobility service: Services which are directly related to the mobility of a user including terminal mobility.

Multiband terminal: Terminal equipment with the capability of accessing services using different frequency bands.

Multimedia service: A service in which the interchanged information consists of more than one type (e.g. video, data, voice, graphics). Multimedia services have multivalued attributes which distinguish them from traditional telecommunication services such as voice or data. A multimedia service may involve multiple parties, multiple connections, the addition/deletion of resources and users within a single communication session.

NOTE 1 – In IMT-2000 specifications or reports, multimedia is used in the sense of multiple information types supported within what the user sees as a single call.

Network: A set of nodes and links that provides connections between two or more defined points to facilitate telecommunication between them.

Network architecture: A network configuration which identifies and defines physical entities and physical interfaces between these physical entities.

Network element function; TMN related (NEF): The functionality providing the communication with the TMN being managed required for monitoring and control purpose.

Network entity: A set of functional entities that is mapped onto a single piece of equipment in all anticipated system implementations. A network entity always relates to one physical entity of the network architecture.

Network integration: Integration as applied to networks.

Network operators: A provider of network capabilities needed to support the services offered to subscribers.

Network performance (NP): The ability of a network or network portion to provide the functions related to communications between users; it contributes to service accessibility, service retainability and service integrity. Network performance parameter values are usually derived from quality of service (QoS) parameter values.

One number (ONE): A service feature enabling that the same logical number dialled from different physical areas will connect to different physical destinations.

Operational system function (OSF): The functionality for processing information related to telecommunication management for the purposes of monitoring, coordinating and/or controlling telecommunication functions to include management functions (i.e. the TMN itself).

Operations system (OS): The OS is the system which performs OSFs. The OS may optionally provide MFs, QSFs and WSFs.

Packet: An information block identified by a label at layer 3 of the OSI reference model.

NOTE 1 – The term "layer" refers to the OSI (Open Systems Interconnection) reference model.

Packet transfer 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.

Paging: Paging is the non-speech, one-way, selective transfer of a simple alert message (e.g. tone only) or a message (e.g. numeric, alphanumeric or transparent data) to a mobile receiver or pager.

NOTE 1 – The feature "Paging with Acknowledgement" is also possible.

Paging channel (PCH): A unidirectional channel on which the network transfers the same information to mobile terminals throughout the paging area.

Path: The continuous series of positions or configurations of a mobile radio system that can be assumed in the process of change when moving towards an IMT-2000.

Personal communications service (PCS): A set of capabilities that allows some combination of terminal mobility, personal mobility, and service profile management.

NOTE 1 – The acronym PCS should be taken to refer to personal communication services.

Personal identification number (PIN): A personal code used for authentication of the user against the UIM to prevent its unauthorized use.

Personal mobility: The ability of a user to access telecommunication services at any terminal on the basis of a personal telecommunication identifier, and the capability of the network to provide those services according to the user's service profile.

NOTE 1 – Personal mobility involves the network capability to locate the terminal associated with the user for the purposes of addressing, routing, and charging of the user's calls.

NOTE 2 – The word "access" is intended to convey the concepts of both originating and terminating services.

NOTE 3 – Management of the service profile by the user is not part of personal mobility.

Personal terminal: A light-weight, small, portable terminal providing the capability for the user to be either stationary or in motion while accessing and using telecommunication services.

Physical channel: A path through a communication space defined in time, frequency and code, which is established for a given period of time. Multiple physical channels can be mapped onto a single radio-frequency channel. One physical channel can also be mapped or duplicated on multiple radio-frequency channels.

Physical entity: A set of zero or more functional entities which are mapped onto a single piece of equipment in all anticipated system implementations, together with the required communication functionality. A "physical entity" corresponds to a single network entity, or it only implements lower-layer communication functions.

Pico cells: Small cells with a typical cell radius of less than 50 m that are predominantly situated indoors.

NOTE 1 – Pico cells are characterized by medium to high traffic density support for mobile low speed stations and wide band services.

Pocket-sized station: A small size, light weight mobile station with relatively low power consumption that can comfortably be carried around by a person.

Portable station: A mobile station that is portable but cannot comfortably be carried around by a person due to weight and/or size, or having relatively high power consumption.

Position determination: The process of determining geographic coordinates/location based on measurements or other information received.

Pre-IMT-2000: Mobile systems that are currently in service or will be introduced prior to IMT-2000.

Privacy: The right of individuals to control or influence what information related to them may be collected and stored and by whom and to whom that information may be disclosed.

NOTE 1 – National laws may apply in matters dealing with the protection of privacy.

Public land mobile network (PLMN): A network established and operated by an administration or Recognized Operating Agency (ROA) for the specific purpose of providing land mobile telecommunication services to the public. A PLMN may be regarded as an extension of a fixed network (e.g. PSTN) or as an integral part of the PSTN.

NOTE 1 – A PLMN may comprise terrestrial cells or a combination of terrestrial and satellite cells.

Public mobile satellite network: A network analogous to a PLMN which serves users via satellite only.

Q adapter function (QAF): The QAF block is used to connect as part of the TMN those non-TMN entities which are NEF-like and OSF-like. The responsibility of the QAF is to translate between a TMN reference point and a non-TMN (e.g. proprietary) reference point and hence this latter activity is shown outside the TMN.

Quality of service (QoS): The collective effect of service performances which determine the degree of satisfaction of a user of a service. It is characterized 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;

–   other factors specific to each service.

Radio bearer connection (RBC): The radio bearer connection is the connection between the MRBC (mobile radio bearer connection) functional entity and the RBC (radio bearer connection) functional entity. It is the element of the end-to-end connection whose configuration is conditioned by radio related attributes. A radio bearer connection may be built consisting of several connection elements.

Radio-frequency (RF) channel: A specified portion of the RF spectrum with a defined bandwidth and a carrier frequency and is capable of carrying information over the radio interface.

Radio interface: The common boundary between the mobile station and the radio equipment in the network, defined by functional characteristics, common radio (physical) interconnection characteristics, and other characteristics, as appropriate.

NOTE 1 – An interface standard specifies the bidirectional interconnection between both sides of the interface at once. The specification includes the type, quantity and function of the interconnecting means and the type, form and sequencing order of the signals to be interchanged by those means. The term "air interface" is synonymous with the term "radio interface". See also "IMT-2000 radio interface".

Radio interface protocol: The protocol used across the radio interface (usually a collection of protocols supporting various layers of the protocol reference model).

Radio resource: A radio resource is a portion of spectrum available in a limited geographical area (cell). This portion of spectrum can be further divided into radio-frequency channels.

Regional service area: A service area that covers several countries and/or ocean regions of comparable size.

Registration: A process by which an IMT-2000 network becomes aware of the existence and location of a terminal and its associated user.

Reliability performance: The probability that an item can perform a required function under given conditions for a given time interval.

Request primitive: A service primitive which is used by the service-user to request a service.

Retrieval service: An interactive service which provides the capability of accessing information stored in database centres. This information will be sent to the user on demand only. This information can be retrieved on an individual basis, e.g. the time at which an information sequence is to start under the control of the user.

Roaming: The ability of a user to access wireless telecommunication services in areas other than the one(s) where the user is subscribed.

Robustness: The ability to withstand random errors, burst errors and high bit error ratios over the whole service area.

NOTE 1 – Robustness of a system is an important attribute.

NOTE 2 – The ranking of potential speech/channel codec combinations may be different under good and marginal conditions.

Security: The protection of information availability, integrity and confidentiality.

Security architecture: The architecture of parties and entities relevant to security, and the complete set of secure procedures and information flows for the realization of security features.

Security feature: A feature that gives some assurance against one or several potential security threats.

Security management: The handling of the network and service management aspects of security, including administrative, operational and maintenance issues.

Security mechanism: A means of providing a security feature.

Security policy: A set of rules which define and constrain the types of security-relevant activities of entities and parties.

Security service: A service releasing a particular security feature as a supplementary service.

Service: A set of functions offered to a user by an organization.

Service access point (SAP): An access point at which the layer $(N − 1)$ provides the $(N − 1)$ services to (N) entities.

Service accessibility performance: The ability of a service to be obtained, within specified tolerances and other given conditions, when requested by the user.

Service area: The area within which a mobile station can access the IMT-2000 services. A service area may consist of several IMT-2000 networks. One service area may consist of one country, be a part of a country or comprise of several countries.

Service feature: A network function associated with a particular basic or supplementary service in order to upgrade such services in the interest of higher comfort to the users but, in general, not offered to them as a service on its own.

Service integrity performance: The ability of a service to perform without excessive impairments, once obtained. Service integrity is mainly influenced by the transmission performance of the network.

Service link: A bidirectional radio transmission link between space station and MES/PES/SP.

Service profile: A record containing information related to a user in order to provide that user with IMT-2000 services.

Service profile management (SPM): The ability to access and interrogate and modify the IMT-2000 service profile.

NOTE 1 – IMT-2000 service profile management can be performed by the IMT-2000 user, IMT-2000 subscriber or IMT-2000 service provider.

NOTE 2 – The above definition pertains to IMT-2000. In general, service profile management may also apply to other service profiles such as the mobile terminal's service profile.

Service profile verification (SPV): A supplementary service which provides the capability to read the service profile information across the user-network interface. This service is a component of configuration management.

Service provider: A person or another entity that has the overall responsibility for the provision of a service or a set of services to the users and for negotiating network capabilities associated with the service(s) he/she provides.

Service retains ability performance: The ability of a service once obtained, to continue to be provided under given conditions for a requested duration. Generally this depends on the transmission tolerances, the propagation performance and reliability performance of the related systems.

Short message: An information block transferred as a whole by means of the Short Message Service.

Short message delivery: The conveyance by the short message system of a short message to a potential recipient.

Signalling information confidentiality: A feature by which the signalling information is protected against disclosure over an IMT-2000 radio interface.

Spot beam: Satellite antenna beam directed to a cell in a satellite system.

Subscriber: A person or other entity that has a contractual relationship with a service provider on behalf of one or more users. (A subscriber is responsible for the payment of charges due to that service provider.)

NOTE 1 – Sometimes the term "IMT-2000 subscriber" is used interchangeably with "subscriber", especially where it is necessary to distinguish a person or organization which subscribes directly to an IMT-2000 service from one which benefits from IMT-2000 services.

Subscriber access to service profile: A feature by which the IMT-2000 subscriber has direct and limited access to the personal service profile of his associated users, by means of which he may be able to restrict access to services, etc.

Supplementary service: A service which modifies or supplements a basic telecommunication service. Consequently, it cannot be offered to a customer as a standalone service, rather, 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 telecommunication services.

Synchronization burst: A burst signal transmitted to establish synchronization when setting the information channel or handover.

System: A regularly interacting or interdependent group of items forming a unified whole technology.

System integration: Integration as applied to systems.

Telecommunication management network (TMN): A network supposed to support the management requirements of an operator (e.g. service provider, network provider, backbone network provider, access provider) to plan, provision install, maintain, operate and administer telecommunications and services.

Teleconference: A teleservice which provides the ability for several parties to be engaged in speech. These parties may speak simultaneously and several parties may use the same terminal equipment.

Telephone service: A public telecommunication service primarily intended for the exchange of information in the form of speech, whereby users can communicate directly and temporarily between themselves in conversational mode, and should be provided in accordance with the International Telecommunication Regulations, and the relevant ITU-T Recommendations.

NOTE 1 – The international telephone service can also support a number of non-voice services such as facsimile and data transmission.

Teleservice: A type of telecommunication service that provides the complete capability, including terminal equipment functions, for communication between users according to protocols established by agreement between administrations and/or ROAs.

Temporary mobile terminal identity (TMTI): An identifier temporarily allocated to a terminal when visiting an IMT-2000 network in order to provide a mutually agreed address for paging a user of that terminal or other mobility related network functions.

Terminal: The equipment which interfaces the end user with IMT-2000.

Terminal data: Data maintained for each terminal including the current terminal location (and capabilities).

Terminal equipment: A device or functionality which provides the capabilities for user applications, e.g. telephony, including the user interface.

NOTE 1 – There may be various types of TEs used, some of which may be incompatible with the mobile termination (MT) equipment. Adaptation of these TEs to incompatible RTs may be accomplished through the use of a terminal adapter.

Terminal location integrity: A feature by which the home IMT-2000 service provider, the visited IMT-2000 service provider and/or the IMT-2000 network operator can have some assurance that the IMT-2000 mobile terminal location related information cannot be modified by intruders.

NOTE 1 – Terminal location integrity may effectively be implemented by the user location integrity.

Terminal mobility: The ability of a terminal to access telecommunications services from different locations and while in motion, and the capability of the network to identify and locate that terminal or the associated subscriber.

NOTE 1 – This ability implies the availability of telecommunication services, ideally, in all areas and at all times. Terminal mobility may be provided according to the mobile terminal's service profile.

Terminal roaming: The movement of a terminal (associated with at least one user) from one cell, location area, area served by one visitor location database, exchange area, subnetwork or network to another, respectively, while the network keeps track of the terminal's location.

TMN management service: An area of management activity which provides for the support of operations, maintenance or administration of the network being managed, described from the user perception of the OAM requirements.

Traffic capacity: The total traffic that can be supported by a single cell (or spot beam), which is part of an infinite set of identical cells (or large number of satellite spot beams) in a uniform two-dimensional (or three-dimensional) pattern.

NOTE 1 – The traffic capacity must be specified at a stated spectrum allocation, quality and grade of service, assuming an appropriate propagation model. This metric, is measured in Erlang/cell or Erlang/satellite spot beam, and is valuable for comparing systems with identical user channel requirements.

Traffic channel (TCH): A point-to-point bidirectional channel which transfers user information and the user information control signal. The TCH transfers voice and facsimile information.

Transfer mode: An information transfer attribute covering transmission, multiplexing and switching in a telecommunication network.

Transmission performance: The reproducibility of a signal input to a telecommunications network under given conditions. The given conditions may include the effect of propagation performance where applicable.

Transmitter power control: The output power control is a feature that is performed to reduce interference within communication system and to save the battery power consumption of portable units.

UIM holder verification: A feature by which the human user of the UIM is authenticated. This feature only applies when the UIM is used for the user association with the IMT-2000 mobile terminals.

Universal personal telecommunications (UPT) service: A service which provides personal mobility and service profile management.

NOTE 1 – This involves the network capability of uniquely identifying a UPT user by means of a UPT number.

Uplink (satellite): A radio transmission link in the direction of Earth-to-space.

Uplink (terrestrial): A unidirectional radio pathway for the transmission of signals from one or more mobile stations to one base station.

UPT database: A repository for information, such as a service profile, that is related to a set of UPT subscribers and UPT users for the purpose of providing UPT service.

UPT service provider: A legal person or entity responsible for providing UPT subscriptions to UPT subscribers.

UPT subscriber: A person who, or entity which, obtains a UPT service from a UPT service provider on behalf of one or more UPT users.

UPT user: A person who, or entity which, has access to Universal Personal Telecommunication (UPT) services and has been assigned a UPT number.

User: A person or other entity authorized by a subscriber to use some or all of the services subscribed to by that subscriber.

User event reports: A feature by which the IMT-2000 user will receive warning announcements or indications at critical moments in the operation of IMT-2000 services (e.g. information about accumulated charges, that his communication is unencrypted, etc.).

User identification: The process which enables an IT system to recognize a user as corresponding to one previously described to the system.

User identity module (UIM): In IMT-2000 it is a logical entity which could be removable from a unit (mobile or fixed) or with functionality contained in a unit. It contains information elements needed by the system to identify, authenticate and permit the users registration. The UIM can also be used to store user specific data.

User location integrity: A feature by which the home IMT-2000 service provider, the visited IMT-2000 service provider and/or the IMT-2000 network operator can have some assurance that the IMT-2000 user location related information cannot be modified by the intruders.

User-to-user signalling (UUS): A supplementary service which allows a mobile user to send/receive a limited amount of information to/from another PLMN or ISDN user over the signalling channel in association with a call to the other user.

Validation (messages): The process of checking the integrity of a message or selected parts of a message.

Validation (user/terminal): The process of verifying that a user or terminal is authorized to access services.

Value added service provider: A service provider which offers services that add value to other (primitive) services. (A value added service cannot be used alone, i.e. with another primitive service.)

Vehicle-mounted station: A mobile station which is mounted and operated in a vehicle where the antenna is mounted at the outside of the vehicle.

Virtual circuit: A type of asynchronous transfer mode (ATM) connection involving the establishment and release procedures such that the label associated with each cell need not contain complete routing information.

Visitor location register (VLR): The location database, other than the home location register (HLR), used by an MSC to retrieve information for, for instance, handling of calls to or from a roaming mobile station, currently located in its area.

Wireless access: A terminal access to the network which uses wireless technology.

Wireline access: A terminal access to the network which uses wire line technology.

NOTE 1 – For example conventional telephone sets and subscriber lines are means of access to the wire line network.

Work station function (WSF): The functionality which provides interaction between O&M personnel and the OSFs.

4.1.2 Definitions of terms related to IMT-Advanced Recommendations and Reports [2,3]

4.1.2.1 Terms related to Wireless MAN-Advanced terrestrial radio interface

(DL/UL) access zone: An integer multiple of subframes located in the MZone of the ABS frame or ARS frame, where an ABS or ARS transmit to the AMSs or receive from AMSs.

AAI (DL/UL) relay zone: An integer multiple of subframes located in the MZone of the ABS frame, where an ABS transmit to the ARSs and/or AMSs or receive from ARSs and AMSs, or ARS frame, where an ARS transmit to the ABS or receive from ABS.

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[2] Certain terms and definitions utilized in this section for IMT-Advanced may also be relevant for IMT-2000 when used in a specific context.

[3] See also Annex 1 (§ 1.2) and Annex 2 (§ 2.2) of Recommendation ITU-R M.2012.

AAI subframe: A structured data sequence of predefined duration used by the Advanced Air Interface specification.

Access link: A radio link between an MR-BS or RS and an MS, or between an MR-BS or RS and a subordinate RS during network entry. The access link is either an uplink or downlink.

Access RS: A relay station that serves as an access station.

Access station: A station that provides a point of access into the network for an MS or RS. An access station can be a base station (BS), relay station (RS), or multihop relay BS (MR-BS).

Active base station (BS): A BS that is informed of the mobile station (MS) capabilities, security parameters, service flows, and full medium access control layer (MAC) context information. For macro diversity handover (MDHO), the MS transmits/receives data to/from all active BSs in the diversity set.

Adaptive antenna system (AAS): An array of antennas and associated signal processing that together is able to change its antenna radiation pattern dynamically to adjust to noise environment, interference and multipath.

Adaptive modulation: A system's ability to communicate with another system using multiple burst profiles and a system's ability to subsequently communicate with multiple systems using different burst profiles.

Adjacent subcarrier allocation: A permutation where the subcarriers are located adjacent to each other.

Advanced base station (ABS): A base station that supports the WirelessMAN-Advanced Air Interface.

Advanced mobile station (AMS): A subscriber station capable of performing the Wireless-MAN OFDMA TDD Release 1 subset of mobile station (MS) features and functions and additionally implementing the WirelessMAN-Advanced Air Interface.

Advanced relay station (ARS): A relay station that supports the WirelessMAN-Advanced Air Interface.

Anchor base station: For macro diversity handover (MDHO) or fast BS switching (FBSS) supporting mobile stations (MSs), a BS where the MS is registered, is synchronized, performs ranging, and monitors the downlink (DL) for control information. For FBSS supporting MSs, the anchor BS is the serving BS that is designated to transmit/receive data to/from the MS at a given frame.

ARS receive/transmit transition gap (ARSRTG): The minimum receive-to-transmit turnaround gap required at an ARS. ARS-RTG is measured from the time of the last sample of the received burst to the first sample of the transmitted burst at the antenna port of the ARS.

ARS transmit/receive transition gap (ARSTTG): The minimum transmit-to-receive turnaround gap required at an ARS. ARS-TTG is measured from the time of the last sample of the transmitted burst to the first sample of the received burst at the antenna port of the ARS.

Authenticator: Authenticator functionality is part of AAA Services, which is included in the NCMS. An authenticator is an entity at one end of a point-to-point link that facilitates authentication of a supplicant (MS) attached to the other end of that link. It can enforce authentication before allowing access to services that are accessible to the supplicant. The authenticator incorporates an AAA client functionality that enables it to communicate with AAA backend infrastructure (AAA based Authentication Server). The AAA server provides the Authenticator with authentication and authorization services over AAA protocols. The authenticator function contains a Key Distributor and may also include a Key Receiver function.

Automatic repeat request (ARQ) block: A distinct unit of data that is carried on an ARQ-enabled connection. Such a unit is assigned a sequence number and is managed as a distinct entity by the ARQ state machines. Block size is a parameter negotiated during connection establishment.

Backbone network: A communication mechanism by which two or more base stations (BSs) communicate to each other. It may also include communication with other networks. The method of communication for backbone networks is outside the scope of this standard.

Bandwidth stealing: The use, by a subscriber station (SS), of a portion of the bandwidth allocated in response to a bandwidth request (BR) for a connection to send a BR or data for any of its connections.

Base station (BS) receive/transmit transition gap (RTG): A gap between the last sample of the uplink (UL) burst and the first sample of the subsequent downlink (DL) burst at the antenna port of the BS in a time division duplex (TDD) transceiver. This gap allows time for the BS to switch from receive (Rx) to transmit (Tx) mode. During this gap, the BS is not transmitting modulated data but simply allowing the BS transmitter carrier to ramp up and the Tx/Rx antenna switch to actuate. Not applicable for frequency division duplex (FDD) systems.

Base station (BS) transmit/receive transition gap (TTG): A gap between the last sample of the downlink (DL) burst and the first sample of the subsequent uplink (UL) burst at the antenna port of the BS in a time division duplex (TDD) transceiver. This gap allows time for the BS to switch from transmit (Tx) to receive (Rx) mode. During this gap, the BS is not transmitting modulated data but simply allowing the BS transmitter carrier to ramp down, the Tx/Rx antenna switch to actuate, and the BS receiver section to activate. Not applicable for frequency division duplex (FDD) systems.

Base station (BS): A generalized equipment set providing connectivity, management, and control of the subscriber station (SS). See also: active base station (BS), anchor base station (BS), neighbour base station (BS), serving base station (BS), target base station (BS).

Basic connection: Connection that is established during subscriber station (SS) initial ranging and used to transport delay-intolerant medium access control layer (MAC) management messages.

Broadband wireless access (BWA): Wireless access in which the connection(s) capabilities are broadband.

Broadband: Having instantaneous bandwidths greater than around 1 MHz and supporting data rates greater than about 1.5 Mb/s.

Broadcast connection: The management connection used by the base station (BS) to send medium access control layer (MAC) management messages on a downlink (DL) to all subscriber stations (SSs). The broadcast connection is identified by a well-known connection identifier (CID). A fragmentable broadcast connection is a connection that allows fragmentation of broadcast MAC management messages.

Burst profile: Set of parameters that describe the uplink (UL) or downlink (DL) transmission properties associated with an interval usage code. Each profile contains parameters such as modulation type, forward error correction (FEC) type, preamble length, guard times, etc. See also: interval usage code.

Centralized scheduling: A mode of operation applicable to multihop relay where a multihop relay BS (MR-BS) determines the bandwidth allocations and generates the corresponding MAPs [or dictates the information used by relay stations (RSs) to generate their MAPs] for all access and relay links in the MR-cell.

Channel identifier (ChID): An identifier used to distinguish between multiple uplink (UL) channels, all of which are associated with the same downlink (DL) channel.

Closed subscriber group (CSG): A set of subscribers authorized by the Femto ABS owner or the network service provider, for accessing CSG Femto ABS.

Concatenation: The act of combining multiple medium access control layer (MAC) protocol data units (PDUs) into a single physical layer (PHY) service data unit (SDU).

Connection identifier (CID): A 16-bit value that identifies a transport connection or an uplink (UL)/ downlink (DL) pair of associated management connections [i.e. belonging to the same subscriber station (SS)] to equivalent peers in the medium access control layer (MAC) of the base station (BS) and SS. The CID address space is common (i.e. shared) between UL and DL and partitioned among the different types of connections. Security associations (SAs) also exist between keying material and CIDs. See also: connection.

Connection: A unidirectional mapping between base station (BS) and subscriber station (SS) medium access control layer (MAC) peers. Connections are identified by a connection identifier (CID). The MAC defines two kinds of connections: management connections and transport connections. See also: connection identifier (CID).

Contiguous resource unit (CRU): The resource allocation unit of the same size as the PRU that has undergone the subband partitioning and miniband permutation, assigned to contiguous allocation and will bypass subcarrier permutation in DL and tile permutation in UL. Syn: localized resource unit.

CSG Femto ABS: CSG-Closed or CSG-Open Femto ABS.

CSG-Closed Femto ABS: A Femto ABS accessible only to the AMSs, which are in its CSG(s), except for emergency services. AMSs that are not the members of the CSG(s) should not try to access CSGClosed Femto ABSs.

CSG-Open Femto ABS: A Femto ABS primarily accessible to the AMSs that belong to its CSG(s), while other AMSs, outside CSG(s), may also access such Femto ABS, and will be served at lower priority. CSG-Open Femto ABS will provide service to such AMSs as long as the QoS of AMSs in its CSG(s) is not compromised.

DC subcarrier: In an orthogonal frequency division multiplexing (OFDM) or orthogonal frequency division multiple access (OFDMA) signal, the subcarrier whose frequency would be equal to the radio frequency (RF) centre frequency of the station.

Default service flow: A service flow that is established automatically without DSA procedure after successful registration procedure. QoS parameters for the default service flow are predefined.

Distributed resource unit (DRU): The resource allocation unit of the same size as the physical resource unit (PRU) that has undergone the subband partitioning and miniband permutation, assigned to distributed allocation and will be submitted to the subcarrier permutation in DL and tile permutation in UL.

Distributed scheduling: A mode of operation applicable to multihop relay where the MR-BS and each RS in the MR-cell (with or without information from the MR-BS) determine the bandwidth allocations and generate the corresponding MAPs for the access link to/from their subordinate SSs and/or relay links to/ from their subordinate RSs.

Diversity set: A list of active base stations (BSs) to the mobile station (MS). The diversity set is managed by the MS and BSs and is applicable to macro diversity handover (MDHO) and fast BS switching (FBSS).

DL access zone: A portion of the DL subframe in the MR-BS/RS frame used for MR-BS/RS to MS or RS (except TTR RS in TDD mode) transmission. The DL access zone may consist of the entire downlink subframe, depending on the method used to separate the transmissions on the access and relay links.

DL relay zone: A portion of the DL subframe in the MR-BS/RS frame used for MR-BS/RS to RS transmission. A frame may have no DL relay zone, depending on the method used to separate the transmissions on the access and relay links.

Downlink (DL): The direction from the base station (BS) to the subscriber station (SS).

Downlink burst transition gap (DLBTG): The gap included on the trailing edge of each allocated downlink (DL) burst so that ramp-down can occur and delay-spread can clear receivers.

Downlink channel descriptor (DCD): A medium access control layer (MAC) message that describes the physical layer (PHY) characteristics of a downlink (DL) channel.

Downlink interval usage code (DIUC): An interval usage code specific to a downlink (DL). See also: interval usage code.

Downlink map (DL-MAP): A medium access control layer (MAC) message that defines burst start times for both time division multiplex and time division multiple access (TDMA) by a subscriber station (SS) on the downlink (DL).

Dual radio MS: A multimode MS/AMS that can have both radios (transmitting and receiving) active at the same time. A dual radio MS/AMS can simultaneous transmit and receive on both radios. A dual radio MS/AMS may behave as a single radio MS by operating in single radio mode.

Dynamic frequency selection (DFS): The ability of a system to switch to different physical radio frequency (RF) channels based on channel measurement criteria to conform to particular regulatory requirements.

Dynamic service: The set of messages and protocols that allow the base station (BS) and subscriber station (SS) to add, modify, or delete the characteristics of a service flow.

Fast base station switching (FBSS): Base station (BS) switching that utilizes a fast switching mechanism to improve link quality. The mobile station (MS) is only transmitting/receiving data to/from one of the active BS (anchor BS) at any given frame. The anchor BS can change from frame to frame depending on the BS selection scheme.

Femto ABS: An ABS with low transmit power, typically installed by a subscriber in the home, SOHO, or enterprise to provide the access to closed or open group of users as configured by the subscriber and/or the access provider. A Femto ABS is typically connected to the service providers network via a broadband connection.

Fixed wireless access: Wireless access application in which the locations of the base station (BS) and subscriber station (SS) are fixed in location during operation.

Frame index: The frame order within a superframe (i.e. the 1st, 2nd, 3rd, or 4th frame of superframe).

Frame number: In WirelessMAN-OFDMA, the frame number is a 24-bit number transmitted in every frame. Frame numbers are not necessarily synchronized across base stations. In WirelessMAN-Advanced Air Interface, the frame number is obtained by concatenating the 12-bit superframe number (transmitted in every superframe) and the 2-bit frame index. Superframe numbers are synchronized across base stations.

Frame: A structured data sequence of fixed duration used by some physical layer (PHY) specifications. A frame may contain both an uplink (UL) subframe and a downlink (DL) subframe.

Frequency assignment (FA) index: A network-specific logical FA index assignment. FA index assignment is used in combination with operator-specific configuration information provided to the mobile station (MS) in a method outside the scope of this standard.

Frequency assignment (FA): A logical assignment of downlink (DL) center frequency and channel bandwidth programmed to the base station (BS).

Frequency division duplex (FDD): A duplex scheme in which uplink (UL) and downlink (DL) transmissions use different frequencies but are typically simultaneous.

Frequency offset index: An index number identifying a particular subcarrier in an orthogonal frequency division multiplexing (OFDM) or orthogonal frequency division multiple access (OFDMA) signal, which is related to its subcarrier index. Frequency offset indices may be positive or negative.

Group key encryption key (GKEK): A random number generated by the base station (BS) or a network entity [e.g. an authentication and service authorization (ASA) server] used to encrypt the group traffic encryption keys (GTEKs) sent in broadcast messages by the BS to mobile stations (MSs) in the same multicast group.

Handover (HO): The process in which a mobile station (MS) migrates from the air-interface provided by one base station (BS) to the air-interface provided by another BS. A break-before-make HO is where service with the target BS starts after a disconnection of service with the previous serving BS. A makebefore-break HO is where service with the target BS starts before disconnection of the service with the previous serving BS.

Horizontal encoding: Indicates transmitting multiple MIMO layers over multiple antennas. The number of MIMO layers is more than 1. The number of MIMO streams is same as the number of MIMO layers in this case.

Infrastructure station: An MR-BS or RS.

Initial ranging connection: A management connection used by the subscriber station (SS) and the base station (BS) during the initial ranging process. The initial ranging connection is identified by a well-known connection identifier (CID). This CID is defined as a constant value within the protocol since an SS has no addressing information available until the initial ranging process is complete.

Intermediate RS: A relay station that is located on a path between an MR-BS and an access RS.

Interval usage code: A code identifying a particular burst profile that can be used by a downlink (DL) or uplink (UL) transmission interval.

Location Based Services (LBS): Services that are based on location data of the MS and/or BS in a network of IEEE 802.16 devices. Examples in location sensitized applications, emergency call origination tracking, equipment tracking etc.

Logical resource unit (LRU): The generic name of logical units for distributed and localized resource allocations.

LZone: A positive integer number of consecutive subframes during which an ABS communicates with RSs or R1 MSs, and where an ARS or an RS communicates with one or more R1 MSs.

Macro ABS: An ABS with high transmit power. A Macro ABS is directly connected to the service providers network.

Macro diversity handover (MDHO): The process in which an mobile station (MS) migrates from the air-interface provided by one or more base stations (BSs) to the air-interface provided by one or more other BSs. This process is accomplished in the downlink (DL) by having two or more BSs transmitting the same medium access control layer (MAC) or physical layer (PHY) protocol data unit (PDU) to the MS so that diversity combining can be performed by the MS. In the uplink (UL), it is accomplished by having two or more BSs receiving (demodulating, decoding) the same PDU from the MS so that diversity combining of the received PDU can be performed among the BSs.

Macro hot-zone ABS: An ABS with smaller transmission power/cell size than that of macro ABSs, typically deployed by service provider and operated on service provider backhaul.

Management connection: A connection used for transporting medium access control layer (MAC) management messages or standards-based messages required by the MAC. For MAC management messages, see also: basic connection, primary management connection, broadcast connection, initial ranging connection. For standards-based messages required by the MAC, see also: secondary management connection.

Management tunnel CID (MT-CID): An identifier taken from the connection identifier (CID) space managed by an MR-BS that uniquely identifies a management tunnel connection between the MR-BS and an access RS.

MIMO layer: An information path fed to the MIMO encoder as an input. A MIMO layer represents one channel coding block.

MIMO stream: Each information path encoded by the MIMO encoder that is passed to the precoder.

Minislot: A unit of uplink (UL) bandwidth allocation equivalent to n physical slots (PSs), where n = 2m and m is an integer ranging from 0 through 7.

Mixed-mode ABS: An ABS with an operating Lzone and operating Mzone.

Mobile station (MS): A station in the mobile service intended to be used while in motion or during halts at unspecified points. An MS is always a subscriber station (SS) unless specifically excepted otherwise in this standard.

MR-BS frame: Frame structure for DL transmission/UL reception by MR-BS.

Multi radio MS: A multimode MS/AMS that can have multiple radios (transmitting and receiving) active at the same time. A multi radio MS/AMS can simultaneous transmit and receive on multiple radios. A Multi Radio MS/AMS may behave as a Single Radio MS by operating in Single Radio Mode.

Multi-layer encoding: The number of MIMO streams is same as the number of MIMO layers in this case.

Multi-user MIMO (MU-MIMO): A MIMO transmission scheme in which multiple MSs are scheduled in one RU, by virtue of spatial separation of the transmitted signals.

Multicast polling group: A group of zero or more subscriber stations (SSs) that are assigned a multicast address for the purposes of polling.

Multihop relay base station (MR-BS): A generalized equipment set providing connectivity, management, and control of relay stations and subscriber stations. See also: base station (BS), relay station (RS).

Multiple input multiple output (MIMO): A system employing at least two transmit (Tx) antennas and at least two receive (Rx) antennas to improve the system capacity, coverage, or throughput.

MZone: A positive integer number of consecutive subframes during which an ABS communicates with one or more ARSs or AMSs, and where an ARS communicates with one or more ARSs or AMSs.

Neighbor base station (BS): For any mobile station (MS), a BS (other than the serving BS) whose downlink (DL) transmission can be received by the MS.

Non-transparent RS: A relay station that transmits DL frame-start preamble, FCH, MAP message(s) and channel descriptor (DCD/UCD) messages.

Operator ID: Operator ID is an identifier of the network provider. The Operator ID is contained in the Base Station ID.

Orderly power-down procedure: The procedure that the mobile station (MS) performs when powering down, for example, as directed by user input or as prompted by an automatic power-down mechanism.

OSG Femto ABS: A Femto ABS accessible to any AMS.

Packing: The act of combining multiple service data units (SDUs) from a higher layer into a single medium access control layer (MAC) protocol data unit (PDU).

Paging Controller: Paging controller is a unit that belongs to the idle mode services in the NCMS. The paging controller retains the MS state and operational parameters and/or administers paging activity for the MS while in idle mode.

Partially configured carrier: A downlink only carrier configured with control channels to support downlink transmission.

Payload header suppression (PHS): The process of suppressing the repetitive portion of payload headers at the sender and restoring the headers at the receiver.

Payload Header Suppression field (PHSF): A string of bytes representing the header portion of a protocol data unit (PDU) in which one or more bytes are to be suppressed (i.e. a snapshot of the uncompressed PDU header inclusive of suppressed and unsuppressed bytes).

Payload header suppression index (PHSI): An 8-bit value that references the payload header suppression (PHS) rule.

Payload header suppression masks (PHSM): A bit mask indicating which bytes in the Payload Header Suppression field (PHSF) to suppress and which bytes to not suppress.

Payload header suppression size (PHSS): The length of the suppressed field in bytes. This value is equivalent to the number of bytes in the Payload Header Suppression field (PHSF) and also the number of valid bits in the payload header suppression mask (PHSM).

Payload header suppression valid (PHSV): A flag that tells the sending entity to verify all bytes that are to be suppressed.

Physical resource unit (PRU): The basic resource allocation unit that consists of 18 adjacent subcarriers in consecutive symbols in the same AAI subframe.

Physical slot (PS): A unit of time, dependent on the physical layer (PHY) specification, for allocating bandwidth.

Point-to-point (PtP): A mode of operation whereby a link exists between two network entities.

Primary carrier: An OFDMA carrier on which an ABS and an AMS/MS exchange traffic and full PHY/MAC control information defined in the Advanced Air Interface specification. Further, the primary carrier is used for control functions for proper AMS/MS operation, such as network entry. Each AMS shall have only one carrier it considers to be its primary carrier in a cell.

Primary management connection: A connection that is established during initial subscriber station (SS) ranging and used to transport delay-tolerant medium access control layer (MAC) management messages.

Privacy key management (PKM) protocol: A client/server model between the base station (BS) and subscriber station (SS) that is used to secure distribution of keying material.

Protocol data unit (PDU): The data unit exchanged between peer entities of the same protocol layer.

Quality of service (QoS) parameter set: A parameter set associated with a service flow identifier (SFID). The contained traffic parameters define scheduling behaviour of uplink (UL) or downlink (DL) flows associated with transport connections.

R1 BS: A base station compliant with the WirelessMAN-OFDMA R1 Reference System.

R1 MS: A mobile station compliant with the WirelessMAN-OFDMA R1 Reference System.

Radio frequency (RF) centre frequency: The centre of the frequency band in which a base station (BS) or subscriber station (SS) is intended to transmit.

Relative delay (RD): The delay of neighbor DL signals relative to the serving/attached BS.

Relay link (R-link): A radio link between an MR-BS and an RS or between a pair of RSs. This can be a relay uplink or downlink.

Relay station (RS): A generalized equipment set, dependent on a multihop relay base station (MR-BS) providing connectivity, to other RSs or subscriber stations (SS). An RS may also provide management and control of subordinate RSs or SSs. The air interface between an RS and an SS is identical to the air interface between a BS and an SS. See also: multihop relay base station (MR-BS), base station (BS), subscriber station (SS).

Relay zone: A portion of a frame used for the relay link.

Resource unit: A granular unit in frequency and time, described by the number of OFDMA subcarriers and OFDMA symbols.

Round trip delay (RTD): The round trip delay time between communicating stations (i.e. such as between an RS and its superordinate station).

Round trip delay (RTD): The time required for a signal or packet to transfer from a MS to a BS and back again.

RS frame: Frame structure for DL/UL transmission/reception by RS.

RS receive/transmit transition gap (RSRTG): The minimum receive-to-transmit turnaround gap required at an RS. RSRTG is measured from the time of the last sample of the received burst to the first sample of the transmitted burst at the antenna port of the RS.

RS transmit/receive transition gap (RSTTG): The minimum transmit-to-receive turnaround gap required at an RS. RSTTG is measured from the time of the last sample of the transmitted burst to the first sample of the received burst at the antenna port of the RS.

Scanning interval: A time period intended for the mobile station (MS) to monitor neighbor base stations (BSs) to determine the suitability of the BSs as targets for handover (HO).

Scheduling RS: A relay station that serves as a scheduling station; i.e. a non-transparent RS with unique BSID and operating in distributed scheduling mode.

Scheduling station: In centralized scheduling mode, the scheduling station is always the MR-BS. In distributed scheduling mode, the scheduling station of a given MS/RS is the first station along the route to the MR-BS that transmits MAPs; i.e. either a non-transparent RS or the MR-BS itself.

Secondary carrier: An OFDMA carrier that an AMS may use to exchange traffic with an ABS, based on allocation commands and rules received over the primary carrier of that ABS. The secondary carrier may also include control signaling to support multicarrier operation.

Secondary management connection: A connection that may be established during subscriber station (SS) registration that is used to transport standards-based (e.g, Simple Network Management Protocol (SNMP), Dynamic Host Configuration Protocol (DHCP)) messages.

Security association (SA): The set of security information that a base station (BS) and one or more of its client subscriber stations (SSs) share in order to support secure communications. This shared information includes traffic encryption keys (TEKs) and cipher block chaining (CBC) initialization vectors (IVs).

Security association identifier (SAID): An identifier shared between the base station (BS) and subscriber station (SS) that uniquely identifies a security association (SA). The SAID is unique within MS. The uniqueness of this identifier shall be guaranteed by {MS MAC Address, SAID} pair.

Security zone (SZ): A group consisting of one or more RSs and the MR-BS that share key material for the protection of MAC management messages produced and processed by members of the group.

Security zone key (SZK): A group key shared by the MR-BS and a group of RSs within the same security zone. The SZK is a head of key hierarchy used to satisfy the security requirements such as integrity protection for MAC management messages within a defined security zone.

Service access point (SAP): The point in a protocol stack where the services of a lower layer are available to its next higher layer.

Service data unit (SDU): The data unit exchanged between two adjacent protocol layers. On the downward direction, it is the data unit received from the previous higher layer. On the upward direction, it is the data unit sent to the next higher layer.

Service flow (SF): A unidirectional flow of medium access control layer (MAC) service data units (SDUs) on a connection that is provided a particular quality of service (QoS).

Service flow identifier (SFID): A 32-bit quantity that uniquely identifies a service flow to the subscriber station (SS).

Serving base station (BS): For any mobile station (MS), the BS with which the MS has most recently completed registration at initial network-entry or during a handover (HO).

Simultaneous transmit and receive (STR) relaying: A relay mechanism where transmission to subordinate station(s) and reception from the superordinate station, or transmission to the superordinate station and reception from subordinate station(s) are performed simultaneously.

Single radio MS: A multimode MS/AMS that operates with only a single transmitting radio and with one or more receiving radios at any given time.

Single user MIMO (SU-MIMO): A MIMO transmission scheme in which a single MS is scheduled in one RU.

STC layer: OFDMA Space Time Coding information-flow fed to the STC encoder as an input. The number of STC layers in a system with vertical encoding is one, while in horizontal encoding, it depends on the number of encoding/modulation paths. This term may be used interchangeably with the word layer when used in the context of OFDMA STC.

STC stream: OFDMA Space Time Coding information path encoded by the STC encoder that is passed to subcarrier mapping and sent through one antenna, or passed on to the beamformer. The number of STC streams in both vertical and horizontal encoding systems is the same as the number of output paths of the STC encoder. This term may be used interchangeably with the word stream when used in the context of OFDMA STC.

STR RS: A non-transparent relay station capable of performing STR relaying.

Subcarrier index: An index number identifying a particular used subcarrier in an orthogonal frequency division multiplexing (OFDM) or orthogonal frequency division multiple access (OFDMA) signal. Subcarrier indices are greater than or equal to zero.

Subscriber station (SS): A generalized equipment set providing connectivity between subscriber equipment and a base station (BS).

Subscriber station transmit/receive gap (SSTTG): The minimum transmit-to-receive turnaround gap. SSTTG is measured from the time of the last sample of the transmitted burst to the first sample of the received burst at the antenna port of the SS.

Superframe: A structured data sequence of fixed duration used by the advanced air interface specifications. A superframe is comprised of four frames.

Target base station (BS): The BS with which a mobile station (MS) intends to be registered at the end of a handover (HO).

Time division duplex (TDD): A duplex scheme where uplink (UL) and downlink (DL) transmissions occur at different times but may share the same frequency.

Time division multiple access (TDMA) burst: A contiguous portion of the uplink (UL) or downlink (DL) using physical layer (PHY) parameters, determined by the downlink interval usage code (DIUC) or uplink interval usage code (UIUC), that remain constant for the duration of the burst. TDMA bursts are separated by preambles and are separated by gaps in transmission if subsequent bursts are from different transmitters.

Time division multiplexing (TDM) burst: A contiguous portion of a TDM data stream using physical layer (PHY) parameters, determined by the downlink interval usage code (DIUC), that remain constant for the duration of the burst. TDM bursts are not separated by gaps or preambles.

Time-division transmit and receive (TTR) relaying: A relay mechanism where transmission to subordinate station(s) and reception from the superordinate station, or transmission to the superordinate station and reception from subordinate station(s) is separated in time.

Transmission time interval (TTI): The duration of the transmission of the physical layer encoded packet over the radio air interface and is equal to an integer number of AAI subframes. The default TTI is 1 AAI subframe. IEEE Std 802.16m-2011 AMENDMENT TO IEEE STD 802.16-2009 8.

Transparent RS: A relay station that does not transmit DL frame-start preamble, FCH, MAP message(s) or channel descriptor (DCD/UCD) messages.

Transparent zone: A portion of the DL subframe in the MR-BS/RS frame for an RS operating in the transparent mode used for MR-BS/RS to MS transmission. A DL subframe may, or may not, have a transparent zone.

Transport connection identifier (CID): A unique identifier taken from the CID address space that uniquely identifies the transport connection. All user data traffic is carried on transport connections, even for service flows that implement connectionless protocols, such as Internet Protocol (IP). An active or admitted service flow (identified by a service flow identifier (SFID)) maps to a Transport CID assigned by the base station (BS).

Transport connection: A connection used to transport user data. It does not include any traffic over the basic, primary, or secondary management connections. A fragmentable transport connection is a connection that allows fragmentation of service data units (SDUs).

TTR RS: A non-transparent relay station that performs TTR relaying.

Tunnel CID (T-CID): An identifier taken from the connection identifier (CID) space that uniquely identifies a transport tunnel connection.

Turbo decoding: Iterative decoding, using soft inputs and soft outputs.

Type/length/value (TLV): A formatting scheme that adds a tag to each transmitted parameter containing the parameter type (and implicitly its encoding rules) and the length of the encoded parameter.

U Interface: The management and control interface that exists between the SS and the BS over the air interface.

UL access zone: A portion of the UL subframe in the MR-BS/RS frame used for MS or RS (except TTR RS in TDD mode) to MR-BS/RS transmission. A frame may have no UL access zone, or the UL access zone may consist of the entire uplink subframe, depending on the method used to separate the transmissions on the access and relay links.

UL relay zone: A portion of the UL subframe in the MR-BS/RS frame used for RS to MR-BS/RS transmission. A frame may have no UL relay zone, or the UL relay zone may consist of the entire uplink subframe, depending on the method used to separate the transmissions on the access and relay links.

Uplink (UL): The direction from a subscriber station (SS) to the base station (BS).

Uplink channel descriptor (UCD): A medium access control layer (MAC) message that describes the physical layer (PHY) characteristics of an uplink (UL).

Uplink interval usage code (UIUC): An interval usage code specific to an uplink (UL).

Uplink map (UL-MAP): A set of information that defines the entire access for a scheduling interval.

User data: Protocol data units (PDUs) of any protocol above a service-specific convergence sublayer (CS) received over the CS service access point (SAP).

Vertical encoding: Indicates transmitting a single MIMO layer over multiple antennas. The number of MIMO layers is always 1.

Wireless access: End-user radio connection(s) to core networks.

WirelessMAN-OFDMA Advanced Co-existing System: An ABS and/or AMS that also implements LZone functionality compliant with WirelessMAN-OFDMA TDD Release 1.

WirelessMAN-OFDMA R1 Reference System: A network compliant with the WirelessMAN-OFDMA capabilities as specified in WirelessMAN-OFDMA TDD Release 1.

4.1.2.2   Terms related to LTE-Advanced terrestrial radio interface

1.8V technology smart card: A smart card operating at 1.8V ± 10% and 3V ± 10%.

1.8V technology terminal: A terminal operating the smart card - Terminal interface at 1.8V ± 10% and 3V ± 10%.

3GPP generic user profile (GUP): The 3GPP generic user profile is the collection of user related data which affects the way in which an individual user experiences services and which may be accessed in a standardized manner.

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

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

3GPP System coverage: See coverage area.

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

3GPP System mobile termination: Part of the 3GPP system mobile station which provides functions specific to the management of the radio interface (Um).

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

3V technology smart card: A smart card operating at 3V± 10% and 5V ± 10%.

3V technology terminal: A terminal operating the smart card - Terminal interface at 3V-± 10% and 5V ± 10%.

A/Gb mode: Mode of operation of the MS when connected to the core network via GERAN and the A and/or Gb interfaces.

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

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

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

Access stratum: Functional grouping consisting of the parts in the infrastructure and in the user equipment and the protocols between these parts being specific to the access technique (i.e. the way the specific physical media between the user equipment and the Infrastructure is used to carry information).

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: Recommendation 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: Recommendation 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.

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

Air interface user rate: The user rate between mobile termination and IWF. For T services it is the maximum possible AIUR not including padding. For NT services it is the maximum possible AIUR.

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

Allowable public land mobile network (PLMN): A PLMN which is not in the list of forbidden PLMN in the UE.

Allowed CSG list: A list stored in the UE containing the CSG identities and associated PLMN identities of the CSGs to which the subscriber belongs.

Ancillary equipment: Equipment (apparatus), used in connection with a receiver, transmitter or transceiver is considered as an ancillary equipment (apparatus) if:

–   the equipment is intended for use in conjunction with a receiver, transmitter or transceiver to provide additional operational and/or control features to the radio equipment, (e.g. to extend control to another position or location); and

–   the equipment cannot be used on a stand alone basis to provide user functions independently of a receiver, transmitter or transceiver; and

–   the receiver, transmitter or transceiver to which it is connected, is capable of providing some intended operation such as transmitting and/or receiving without the ancillary equipment (i.e. it is not a sub unit of the main equipment essential to the main equipment basic functions).

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

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

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

Application dedicated file (ADF): An application DF is the entry point to an application on the UICC.

Application interface: Standardized interface used by application/clients to access service capability features.

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

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

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

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

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

Band category: A group of operating bands for which the same MSR scenarios apply.

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

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

Base station controller: This equipment in the BSS is in charge of controlling the use and the integrity of the radio resources.

Base station receives period: The time during which the base station is receiving data subframes or UpPTS.

Base station RF bandwidth: The bandwidth in which a base station transmits and receives multiple carriers and/or RATs simultaneously.

Base station RF bandwidth edge: The frequency of one of the edges of the base station RF bandwidth.

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

Baseline implementation capabilities: Set of implementation capabilities, in each technical domain, required to enable a UE to support the required baseline capabilities.

Basic OR: Basic optimal routeing.

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

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

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

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

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

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

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

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

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

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

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 utilization 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).

Carrier: The modulated waveform conveying the E-UTRA, UTRA or GSM/EDGE physical channels.

Carrier frequency: Centre frequency of the cell.

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

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

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

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

Cell: Radio network object that can be uniquely identified by a user equipment from a (cell) identification that is broadcasted over a geographical area from one UTRAN access point. A cell is either FDD or TDD mode.

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

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

Channel bandwidth: The RF bandwidth supporting a single RF carrier with the transmission bandwidth configured in the uplink or downlink of a cell. The channel bandwidth is measured in MHz and is used as a reference for transmitter and receiver RF requirements.

Channel edge: The lowest and highest frequency of the carrier, separated by the channel bandwidth.

Chargeable event: An activity utilizing 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.

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

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.

Closed subscriber group (CSG): A Closed Subscriber Group identifies subscribers of an operator who are permitted to access one or more cells of the PLMN but which have restricted access (CSG cells).

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: Recommendation ITU-T I.113).

Continuous phenomena (continuous disturbance): Electromagnetic disturbance, the effects of which on a particular device or equipment cannot be resolved into a succession of distinct effects (IEC 60050-161 [6]).

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 points.

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

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

Core network operator: Operator that offers core network services.

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

Corporate code group: Combination of the corporate code and the associated SP and network codes.

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

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

Coverage area: Area over which a 3GPP system service is provided with the service probability above a certain threshold.

CSG cell: A cell, part of the PLMN, broadcasting a specific CSG Identity. A CSG cell is accessible by the members of the closed subscribers group for that CSG Identity. All the CSG cells sharing the same identity are identifiable as a single group.

CSG identity (CSGID): An identity broadcast by a CSG cell or cells and used by the UE to facilitate access for authorized members of the associated closed subscriber group.

CSG indicator: An indication transmitted on the broadcast channel of the CSG cell that allows the UE to identify such as CSG cell.

CSG manager: A CSG manager can, under the operator's supervision, add, remove and view the list of CSG members.

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

Current EF: The latest EF selected.

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

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: Recommendation 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: Recommendation ITU-T I.350).

Destination user: Entity to which calls to the general packet radio service (GPRS) are directed.

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

Directory number: A string consisting of one or more of the characters from the set {0, 1, 2, 3, 4, 5, 6, 7, 8, 9, *, #, a, b, c} associated with a nature of address indicator and number plan indicator.

When using the public MMI for the control of supplementary services however, * and # cannot be part of any SC or SI field.

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

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

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

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

DL RS power: The resource element power of downlink reference symbol.

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

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

Donor coupling loss: The coupling loss between the repeater and the donor base station.

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.

Downlink operating band: The part of the operating band designated for downlink.

Downlink pilot timeslot: Downlink part of the special sub frame (for TDD operation).

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.

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

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

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

Elementary procedure (EP): The RANAP, RNSAP, NBAP, S1AP, X2AP, PCAP, HNBAP, LPPa, RNA, RUA, RETAP and TMAAP protocols consist of elementary procedures (EPs).

An EP consists of an initiating message and possibly a response message.

Three kinds of EP are used:
– Class 1: elementary procedures with response (success or failure).
– Class 2: elementary procedures without response.
– Class 3: elementary procedures with possibility of multiple responses (RANAP only).

For Class 1 EPs, the types of responses can be as follows:

Successful

–   A signalling message explicitly indicates that the elementary procedure has been successfully completed with the receipt of the response.

Unsuccessful

–   A signalling message explicitly indicates that the EP failed.

Class 2 EPs are considered always successful.

Class 3 EPs have one or several response messages reporting both successful and unsuccessful outcome of the requests, and temporary status information about the requests. This type of EP only terminates through response(s) or EP timer expiry.

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

End-user identity (EUI): An end-user identity is an identity that uniquely characterizes an end-user in the 3GPP system. An end-user identity is mainly intended for administration purposes of the operator.

Enterprise systems: Information systems that are used in the telecommunication organization but are not directly or essentially related to the telecommunications aspects (call centre's, Fraud detection and prevention systems, invoicing etc.).

Equivalent HPLMN/Equivalent home PLMN (EHPLMN): Any of the PLMN entries contained in the equivalent HPLMN list.

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

E-UTRAN radio access bearer (E-RAB): An E-RAB uniquely identifies the concatenation of an S1 bearer and the corresponding data radio bearer. When an E-RAB exists, there is a one-to-one mapping between this E-RAB and an EPS bearer of the non access stratum as defined in [7].

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 3.84 Mcps).

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

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

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

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

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

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

NOTE 1 – The term "user information unit" has been replaced by the term "service data unit".

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

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

Fixed network user rate: The user rate between IWF and the fixed network.

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

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

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

Framework: A framework defines a set of application programming interface (API) classes for developing applications and for providing system services to those applications.

Frequency layer: Set of cells with the same carrier frequency.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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.

Heterogeneous network: A 3GPP access network consisting of multiple cells with different characteristics (e.g. for the case of E-UTRA: a variety of e-NodeBs, Home e-NodeBs, e-UTRA Relays).

Home environment value added service provider (HE-VASP): This is a VASP that has an agreement with the home environment to provide services. The home environment provides services to the user in a managed way, possibly by collaborating with HE-VASPs, but this is transparent to the user. The same service could be provided by more than one HE-VASP and each HE-VASP can provide more than one service.

Home environment: Responsible for overall provision and control of the personal service environment of its subscribers.

HNB name: The HNB name is a broadcast string in free text format that provides a human readable name for the home NodeB/eNodeB.

Home PLMN: This is a PLMN where the MCC and MNC of the PLMN identity match the MCC and MNC of the IMSI.

Hybrid cell: A cell broadcasting a CSG indicator set to false and a specific CSG identity. This cell is accessible as a CSG cell by UEs which are members of the CSG and as a normal cell by all other UEs.

IC card: A card holding an integrated circuit containing subscriber, end user, authentication and/or application data for one or more applications.

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

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

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

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

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

IP flow mobility: Distribution of IP flows on a UE between 3GPP and WLAN available accesses based on the different characteristics of the IP flows, the operator policies and the capabilities of the available accesses.

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

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

Information data rate: Rate of the user information, which must be transmitted over the air interface. For example, output rate of the voice codec.

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

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

Integrity: (in the context of security) The avoidance of unauthorized 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, i.e. having different MCC-MNC.

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

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

Interface: The common boundary between two associated systems (source: Recommendation 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 dialable number allocated to a 3GPP System user.

Interference signal code power (ISCP): Given only interference power is received, the average power of the received signal after dispreading and combining.

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

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

Intra-cell handover: A handover within one sector or between different sectors of the same cell. An intra-cell handover does not require network connections to be altered.

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

NOTE 1 – This includes the case of UMTS <>GSM handover where MCC-MNC are the same in both cases.

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

IP-connectivity access network bearer (IP-CAN bearer): The data communications bearer provided by the IP-connectivity access network. When using GPRS, the IP-connectivity access network bearers are provided by PDP contexts.

IRP information model: An IRP information model consists of an IRP information service and a network resource model (see below for definitions of IRP information service and network resource model).

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

IRP solution set: An IRP solution set is a mapping of the IRP information service to one of several technologies (CORBA/IDL, SNMP/SMI, CMIP/GDMO, etc.). An IRP information service can be mapped to several different IRP solution sets. Different technology selections may be done for different IRPs.

Inter system change: A change of radio access between different radio access technologies such as GSM and UMTS.

IMS credentials (IMC): A set of IMS security data and functions for IMS access by a terminal that does not support any 3GPP access technology . The IMC is not including an ISIM or a USIM. The IMC is not used if ISIM or USIM is present.

IMS multimedia telephony: A service that allows multimedia conversational communications between two or more users. It provides real time bidirectional conversational transfer of media, e.g. speech, video, text or other types of data. The IMS multimedia telephony service includes Supplementary Services and takes account of regulatory requirements.

IMS SIM (ISIM): An application residing on the UICC that provides access to IP multimedia services.

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

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

Iu mode: Mode of operation of the MS when connected to the core network via GERAN or UTRAN and the Iu interface.

Iub: Interface between an RNC and a Node B.

Iur: A logical interface between two RNC. Whilst logically representing a point-to-point link between RNC, the physical realization may not be a point-to-point link.

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.

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

Local IP access (LIPA): Allows an IP-capable UE connected via a H(e)NB direct access to other IP-capable devices in the local residential/corporate IP network.

Localised service area (LSA): A LSA is an operator-defined group of cells, for which specific access conditions apply. This may correspond to an area in which the core network offers specific services. A LSA may be defined within a PLMN or globally. Therefore, a LSA may offer a non-contiguous radio coverage.

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

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

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

Logical model: A logical model defines an abstract view of a network or network element by means of information objects representing network element, aggregations of network elements, the topological relationship between the elements, endpoints of connections (termination points), and transport entities (such as connections) that transport information between two or more termination points. The information objects defined in the Logical Model are used, among others, by connection management functions. In this way a physical implementation independent management is achieved.

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

Lower RF bandwidth edge: The frequency of the lower edge of the base station RF bandwidth, used as a frequency reference point for transmitter and receiver requirements.

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.

Macro cells: "Macro cells" are outdoor cells with a large cell radius.

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

Management infrastructure: The collection of systems (computers and telecommunications) a 3GPP system organization has in order to manage a 3GPP System.

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

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

Maximum base station RF bandwidth: The maximum RF bandwidth supported by a BS within an operating band.

Maximum output power: For UE, this is a measure of the maximum power supported by the UE (i.e. the actual power as would be measured assuming no measurement error). For FDD BS, the mean power level per carrier of the base station measured at the antenna connector in a specified reference condition. For TDD BS this refers to the measure of power when averaged over the transmit timeslot at the maximum power setting. For LTE: the mean power level per carrier of the base station measured at the antenna connector in a specified reference condition.

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 throughput: Maximum achievable throughput for a reference measurement channel.

Maximum total output power: Sum of the power of all carriers available at the antenna connector for a specified reference condition.

Maximum transmitter power per traffic channel (dBm): The maximum power at the transmitter output for a single traffic channel.

MBMS-service-associated signalling: When M2AP messages associated to one MBMS service uses the MBMS-service-associated logical M2-connection for association of the message to the respective MBMS service in eNB and EPC.

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

Mean power: When applied to E-UTRA transmission this is the power measured in the operating system bandwidth of the carrier. The period of measurement shall be at least one subframe (1 ms) unless otherwise stated.

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

Measurement bandwidth: The bandwidth in which an emission level is specified.

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

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

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

Micro cells: "Micro cells" are small cells.

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

Mobile equipment (ME): The mobile equipment is functionally divided into several entities, i.e. one or more mobile terminations (MT) and one or more terminal equipments (TE).

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

Mobile station (MS): A mobile station (MS) corresponds to a user equipment (UE).

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

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

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

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

MSR base station: Base station characterized by the ability of its receiver and transmitter to process two or more carriers in common active RF components simultaneously in a declared RF bandwidth, where at least one carrier is of a different RAT than the other carrier(s).

Multi-carrier transmission configuration: A set of one or more contiguous carriers that a BS is able to transmit simultaneously according to the manufacturer's specification.

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: Recommendation ITU-T I.113).

Multimedia service: Services that handle several types of media such as audio and video in a synchronized 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.

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: Recommendation ITU-T X.213 | ISO/IEC 8348).

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

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

Network operator: See PLMN operator.

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

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

Network service data unit (NSDU): A unit of data passed between the user and the GPRS network across a network service access point (NSAP).

Network subset code: Digits 6 and 7 of the IMSI.

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

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

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

Node B: A logical node responsible for radio transmission/reception in one or more cells to/from the user equipment. Terminates the Iub interface towards the RNC.

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

Nominal maximum output power: This is the nominal power defined by the UE power class.

Non-access stratum: Protocols between UE and the core network that are not terminated in the UTRAN.

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

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

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

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

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

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

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

Occupied bandwidth: The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage $\beta/2$ of the total mean power of a given emission.

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

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

One stop billing: One bill for all charges incurred using the 3GPP system.

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

Open service access: Concept for introducing a vendor independent means for introduction of new services.

Operating band: A frequency range in which E-UTRA operates (paired or unpaired), that is defined with a specific set of technical requirements.

Operations system: Indicates a generic management system, independent of its location level within the management hierarchy.

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

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

Orthogonal channel noise simulator: A mechanism used to simulate the users or control signals on the other orthogonal channels of a downlink.

OSA interface: Standardized interface used by application/clients to access service capability features.

Output power (P_{out}): The mean power of one carrier of the UE, delivered to a load with resistance equal to the nominal load impedance of the transmitter.

Packet: An information unit identified by a label at layer 3 of the OSI reference model (source: Recommendation 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: Recommendation 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.

Pass band: The frequency range that the repeater operates in with operational configuration. This frequency range can correspond to one or several consecutive nominal channels. If they are not consecutive each subset of channels shall be considered as an individual pass band.

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 bur sty signal (source: Recommendation 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 personalized information defining how subscribed services are provided and presented towards the user. Each subscriber of the home environment has her own personal service environment. The personal service environment is defined in terms of one or more user profiles.

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

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

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

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

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

Pico cells: "Pico cells" are cells, mainly indoor cells, with a radius typically less than 50 metres.

PICH monitoring occasion: The time instance where the UE monitors PICH within paging occasion.

Pilot identity: A service specific public address used for initial contact, associated with a group of publicly addressable identities (e.g. E.164 numbers or SIP URI).

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 minimized in adjacent countries unless otherwise agreed.

PLMN operator: Public land mobile network operator. The entity which offers telecommunications services over an air interface.

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

Point-to-multipoint service: A service type in which data is sent to "all service subscribers or a pre-defined subset of all subscribers" within an area defined by the service requester.

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

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

Port: A particular interface, of the specified equipment (apparatus), with the electromagnetic environment. For example, any connection point on equipment intended for connection of cables to or from that equipment is considered as a port.

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

Ported subscriber: The subscriber of a ported number.

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

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

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

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

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

Proactive SIM: A SIM, which is capable of issuing commands to the terminal. Part of SIM application toolkit.

Protocol: A formal set of procedures that are adopted to ensure communication between two or more functions within the within the same layer of a hierarchy of functions (source: Recommendation 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: Recommendation ITU-T X.200 | ISO/IEC 7498-1).

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

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 characterized 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.

Radio access bearer: The service that the access stratum provides to the non-access stratum for transfer of user data between user equipment and CN.

Radio access mode: Mode of the cell, FDD or TDD.

Radio access network information management: Functionality supporting the exchange of information, via the core network, between peer application entities located in a GERAN or in a UTRAN access network.

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

Radio access network application part: Radio network signalling over the Iu.

Radio access network operator: Operator that offers radio access to one or more core network operators.

Radio access technology: Type of technology used for radio access, for instance E-UTRA, UTRA, GSM, CDMA2000 1xEV-DO (HRPD) or CDMA2000 1x (1xRTT).

Radio bearer: The service provided by the Layer 2 for transfer of user data between user equipment and UTRAN.

Radio communications equipment: Telecommunications equipment which includes one or more transmitters and/or receivers and/or parts thereof for use in a fixed, mobile or portable application. It can be operated with ancillary equipment but if so, is not dependent on it for basic functionality.

Radio digital unit: Equipment which contains base band and functionality for controlling radio unit.

Radio equipment: Equipment which contains radio digital unit and radio unit.

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 interface between user equipment and a UTRAN access point. This term encompasses all the functionality required to maintain such interfaces.

Radio link: A "radio link" is a logical association between single user equipment and a single UTRAN access point. Its physical realization comprises one or more radio bearer transmissions.

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

Radio link control: A sublayer of radio interface layer 2 providing transparent, unacknowledged and acknowledged data transfer service.

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

Radio link set: A set of one or more radio links that has a common generation of transmit power Control (TPC) commands in the DL.

Radio network controller: This equipment in the RNS is in charge of controlling the use and the integrity of the radio resources.

Radio network subsystem application part: Radio network signalling over the Iur.

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

Radio network temporary identifier: A radio network temporary identifier is a generic term of an identifier for a UE when an RRC connection exists. Following types of RNTI are defined: cell RNTI (C-RNTI), serving RNC RNTI (S-RNTI), UTRAN RNTI (U-RNTI) and GERAN RNTI (G-RNTI).

Radio resource control: A sub layer 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 2nd or 3rd generation radio access technology, e.g. UTRAN or GERAN.

Radio unit: Equipment which contains transmitter and receiver.

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

RE power control dynamic range: The difference between the power of a RE and the average RE power for a BS at maximum output power for a specified reference condition.

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 dispreading 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 exclusion band: The receiver exclusion band is the band of frequencies over which no tests of radiated immunity of a receiver are made. The exclusion band for receivers is expressed relative to the base station receive band.

Receiver noise figure (dB): Receiver noise figure is the noise figure of the receiving system referenced to the receiver input.

Receiver sensitivity (dBm): This is the signal level needed at the receiver input that just satisfies the required $E_b/(N_0+I_0)$.

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

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

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

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

Reference bandwidth: The bandwidth in which an emission level is specified.

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

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

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

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

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

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

Relay: Terminal devices capable of ODMA relay communications.

Relay/Seed gateway: Relay or Seed that communicates with the UTRAN, in either TDD or FDD mode.

Relaylink: Relaylink is a communications link between two ODMA relay nodes.

Release 99: A particular version of the 3GPP System standards produced by the 3GPP project. Also: Release 4, Release 5, Release 6 etc.

Repeater: A device that receives, amplifies and transmits the radiated or conducted RF carrier both in the down-link direction (from the base station to the mobile area) and in the up-link direction (from the mobile to the base station).

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

Required $E_b/(N_0+I_0)$ (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 Recommendation ITU-T I.113).

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

Root directory: Obsolete term for master file.

Root relay: ODMA relay node where communications originate or terminate.

RRC connection: A point-to-point bidirectional connection between RRC peer entities on the UE and the UTRAN sides, respectively. An UE has either zero or one RRC connection.

RRC filtered mean power: The mean power of a UTRA carrier as measured through a root raised cosine filter with roll-off factor a and a bandwidth equal to the chip rate of the radio access mode.

NOTE 1 – The RRC filtered mean power of a perfectly modulated UTRA signal is 0.246 dB lower than the mean power of the same signal.

S1: Interface between an eNB and an EPC, providing an interconnection point between the EUTRAN and the EPC. It is also considered as a reference point.

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: Recommendation ITU-T X.140).

NOTE 1 – 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: Recommendation ITU-T X.140).

NOTE 1 – The source document term "user information unit" has been replaced by the term "service data unit".

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

NOTE 1 – 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: Recommendation ITU-T X.140).

NOTE 1 – 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: Recommendation ITU-T X.140).

NOTE 1 – The source document term "user information unit" has been replaced by the term "service data unit".

Seamless handover: "Seamless handover" is a handover without perceptible interruption of the radio connection.

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

Secured packet: The information flow on top of which the level of required security has been applied. An application message is transformed with respect to a chosen transport layer and chosen level of security into one or more secured packets.

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

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

Selected IP traffic offload (SIPTO): Offload of selected types of IP traffic (e.g. internet traffic) towards a defined IP network close to the UE's point of attachment to the access network. SIPTO is applicable to traffic offload for the macro-cellular access network and for the H(e)NB subsystem.

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

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

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

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

Service area: The service area is defined in the same way as the service area according to Recommendation ITU-T Q.1001. 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: Recommendation ITU-T I.112).

NOTE 1 – 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: Recommendation ITU-T I.113).

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

Service capability feature: Functionality offered by service capabilities that are accessible via the standardized application interface.

Service capability server: Network functionality providing open interfaces towards the functionality offered by 3GPP System service capabilities.

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

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

NOTE 1 – In particular service continuity encompasses the possibility that after a RAT/domain change the user experience is maintained by a different telecommunication service (e.g. tele- or bearer service) than before the RAT/domain change.

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

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

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

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

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

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

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

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

Service provider: A service provider is either a network operator or another entity that provides services to a subscriber (e.g. a MVNO).

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

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

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

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

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

Service subscriber: Entity which subscribes to the general packet radio service (GPRS) service.

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

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

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

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

Settlement: Payment of amounts resulting from the accounting process.

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

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

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

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

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

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

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

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

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

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

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

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

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

SP code: Code which when combined with the network code refers to a unique SP. The code is provided in the GID1 file on the SIM and is correspondingly stored on the ME.

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

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

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

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

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

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

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

Sub network management functions: Set of functions that are related to a network model for a set of network elements constituting a clearly defined sub-network, which may include relations between the network elements. This model enables additional functions on the sub-network level (typically in the areas of network topology presentation, alarm correlation, service impact analysis and circuit provisioning).

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

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

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

Subscription management (SuM): Set of capabilities that allow operators, service providers, and indirectly subscribers, to provision, control, monitor the subscription profile.

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

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

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

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

Telecommunication port: Ports which are intended to be connected to telecommunication networks (e.g. public switched telecommunication networks, integrated services digital networks), local area networks (e.g. Ethernet, Token Ring) and similar networks.

Telecommunication service: What is offered by a PLMN operator or service provider to its customers in order to satisfy a specific telecommunication requirement? (source: Recommendation ITU-T I.112). Telecommunication services are divided into two broad families: bearer services and teleservices (source: Recommendation 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 standardized protocols and transmission capabilities established by agreement between operators.

Terminal: A device into which a UICC can be inserted and which is capable of providing access to 3GPP System services to users, either alone or in conjunction with a UICC.

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

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

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

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

Transient phenomenon: Pertaining to or designating a phenomenon or a quantity which varies between two consecutive steady states during a time interval short compared with the time-scale of interest (IEC 60050-161).

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

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

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

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

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: Recommendation ITU-T I.113).

Transmission bandwidth: Bandwidth of an instantaneous transmission from a UE or BS, measured in resource block units.

Transmission bandwidth configuration: The highest transmission bandwidth allowed for uplink or downlink in a given channel bandwidth, measured in resource block units.

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).

Transmitter exclusion band: The transmitter exclusion band is the band of frequencies over which no tests of radiated immunity of a transmitter are made. The exclusion band for transmitters is expressed relative to the carrier frequencies used (the carrier frequencies of the base stations activated transmitter(s)).

Transmitter OFF period: The time period during which the BS transmitter is not allowed to transmit.

Transmitter ON period: The time period during which the BS transmitter is transmitting data and/or reference symbols, i.e. data sub frames or DwPTS.

Transmitter transient period: The time period during which the transmitter is changing from the OFF period to the ON period or vice versa.

Transport block: Transport block is defined as the basic data unit exchanged between L1 and MAC. An equivalent term for transport block is "MAC PDU".

Transport block set: Transport block set is defined as a set of transport blocks that is exchanged between L1 and MAC at the same time instance using the same transport channel. An equivalent term for transport block Set is "MAC PDU Set".

Transport block set size: Transport block set size is defined as the number of bits in a transport block set.

Transport block size: Transport block size is defined as the size (number of bits) of a transport block.

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

Transport format: A Transport format is defined as a format offered by L1 to MAC for the delivery of a transport block set during a transmission time interval on a transport channel. The transport format constitutes of two parts – one dynamic part and one semi-static part.

Transport format combination: A Transport format combination is defined as the combination of currently valid transport formats on all transport channels of an UE, i.e. containing one transport format from each transport channel.

Transport format combination set: A transport format combination set is defined as a set of transport format combinations to be used by an UE.

Transport format combination indicator (TFCI): A transport format combination indicator is a representation of the current transport format combination.

Transport format identification (TFI in UTRAN, TFIN in GERAN): A label for a specific transport format within a transport format set.

Transport format set: A set of transport formats. For example, a variable rate DCH has a transport format set (one transport format for each rate), whereas a fixed rate DCH has a single transport format.

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

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

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

Universal terrestrial radio access network (UTRAN): UTRAN is a conceptual term identifying that part of the network which consists of RNCs and Node Bs between Iu and Uu interfaces.

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

Uplink: An "uplink" is a unidirectional radio link for the transmission of signals from a UE to a base station, from a mobile station to a mobile base station or from a mobile base station to a base station.

Uplink operating band: The part of the operating band designated for uplink.

Uplink pilot timeslot: Uplink part of the special sub frame (for TDD operation).

Upper RF bandwidth edge: The frequency of the upper edge of the base station RF bandwidth, used as a frequency reference point for transmitter and receiver requirements.

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

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

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

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

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

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 i.e. UTRA-FDD; UTRA-TDD.

UTRA-NTDD: Time division duplex UTRA access mode 1.28 Mcps option.

UTRA-TDD: Time division duplex UTRA Radio access mode (Includes UTRA-NTDD and UTRA-WTDD).

UTRA-WTDD: Time division duplex UTRA access mode 3.84 Mcps option.

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

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

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

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

Uu: The radio interface between UTRAN and the user equipment.

Value added service provider: Provides services other than basic telecommunications service for which additional charges may be incurred.

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

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

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

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

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

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

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

4.1.3   Definitions of general terms related to IMT

Co-channel sharing: Co-channel sharing is the case where both system components are operating on the same frequency, but separated geographically.

Adjacent band compatibility: Adjacent band compatibility is the case where both system components are co-located and operate on adjacent frequencies.

4.2   Abbreviations and acronyms used in IMT Recommendations and Reports

4.2.1   Abbreviations and acronyms of terms related to IMT-2000

A

AAB	Automatic alternative billing
AAC	Authentication and access control
AAL	ATM adaptation layer
AC	Ciphering algorithm
ACB	Automatic call back
ACCF	Access and control function
ACCH	Associated control channel
ACI	Access core network interface
AK	Ciphering key generation algorithm
ALS	Application layer structure
AoC	Advice-of-charge
ARIB	Association of Radio Industries and Businesses (formerly RCR)
AS	Value added services
ASE	Application service elements
AT	Terminal authentication algorithm
ATM	Asynchronous transfer mode
AU	User authentication algorithm

B

B-ISDN	Broadband ISDN
BA	Basic access
BC	Bearer control
BCAF	Bearer control agent function
BCCH	Broadcast control channel
BCF	Bearer control function
BCPN	Business CPN
BCSM	Basic call state model
BER	Bit error ratio
BIC-Roam	Barring of incoming calls when roaming outside the home PLMN country

BOIC	Barring of outgoing international calls
BS	Base station
BSI	Base station identifier
BT	Terminal session key generation algorithm (session key schemes)
BU	User session key generation algorithm (session key schemes)

C

CAC	Common access channel
CC	Call control
CCAF	Call control agent function
CCBS	Completion of calls to busy subscriber
CCBU	Completion of calls to busy users
CCC	Credit card calling
CCCH	Common control channel
CCF	Connection (call) control function
CCH	Control channel
CCIR	International Radio Consultative Committee (now ITU-R)
CCITT	International Telegraph and Telephone Consultative Committee (now ITU-T)
CDMA	Code-division multiple access
CELP	Code excited linear prediction
CF	Call forwarding
CH	Call hold
CHIC	Confidentiality and integrity control
CHIP	Common management information protocol
CNN	Cipher text for MN
COMA	Customer network management access
CPT	Control point transfer
CPE	Customer premises equipment
CPM	Customer profile management
CPIP	Calling party identification presentation
CPN	Customer premises network
CRG	Customized ringing
CS	Capability set
CT	Call transfer
CUG	Closed user group
CW	Call waiting

D

DCCH   Dedicated control channel

DCPN   Domestic customer premises network

DDB   Distributed database

DS   Direct sequence

DTCH   Dedicated traffic channel

DTMF   Dual tone multiple frequency

E

EFS   Error free seconds

EIA   Electronic Industry Association

e.i.r.p.   Equivalent isotropical radiated power

EMC   Electromagnetic compatibility

ERP   Equivalent radiated power

ETR   ETSI technical report

ETS   ETSI technical specification

F

FACH   Forward access channel

FDD   Frequency division duplex

FDMA   Frequency division multiple access

FE   Functional entity

FEC   Forward error correction

FFS   For further study temporary entry

FH   Frequency hop

FPH   Freephone

FSS   Fixed-satellite service

G

GDMO   Guidelines for the definition of managed objects

GMPCS   Global mobile personal communications by satellite

GPS   Global positioning system

GSM   Global system for mobile communications

GSO   Geostationary satellite orbit

H

HC   Handover criteria

HEC   Header error control

HEO   Highly inclined elliptical orbit

HLR	Home location register
HOC	Handover control
HUP	Handover user profile

I

IBCN	Integrated broadband communications network
ICO	Intermediate circular orbit
ID	Handover initiation and decision
IMSI	International mobile station identity
IMT	International Mobile Telecommunications
IMT-2000	International Mobile Telecommunications-2000
IMTI	International mobile terminal identity
IMUI	International mobile user identity
IN	Intelligent network
INAP	Intelligent network application protocol
IP	Intelligent peripheral
IS	Interim standard
ISCP	ISDN control part
ISDN	Integrated services digital network
ISL	Inter-satellite links
ISO	International Organization for Standardization
IT	Information technology
IUN	International UMTS number
IWF	Interworking function
IWU	Interworking unit

K

KAT	Terminal session key
KAU	User session key
KC	Ciphering key
KPN	Public network encryption key (public key schemes)
KPSP	Public service provider authentication key (certified public key schemes)
KPT	Public terminal authentication key (public key schemes)
KPU	Public user authentication key (public key schemes)
KSN	Secret network encryption key (public key schemes)
KSSP	Secret service provider authentication key (certified public key schemes)
KST	Secret terminal authentication key (public key schemes)
KSU	Secret user authentication key (public key schemes)

KT   Terminal authentication key (secret key schemes)

KU   User authentication key (secret key schemes)

KX   Intermediate ciphering key (public key schemes)

L

LAC   Link access control layer

LAJ   Location area identifier

LAV   Least acceptable value

LCA   Local configuration analysis

LE   Local exchange

LEI   Local exchange identifier

LEO   Low-Earth orbit

LES   Land earth station

LOCM   Location management

LoS   Line-of-sight (path)

M

MAC   Medium access control layer

MAD   Management administrative domain

MBCF   Mobile bearer control function

MCCF   Mobile call control function

MCF   Mobile control function

MCI   Malicious call identification

MDC   Manipulation detection code

MEF   Measurement function

MES   Mobile earth station

MF   Mediation function

MM   Mobility management

MMC   Meet-me conference

MN   Message sent from network

MOS   Mean opinion score

MoU   Memorandum of understanding

MRBC   Mobile radio bearer control

MRLC   Mobile radio link control

MRRA   Mobile radio resource allocation

MRRC   Mobile radio resource control

MRTR   Mobile radio transmission and reception

MS   Mobile station

MSC	Mobile services switching centre
MSCP	Mobility and service control point
MSF	Mobile storage function
MSS	Mobile satellite system
MT	Mobile termination
MTRN	Mobile terminal roaming number
MWC	Multiway calling
N	
NADC	North American digital cellular system
NEF	Network element function
NP	Network performance
NTWK	Network layer
O	
O&M	Operations and maintenance
OAM	Operations, administration and maintenance
ONE	One number
OS	Operations system
OSF	Operational system function
OSI	Open systems interconnection
OSS	Operations support system
P	
PABX	Private automatic branch exchange
PAI	Paging area identifier
PC	Personal computer
PCH	Paging channel
PCS	Personal communications service
PDC	Personal digital cellular
PDN	Public data network
PES	Personal earth station
PHY	Physical layer
PIN	Personal identification number
PLMN	Public land mobile network
PM	Physical medium (sublayer)
PMSN	Public mobile satellite network
POTS	Plain ordinary telephone service
PRA	Primary rate access

PRM	Premium rate
PRMC	Premium rate charging PTN private telecommunications network
PS	Personal station
PSN	Public switched network
PSPDN	Packet switched public data network
PSTN	Public switched telephone network
PUI	Public user identity

Q

QAF	Q adapter function
QoS	Quality of service

R

RACE	Research and development in advanced communications for Europe
RACH	Random access channel
RAS	Radio access system
RBC	Radio bearer connection
RESu, REST:	Result of authentication algorithm on RND
REVAL	Radio evaluation
RF	Radio frequency
RFTR	Radio-frequency transmission and reception
RLC	Radio link control
RMTI	Random mobile terminal identity
RMUI	Random mobile user identity
RNDu, RNDT, CHALL:	Random numbers
ROA	Recognized Operating Agency (previously RPOA)
RRA	Radio resource allocation
RRC	Radio resource control
RRT	Rerouting triggering
RSPC	Radio specification
RTCH	Random traffic channel

S

SAP	Service access point
SAR	Segmentation and reassembly (sublayer)
SCAF	Service control access function
SCEF	Service creation environment function
SCF	Service control function
SCF(M)	Service control function (mobile)

SCF-BY/DA Selective CF on busy/don't answer

SDCCH   Stand alone dedicated control channel

SDF   Service data function

SDF(M)   Service data function (mobile)

SHR   Special handover request

SIB   Service independent building block

SMAF   Service management access (agent) function

SMF   Service management function

SMSI   Short mobile station identifier

SN   Multiple subscriber number

SP   Satellite pager

SPID   IMT-2000 service provider identity SAP (service access point)

SPLC   Split charging (service feature)

SPM   Service profile management

SRF   Specialized resource function

SSF   Service switching function

SSP   Service switching point

SUI   Secret user identity

T

TC   Transmission convergence (sublayer)

TCC   Target cells and connections

TCH   Traffic channel

TCRTR   Technical Committee reference technical report

TDD   Time division duplex

TDMA   Time division multiple access

TE   Terminal equipment

TIA   Telecommunication Industry Association

TIM   Terminal identity module

TMN   Telecommunication management network

TMTI   Temporary mobile terminal identity

TMUI   Temporary mobile user identity (IMT-2000 user identity)

TO   Telecommunication operator

TSC   Technical Subcommittee

TTC   Telecommunication Technology Committee

U

UI   Un-numbered information

UIM	User identity module
UMTS	Universal mobile telecommunications system
UNI	User network interface
UPT	Universal personal telecommunications
UPTN	Universal personal telecommunication number
UUI	UMTS user identity
UUM	UMTS user mobility
UUS	User-to-user signalling

V

VC	Virtual channel
VLR	Visitor location register
VP	Virtual path
VPI	Virtual path identifier

W

WSF	Work station function

4.2.2   Abbreviations and acronyms related to IMT-Advanced[4] Recommendations and Reports

4.2.2.1   Abbreviations and acronyms related to WirelessMAN-Advanced terrestrial radio interface

0-9

3-DES	triple data encryption standard

A

A-MAP	Advanced map
A-Preamble	Advanced preamble
AAI	Advanced air interface
AAS	Adaptive antenna system
ABS	Advanced base station
AC	Authentication control
ACM	Account management
AES	Advanced encryption standard
AGC	Automatic gain control
AGMH	Advanced generic MAC header
aGPS	Adaptive grant polling service

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[4] Certain abbreviations and acronyms utilized in this section for IMT-Advanced may also be relevant for IMT-2000 when used in a specific context.

AK	Authorization key
AKID	Authorization key identifier
AMC	Adaptive modulation and coding
AMS	Advanced mobile station
AOA	Angle of arrival
ARQ	Automatic repeat request
ARS	Advanced relay station
ASA	Authentication and service authorization
ASN	Access service network
ASN.1	Abstract syntax notation
ASR	Anchor switch reporting
ATDD	Adaptive time division duplexing
ATM	Asynchronous transfer mode

B

BCC	Block convolutional code
BE	Best effort
BER	Bit error ratio
BPSK	Binary phase shift keying
BR	Bandwidth request
BS	Base station
BSN	Block sequence number
BTC	Block turbo code
BW	Bandwidth
BWA	Broadband wireless access
BWAA	Bandwidth allocation/access

C

C/I	Carrier-to-interference ratio
C/N	Carrier-to-noise ratio
CA	Certification authority
CBC	Cipher block chaining
CBC-MAC	Cipher block chaining message authentication code
CC	Confirmation code
CCH	Control sub channel
CCI	Co-channel interference
CCM	CTR mode with CBC-MAC
CCS	Common channel signaling

CCV   Clock comparison value

CDMA   Code division multiple access

CDR   Conjugate data repetition

ChID   Channel identifier

CID   Connection identifier

CINR   Carrier-to-interference-and-noise ratio

CIR   Channel impulse response

CL   Closed-loop

CLP   Cell loss priority

CLRU   Contiguous LRU

CMAC   Cipher-based message authentication code

CMI   Codebook matrix index

CoRe   Constellation rearrangement

CP   Cyclic prefix

CPS   Common part sublayer

CQI   Channel quality information

CQICH   Channel quality information channel

CRC   Cyclic redundancy check

CRID   Context retention identifier

CRT   Context retention timer

CRU   Contiguous resource unit

CRV   CoRe version

CS   Convergence sublayer

CSCF   Centralized scheduling configuration

CSCH   Centralized scheduling

CSG   Closed subscriber group

CSIT   Channel state information at the transmitter

CSM   Collaborative spatial multiplexing

CTC   Convolutional turbo code

CTR   Counter mode encryption

D

D-TDOA   Downlink time difference of arrival

DAMA   Demand assigned multiple accesses

DARS   Digital audio radio satellite

dBi   Decibels of gain relative to the 0 dB gain of a free-space isotropic radiator

dBm   Decibels relative to 1 mW

DCAS	Downlink CRU allocation size
DCD	Downlink channel descriptor
DCR	Deregistration with context retention
DES	Data encryption standard
DFS	Dynamic frequency selection
DHCP	Dynamic host configuration protocol
DID	Deregistration identifier
DIUC	Downlink interval usage code
DL	Downlink
DLFP	Downlink frame prefix
DLRU	Distributed Lru
DRU	Distributed resource unit
DSA	Dynamic service addition
DSAC	Downlink subband allocation count
DSC	Dynamic service change
DSCH	Distributed scheduling
DSCP	Differentiated services code point
DSD	Dynamic service deletion
DSx	Dynamic service addition, change, or deletion

E

E-MBS	Multicast and broadcast service
EAP	Extensible authentication protocol
EBB	Established before break
EC	Encryption control
ECB	Electronic code book
ECRTP	A IP-header-compression CS PDU format (IETF RFC 3545)
EDE	Encrypt-decrypt-encrypt
EESS	Earth exploratory satellite system
EH	Extended header
EIK	EAP integrity key
EIRP	Effective isotropic radiated power
EKS	Encryption key sequence
EVM	Error vector magnitude

F

FBSS	Fast base station switching
FC	Fragmentation control

FCAPS	Fault management, configuration management, account management, performance management, security management
FCH	Frame control header
FDD	Frequency division duplex or duplexing
FEC	Forward error correction
FFR	Fractional frequency reuse
FFSH	Fast-feedback allocation subheader
FFT	Fast Fourier transform
FHDC	Frequency hopping diversity coding
FID	Flow identifier
FMT	UL feedback mini-tile
FP	Frequency partition
FPC	Frequency partition configuration
FPC	Fast power control
FPCT	Frequency partition count
FPEH	Fragmentation and packing extended header
FPS	Frequency partition size
FPSC	Frequency partition subband count
FRS	Fixed relay station
FSH	Fragmentation subheader
FSN	Fragment sequence number
FSS	Fixed satellite service
FUSC	Full usage of subchannels

G

GF	Galois field
GKEK	Group key encryption key
GMH	Generic MAC header
GMSH	Grant management subheader
GPCS	Generic packet convergence sublayer
GPS	Global positioning system
GRA	Group resource allocation
GS	Guard symbol
GTEK	Group traffic encryption key

H

H-FDD	Half-duplex frequency division duplex
HARQ	Hybrid ARQ
HCS	Header check sequence
HE	Horizontal encoding
HEC	Header error check
HMAC	Hashed message authentication code
HMT	UL HARQ mini-tiles
HO	Handover
HR	Handover ranging
HT	Header type
HUMAN	High-speed unlicensed metropolitan area network

I

I	Inphase
IANA	Internet assigned numbers authority
ICV	Integrity check value
IE	Information element
IFFT	Inverse fast Fourier transform
IMM	Idle mode management
IP	Internet Protocol
IR	Incremental redundancy
IR	Initial ranging
IS	Infrastructure station
ISL	Interference sensitivity level
IV	Initialization vector
IWF	Interworking function

J

<void>

K

KEK	Key encryption key

L

LAN	Local area network
LBS	Location based services
LDM	Low-duty mode
LDPC	Low-density parity check

LFSR	Linear feedback shift register
LLC	Logical link control
LoS	Line-of-sight
LRU	Logical resource unit
LSB	Least significant bit

M

MAC	Medium access control layer
MAK	MBS authorization key
MAN	Metropolitan area network
MBS	Multicast and broadcast service
MCEH	MAC control extended header
MCID	Multicast CID
MCS	Modulation coding scheme
MDHO	Macro diversity handover
MDS	Multipoint distribution service
MEF	MIMO encoder format
MEH	Multiplexing extended header
MGTEK	MBS group traffic encryption key
MIB	Management information base
MIC	Message integrity check
MIH	Media independent handover
MIHF	MIH function
MIMO	Multiple input multiple output
MLRU	Minimum A-MAP logical resource unit
MMDS	Multichannel multipoint distribution service
MPEG	Moving pictures experts group
MR-BS	Multihop relay base station
MRS	Mobile relay station
MS	Mobile station
MSB	Most significant bit
MSK	Master session key
MU	Multi-user

N

N/A	Not applicable
NAI	Network access identifier
NAS	Network access server

NCFG	Network configuration
NCMS	Network control and management system
NCMS(BS)	Network control and management system at the BS side (network side)
NCMS(SS/MS)	Network control and management system at the SS/MS side
NEM	Network entry management
NENT	Network entry
NIP	Normalized interference power
NLoS	Non-line-of-sight
NLRU	Miniband LRU
NNI	Network-to-network interface (or network node interface)
NRM	Network reference model
nrtPS	Non-real-time polling service
NS-RCH	Non-synchronized ranging channel
NS/EP	National security/Emergency preparedness
NSP	Network service provider

O

OFDM	Orthogonal frequency division multiplexing
OFDMA	Orthogonal frequency division multiple access
OID	Object identifier
OL	Open-loop
OSG	Open subscriber group

P

P-SFH	Primary superframe header
PA	Persistent allocation
PA-Preamble	Primary advanced preamble
PAK	Primary authorization key
PAPR	Peak to average power ratio
PBR	Piggyback request
PDU	Protocol data unit
PER	Packet error ratio
PFBCH	UL primary fast feedback channel
PGID	Paging-group identifier
PHS	Payload header suppression
PHSF	Payload header suppression field
PHSI	Payload header suppression index
PHSM	Payload header suppression mask

PHSS	Payload header suppression size
PHSV	Payload header suppression valid
PHY	Physical layer
PKM	Privacy key management
PM	Poll-me bit
PMD	Physical medium dependent
PMI	Preferred matrix index
PMK	Pairwise master key
PMP	Point-to-multipoint
PN	Packet number
PPP	Point-to-point protocol
PPRU	Permuted physical resource unit
PRBS	Pseudo-random binary sequence
PRU	Physical resource unit
PS	Physical slot
PSC	Power saving class
PSH	Packing subheader
PSI	Pilot stream index
PTI	Payload type indicator
P-P	Point-to-point
PUSC	Partial usage of subchannels
PUSC-ASCA	Partial usage of subchannels – Adjacent subcarrier allocation
PVC	Permanent virtual circuit

Q

Q	Quadrature
QAM	Quadrature amplitude modulation
QoS	Quality of service
QPSK	Quadrature phase-shift keying

R

R-ACK	Relay ACK
R-DL	Relay downlink
R-FCH	Relay zone frame control header
R-MAP	Relay zone MAP
R-RTI	Relay receive/transmit transition interval
R-TTI	Relay transmit/receive transition interval
R-UL	Relay uplink

R-Zone	Relay zone
RA-ID	Random access identifier
RCH	Ranging channel
RCP	Ranging cyclic prefix
RD	Relative delay
REQ	Request
RFMT	Reordered UL feedback mini-tile
RHMT	Reordered UL HARQ mini-tile
RLAN	Radio local access network
RNG	Ranging
ROHC	An IP-header-compression CS PDU format (IETF RFC 3095)
RP	Ranging preamble
RRA	Radio resource agent
RRC	Radio resource controller
RRM	Radio resource management
RS	Reed-Solomon
RS	Relay station
RSP	Response
RSS	Receive signal strength
RSSI	Receive signal strength indicator
RTD	Round trip delay
RTD	Round trip delay
RTG	Receive/transmit transition gap
rtPS	Real-time polling service
RU	Resource unit
Rx	Receive
RxDS	Receiver delay spread clearing interval

S

S-ABS	Serving ABS
S-RCH	Synchronized ranging channel
S-SFH	Secondary superframe header
SA	Security association
SA-Preamble	Secondary advanced preamble
SAC	Subband allocation count
SAID	Security association identifier
SAP	Service access point

SAR	Synthetic aperture radar
SC	Single carrier
Sc	Subcarrier
SDMA	Spatial division multiple access
SDU	Service data unit
SF	Service flow
SFBC	Space-frequency block code
SFBCH	UL secondary fast feedback channel
SFH	Superframe header
SFID	Service flow identifier
SFM	Service flow management
SHA	Secure hash algorithm
SI	Slip indicator
SIQ	Service information query
SLRU	Subband LRU
SM	Spatial multiplexing
SN	Sequence number
SNMP	Simple network management protocol
SNR	Signal-to-noise ratio
SOHO	Small office home office
SON	Self organizing networks
SP	S-SFH subpacket
SPID	Subpacket ID
SPMH	Short-packet MAC header
SS	Subscriber station
SSID	Subscriber station identification (MAC address)
SSM	Subscriber station management
SSSCH	Service-specific scheduling control header
SSTG	Subscriber station transition gap
STC	Space time coding
STID	Station identifier
STTD	Space time transmit diversity
SU	Single-user
SVC	Switched virtual circuit

T

T-ABS	Target ABS
TCM	Trellis coded modulation
TCP	Transmission control protocol
TCS	Transmission convergence sublayer
TDD	Time division duplex or duplexing
TDM	Time division multiplexing
TDMA	Time division multiple access
TDOA	Time difference of arrival
TDU	Tunnel data unit
TEK	Traffic encryption key
TFTP	Trivial file transfer protocol
TLV	Type/length/value
TOA	Time of arrival
TSTID	Temporary STID
TTG	Transmit/receive transition gap
TUSC	Tile usage of subchannels
Tx	Transmit (abbreviation not used as verb)

U

U-NII	Unlicensed national information infrastructure
U-TDOA	Uplink time difference of arrival
UCAS	Uplink CRU allocation size
UCD	Uplink channel descriptor
UDP	User datagram protocol
UEP	Unequal error protection
UFPC	Uplink frequency partition configuration
UGS	Unsolicited grant service
UIUC	Uplink interval usage code
UL	Uplink
UNI	User-to-network interface (or user-network interface)
USAC	Uplink subband allocation count
UTC	Universal coordinated time
UW	Unique word

V

VC	Virtual channel
VCI	Virtual channel identifier

VE	Vertical encoding
VLAN	Virtual local area network
VP	Virtual path
VPI	Virtual path identifier

W

WLAN	Wireless local area network

X

XOR	Exclusive-or

Y

<void>

Z

<void>

4.2.2.2   Abbreviations and acronyms related to LTE-Advanced terrestrial radio interface

0-9

1x RTT	cdma2000 1x radio transmission technology
2G	2nd Generation
3G	3rd Generation
3GPP	Third Generation partnership project
8-PSK	8-state phase shift keying

A

A-SGW	Access signalling gateway
A3	Authentication algorithm A3
A38	A single algorithm performing the functions of A3 and A8
A5/1	Encryption algorithm A5/1
A5/2	Encryption algorithm A5/2
A5/X	Encryption algorithm A5/0-7
A8	Ciphering key generating algorithm A8
AAL	ATM adaptation layer
AAL2	ATM adaptation layer type 2
AAL5	ATM adaptation layer type 5
AB	Access burst
AC	Access class (C0 to C15)
	Access condition
	Application context
	Authentication centre

ACC	Automatic congestion control
ACELP	Algebraic code excited linear prediction
ACCH	Associated control channel
ACIR	Adjacent channel interference ratio
ACK	Acknowledgement
ACL	APN control list
ACLR	Adjacent channel leakage power ratio
ACM	Accumulated call meter
	Address complete message
ACMmax	ACM (accumulated call meter) maximal value
ACRR	Adjacent channel rejection ratio
ACS	Adjacent channel selectivity
ACU	Antenna combining unit
ADC	Administration centre
	Analogue to digital converter
ADCH	Associated dedicated channel
ADF	Application dedicated file
ADM	Access condition to an EF which is under the control of the authority which creates this file
ADN	Abbreviated dialling numbers
ADPCM	Adaptive differential pulse code modulation
AE	Application entity
AEC	Acoustic echo control
AEF	Additional elementary functions
AESA	ATM end system address
AFC	Automatic frequency control
AGCH	Access grant channel
Ai	Action indicator
AI	Acquisition indicator
AICH	Acquisition indicator channel
AID	Application identifier
AIUR	Air interface user rate
AK	Anonymity key
AKA	Authentication and key agreement
AKI	Asymmetric key index
ALCAP	Access link control application protocol

ALSI	Application level subscriber identity
ALW	Always
AM	Acknowledged mode
AMF	Authentication management field
AMN	Artificial mains network
AMR	Adaptive multi rate
AMR-WB	Adaptive multi rate wide band
AN	Access network
ANP	Access network provider
AoC	Advice of charge
AoCC	Advice of charge charging
AoCI	Advice of charge information
AP	Access preamble
APDU	Application protocol data unit
API	Application programming interface
APN	Access point name
ARFCN	Absolute radio frequency channel number
ARP	Address resolution protocol
ARQ	Automatic repeat request
ARR	Access rule reference
AS	Access stratum
ASC	Access service class
ASCI	Advanced speech call items
ASE	Application service element
ASN.1	Abstract syntax notation one
AT command	Attention command
ATM	Asynchronous transfer mode
ATR	Answer to reset
ATT (flag)	Attach
AU	Access unit
AuC	Authentication centre
AUT(H)	Authentication
AUTN	Authentication token
AWGN	Additive white Gaussian noise

B

B-ISDN	Broadband ISDN
BA	BCCH allocation
BAIC	Barring of all incoming calls
BAOC	Barring of all outgoing calls
BC	Band category
BCC	Base transceiver station (bts) colour code
BCCH	Broadcast control channel
BCD	Binary coded decimal
BCF	Base station control function
BCFE	Broadcast control functional entity
BCH	Broadcast channel
BCIE	Bearer capability information element
BDN	Barred dialling number
BER	Bit error ratio
	Basic encoding rules (of ASN.1)
BFI	Bad frame indication
BG	Border gateway
BGT	Block guard time
BI	All barring of incoming call
BIC	Baseline implementation capabilities
BIC-Roam	Barring of incoming calls when roaming outside the home PLMN country
BID	Binding identity
BLER	Block error ratio
Bm	Full-rate traffic channel
BMC	Broadcast/Multicast control
BN	Bit number
BO	All barring of outgoing call
BOC	Bell Operating Company
BOIC	Barring of outgoing international calls
BOIC-exHC	Barring of outgoing international calls except those directed to the home plmn country
BPSK	Binary phase shift keying
BS	Base station
	Basic service (group)
	Bearer service

BSG	Basic service group
BSC	Base station controller
BSIC	Base transceiver station identity code
BSIC-NCELL	BSIC of an adjacent cell
BSR	Buffer status report
BSS	Base station subsystem
BSSAP	Base station subsystem application part
BSSGP	Base station subsystem GPRS protocol
BSSMAP	Base station subsystem management application part
BSSOMAP	Base station subsystem operation and maintenance application part
BTFD	Blind transport format detection
BTS	Base transceiver station
BVC	BSS GPRS protocol virtual connection
BVCI	BSS GPRS protocol virtual connection identifier
BW	Bandwidth
BWT	Block waiting time

C

C	Conditional
C-	Control-
C/I	Carrier-to-interference power ratio
CA	Carrier aggregation
C-APDU	Command APDU
C-RNTI	Cell radio network temporary identity
C-TPDU	Command TPDU
CA	Capacity allocation
	Cell allocation
	Certification authority
CAA	Capacity allocation acknowledgement
CAD	Card acceptance device
CAI	Charge advice information
CAMEL	Customised application for mobile network enhanced logic
CAP	CAMEL application part
CAZAC	Constant amplitude zero auto-correlation
CB	Cell broadcast
CBC	Cell broadcast centre
	Cipher block chaining

CBCH	Cell broadcast channel
CBMI	Cell broadcast message identifier
CBR	Constant bit rate
CBS	Cell broadcast service
CC	Call control
	Country code
	Cryptographic checksum
	Component carrier
CC/PP	Composite capability/Preference profiles
CCBS	Completion of calls to busy subscriber
CCCH	Common control channel
CCE	Control channel element
CCF	Call control function
CCH	Control channel
CCI	Capability / configuration identifier
CCITT	Comité consultatif international télégraphique et téléphonique (the International Telegraph and Telephone Consultative Committee)
CCK	Corporate control key
CCM	Certificate configuration message
	Current call meter
CCO	Cell change order
CCP	Capability/configuration parameter
CCPCH	Common control physical channel
Cct	Circuit
CCTrCH	Coded composite transport channel
CD	Capacity deallocation
	Collision detection
CDA	Capacity deallocation acknowledgement
CDCH	Control-plane dedicated channel
CDMA	Code division multiple access
CDN	Coupling/decoupling network
CDR	Charging data record
CDUR	Chargeable duration
CED	Called station identifier
CEIR	Central equipment identity register
CEND	End of charge point

CEPT	Conférence des Administrations européennes des Postes et Télécommunications
CF	Conversion facility
	All call forwarding services
CFB	Call forwarding on mobile subscriber busy
CFN	Connection frame number
CFNRc	Call forwarding on mobile subscriber not reachable
CFNRy	Call forwarding on no reply
CFU	Call forwarding unconditional
CGI	Common gateway interface
	Cell global identifier
CHAP	Challenge handshake authentication protocol
CHP	Charging point
CHV	Card holder verification information
CI	Cell identity
	CUG index
CID	Cell-ID (positioning method)
CIM	Common information model
CIR	Carrier to interference ratio
CK	Cipher key
CKSN	Ciphering key sequence number
CLA	Class
CLI	Calling line identity
CLIP	Calling line identification presentation
CLIR	Calling line identification restriction
CLK	Clock
CM	Connection management
CMAS	Commercial mobile alert service
CMC	Connection mobility control
CMD	Command
CMIP	Common management information protocol
CMISE	Common management information service
CMM	Channel mode modify
CN	Core network
	Comfort noise
CNAP	Calling name presentation
CNG	Calling tone

CNL	Co-operative network list
CNTR	Counter
CLNP	Connectionless network protocol
CLNS	Connectionless network service
COLI	Connected line identity
COLP	Connected line identification presentation
COLR	Connected line identification restriction
COM	COMplete
CONNACK	Connect acknowledgement
CONS	Connection-oriented network service
CORBA	Common object request broker architecture
CP	Cyclic prefix
CP-Admin	Certificate present (in the MExE SIM)-administrator
CP-TP	Certificate present (in the MExE SIM)-third party
CPBCCH	Compact packet BCCH
CPICH	Common pilot channel
CPCH	Common packet channel
CPCS	Common part convergence sublayer
CPS	Common part sublayer
CPU	Central processing unit
C-plane	Control plane
C/R	Command/Response field bit
CQI	Channel quality indicator
CRC	Cyclic redundancy check
CRE	Call ree-establishment procedure
CRNC	Controlling radio network controller
CS-GW	Circuit switched gateway
CS	Circuit switched
	Coding scheme
CSCF	Call server control function
CSD	Circuit switched data
CSE	Camel service environment
CSG	Closed subscriber group
CSGID	Closed subscriber group identity
CSI	Channel state information
CSPDN	Circuit switched public data network

CT	Call transfer supplementary service
	Channel tester
	Channel type
CTCH	Common traffic channel
CTDMA	Code time division multiple access
CTFC	Calculated transport format combination
CTM	Cellular text telephone modem
CTR	Common technical regulation
CTS	Cordless telephony system
CUG	Closed user group
CW	Call waiting
	Continuous wave (unmodulated signal)
CWI	Character waiting integer
CWT	Character waiting time
C-RNTI	Cell RNTI

D

DAC	Digital to analog converter
DAD	Destination address
DAM	DECT authentication module
DB	Dummy burst
DC	Dedicated control (SAP)
	Direct current
DCA	Dynamic channel allocation
DCCH	Dedicated control channel
DCE	Data circuit terminating equipment
DCF	Data communication function
DCH	Dedicated channel
DCI	Downlink control information
DCK	Depersonalisation control key
DCN	Data communication network
DCS	Data coding scheme
DCS1800	Digital cellular network at 1 800 MHz
DC-HSDPA	Dual cell HSDPA
DDI	Direct dial in
DECT	Digital enhanced cordless telecommunications
DET	Detach

DES	Data encryption standard
DF	Dedicated file
DFT	Discrete Fourier transformation
DHCP	Dynamic host configuration protocol
DHO	Diversity handover
diff-serv	Differentiated services
DISC	Disconnect
DL	Data layer
	Downlink (forward link)
DLCI	Data link connection identifier
DLD	Data link discriminator
DL-SCH	Downlink shared channel
Dm	Control channel (ISDN terminology applied to mobile service)
DMR	Digital mobile radio
DMTF	Distributed management task force
DN	Destination network
DNIC	Data network identifier
DNS	Directory name service
DO	Data object
DP	Dial/Dialled pulse
DPCCH	Dedicated physical control channel
DPCH	Dedicated physical channel
DPDCH	Dedicated physical data channel
DRAC	Dynamic resource allocation control
DRB	Data radio bearer
DRNC	Drift radio network controller
DRNS	Drift RNS
DRX	Discontinuous reception
DS-CDMA	Direct-sequence code division multiple access
DSAC	Domain specific access control
DSCH	Downlink shared channel
DSE	Data switching exchange
DSI	Digital speech interpolation
DSS1	Digital subscriber signalling No.1
DTAP	Direct transfer application part
DTCH	Dedicated traffic channel

DTE   Data terminal equipment

DTMF   Dual tone multiple frequency

DTT   Digital terrestrial television

DTX   Discontinuous transmission

DUT   Device under test

DwPTS   Downlink pilot timeslot

E

E-CID   Enhanced Cell-ID (positioning method)

E-GGSN   Enhanced GGSN

E-HLR   Enhanced HLR

E-RAB   E-UTRAN radio access bearer

E-SMLC   Enhanced serving mobile location centre

E-TM   E-UTRA test model

EA   External alarms

EARFCN   E-UTRA absolute radio frequency channel number

EBSG   Elementary basic service group

ECB   Electronic code-book

ECC   Emergency call code

             Elliptic curve cryptography

ECEF   Earth centred, earth fixed

ECGI   E-UTRAN cell global identifier

ECI   Earth-centered-inertial

ECM   Error correction mode (facsimile)

             EPS connection management

Ec/No   Ratio of energy per modulating bit to the noise spectral density

ECSD   Enhanced CSD

ECT   Explicit call transfer supplementary service

ECTRA   European Committee of Telecommunications Regulatory Affairs

EDC   Error detection code byte

EDGE   Enhanced data rates for GSM evolution

EEL   Electric echo loss

EF   Elementary file (on the UICC)

EFR   Enhanced full rate

EFS   Error free seconds

EGPRS   Enhanced GPRS

EHPLMN   Equivalent home PLMN

EIR	Equipment identity centre
	Equipment identity register
EIRP	Equivalent isotropic radiated power
EL	Echo loss
EF	Elementary file
EM	Element manager
EMC	Electromagnetic compatibility
eMLPP	enhanced multi-level precedence and pre-emption
EMMI	Electrical man machine interface
eNB	E-UTRAN Node B
	Evolved Node B
EP	Elementary procedure
EPA	Extended pedestrian a model
EPC	Enhanced power control
	Evolved packet core
EPRE	Energy per resource element
E-UTRA	Evolved UTRA
	Evolved universal terrestrial radio access
E-UTRAN	Evolved UTRAN
	Evolved universal terrestrial radio access network
EPS	Evolved packet system
EPCCH	Enhanced power control channel
EPROM	Erasable programmable read only memory
ERP	Ear reference point
	Equivalent radiated power
ERR	Error
ESD	Electrostatic discharge
ETNS	European Telecommunications Numbering Space
ETR	ETSI Technical Report
ETS	European Telecommunication Standard
ETSI	European Telecommunications Standards Institute
etu	Elementary time unit
ETU	Extended typical urban model
ETWS	Earthquake and tsunami warning system
EUI	End-user identity

EVA	Extended vehicular a model
EVM	Error vector magnitude
F	
FA	Full allocation
	Fax adaptor
FAC	Final assembly code
FACCH	Fast associated control channel
FACCH/F	Fast associated control channel/Full rate
FACCH/H	Fast associated control channel/Half rate
FACH	Forward access channel
FAUSCH	Fast uplink signalling channel
FAX	Facsimile
FB	Frequency correction burst
FBI	Feedback information
FCC	Federal communications commission
FCCH	Frequency correction channel
FCI	File control information
FCP	File control parameter
FCS	Frame check sequence
FDD	Frequency division duplex
FDM	Frequency division multiplex
FDMA	Frequency division multiple access
FDN	Fixed dialling number
FDR	False transmit format detection ratio
FEC	Forward error correction
FER	Frame erasure rate, frame error rate
FFS	For further study
FFT	Fast Fourier transformation
FH	Frequency hopping
FLO	Flexible layer one
FM	Fault management
FMC	Fixed mobile convergence
FN	Frame number
FNUR	Fixed network user rate
FP	Frame protocol
FPLMN	Forbidden PLMN

FR	Full rate
FRC	Fixed reference channel
FTAM	File transfer access and management
ftn	Forwarded-to number

G

G-RNTI	GERAN radio network temporary identity
GAGAN	GPS aided geo augmented navigation
GBR	Guaranteed bit rate
GC	General control (SAP)
GCR	Group call register
GERAN	GSM EDGE radio access network
GGSN	Gateway GPRS support node
GID1	Group identifier (level 1)
GID2	Group identifier (level 2)
GLONASS	GLObal'naya NAvigatsionnaya Sputnikovaya Sistema (Engl.: Global navigation satellite system)
GMLC	Gateway mobile location centre
GMM	GPRS mobility management
GMSC	Gateway MSC
GMSK	Gaussian minimum shift keying
GP	Guard period
GPA	GSM PLMN area
GPRS	General packet radio service
GPS	Global positioning system
GRA	GERAN registration area
GSA	GSM system area
GSIM	GSM service identity module
GSM	Global system for mobile communications
GSN	GPRS support nodes
GT	Global title
GTP	GPRS tunneling protocol
GTP-U	GPRS tunnelling protocol for user plane
GTT	Global text telephony
GUMMEI	Globally unique MME identifier
GUP	3GPP generic user profile

H

H-CSCF	Home CSCF
HANDO	Handover
HARQ	Hybrid ARQ, hybrid automatic repeat request
HCS	Hierarchical cell structure
HDLC	High level data link control
HE	Home environment
HE-VASP	Home environment value added service provider
HF	Human
HFN	Hyper frame number
HHO	Hard handover
HLC	High layer compatibility
HLR	Home location register
HN	Home network
HO	Handover
HOLD	Call hold
HPLMN	Home public land mobile network
HPS	Handover path switching
HPU	Hand portable unit
HR	Half rate
HRPD	CDMA2000 high rate packet data
HRR	Handover resource reservation
HSCSD	High speed circuit switched data
HSDPA	High speed downlink packet access
HSN	Hopping sequence number
HSPA	High speed packet access
HSS	Home subscriber server
HSUPA	High speed uplink packet access
HTTP	Hyper text transfer protocol
HTTPS	Hyper text transfer protocol secure (https is http/1.1 over SSL, i.e. port 443)
HU	Home units

I

I-Block	Information block
I-ETS	Interim European Telecommunications Standard
I/O	Input/Output
I	Information frames (RLP)

IA	Incoming access (closed user group SS)
IAM	Initial address message
IC	Integrated circuit
	Interlock code (CUG SS)
IC(pref)	Interlock code of the preferential CUG
ICB	Incoming calls barred (within the CUG)
ICC	Integrated circuit card
ICCID	Integrated circuit card identification
ICD	Interface control document
ICGW	Incoming call gateway
ICI	Incoming call information
ICIC	Inter-cell interference coordination
ICM	In-call modification
ICMP	Internet control message protocol
ICS	In-channel selectivity
ICT	Incoming call timer
ID	Identifier
IDFT	Inverse discrete Fourier transform
IDL	Interface definition language
IDN	Integrated digital network
IDNNS	Intra domain NAS node selector
IE	Information element
IEC	International Electrotechnical Commission
IED	Information element data
IEI	Information element identifier
IEIDL	Information element identifier data length
IETF	Internet engineering task force
IF	Infrastructure
IFD	Interface device
IFOM	IP flow mobility
IFS	Information field sizes
IFSC	Information field size for the UICC
IFSD	Information field size for the terminal
IHOSS	Internet hosted octet stream service
IIOP	Internet inter-ORB protocol
IK	Integrity key

IM	Intermodulation
	IP multimedia
IMA	Inverse multiplexing on ATM
IMC	IMS credentials
IMEI	International mobile equipment identity
IMGI	International mobile group identity
IMPI	IP multimedia private identity
IMPU	IP multimedia public identity
IMS	IP multimedia subsystem
IMSI	International mobile subscriber identity
IMT-2000	International Mobile Telecommunications-2000
IMUN	International mobile user number
IN	Intelligent network
	Interrogating node
INAP	Intelligent network application part
INF	INFormation field
IP	Internet Protocol
IP-CAN	IP-connectivity access network
IP-M	IP multicast
IPv4	Internet Protocol Version 4
IPv6	Internet Protocol Version 6
IR	Infrared
IRP	Integration reference point
IS	Interface specification
ISC	International switching centre
ISCP	Interference signal code power
ISDN	Integrated services digital network
ISIM	IM services identity module
ISO	International Organisation for Standardisation
ISP	Internet service provider
ISUP	ISDN user part
ITC	Information transfer capability
ITU	International Telecommunication Union
ITU-R	Radiocommunication Sector of the ITU
IUI	International USIM identifier
IUT	Implementation under test

IWF	Interworking function
I-WLAN	Interworking WLAN
IWMSC	Interworking MSC
IWU	Interworking unit

J

JAR file	Java archive file
JCRE	Java Card™ run time environment
JD	Joint detection
JNDI	Java naming directory interface
JP	Joint predistortion
JPEG	Joint Photographic Experts Group
JTAPI	Java telephony application programming interface
JVM	Java™ virtual machine

K

k	Windows size
K	Constraint length of the convolutional code
	USIM individual key
kbps	kilo-bits per second
Kc	Ciphering key
Ki	Individual subscriber authentication key
KSI	Key set identifier
ksps	kilo-symbols per second

L

L1	Layer 1 (physical layer)
L2	Layer 2 (data link layer)
L2ML	Layer 2 management link
L2R	Layer 2 relay
L2R BOP	L2R bit orientated protocol
L2R COP	L2R character orientated protocol
L3	Layer 3 (network layer)
LA	Location area
LAC	Link access control
	Location area code
LAI	Location area identity
LAN	Local area network
LAPB	Link access protocol balanced

LAPDm   Link access protocol on the Dm channel

LATA   Local access and transport area

LAU   Location area update

LB   Load balancing

LCD   Low constrained delay

LCG   Logical channel group

LCN   Local communication network

LCP   Link control protocol

LCR   Low chip rate

LCS   Location services

LCSC   LCS client

LCSS   LCS server

LE   Local exchange

LEN   LENgth

LI   Language indication

             Length indicator

             Line identity

LIPA   Local IP access

LLC   Logical link control

             Low layer compatibility

Lm   Traffic channel with capacity lower than a Bm

LMSI   Local mobile station identity

LMU   Location measurement unit

LN   Logical name

LNA   Low noise amplifier

LND   Last number dialled

LNS   L2TP network server

LPLMN   Local PLMN

LPP   LTE positioning protocol

LPPa   LTE positioning protocol annex

LR   Location register

             Location registration

LSA   Localised service area

LSB   Least significant bit

LSTR   Listener sidetone rating

LTE	Local terminal emulator
	Long term evolution
LTZ	Local time zone
LU	Local units
	Location update
LV	Length and value
M	
M	Mandatory
MA	Mobile allocation
	Multiple accesses
MAC	Medium access control (protocol layering context)
	Message authentication code (encryption context)
MAC-A	MAC used for authentication and key agreement (TSG T WG3 context)
MAC-I	MAC used for data integrity of signalling messages (TSG T WG3 context)
MACN	Mobile allocation channel number
MAF	Mobile additional function
MAH	Mobile access hunting supplementary service
MAHO	Mobile assisted handover
MAI	Mobile allocation index
MAIO	Mobile allocation index offset
MAP	Mobile application part
MBMS	Multimedia broadcast and multicast service
MBSFN	Multimedia broadcast multicast service single frequency network
MCC	Mobile country code
MCCH	Multicast control channel
MCE	Multi-cell/multicast coordination entity
MCH	Multicast channel
MCI	Malicious call identification supplementary service
MCML	Multi-class multi-link PPP
Mcps	Mega-chips per second
MCS	Modulation and coding scheme
MCU	Media control unit
MD	Mediation device
MDL	(Mobile) Management (entity) - Data link (layer)
MDS	Multimedia distribution service
MDT	Minimization of drive tests

ME	Maintenance entity
	Mobile equipment
MEF	Maintenance entity function
MEHO	Mobile evaluated handover
MER	Message error ratio
MExE	Mobile execution environment
MF	Master file
	Multiframe
MGCF	Media gateway control function
MGCP	Media gateway control part
MGT	Mobile global title
MGW	Media gateway
MHEG	Multimedia and Hypermedia Information Coding Expert Group
MHS	Message handling system
MIB	Management information base
	Master information block
MIC	Mobile interface controller
MIM	Management information model
MIMO	Multiple input multiple output
MIP	Mobile IP
MIPS	Million instructions per second
MLC	Mobile location centre
MM	Man machine
	Mobility management
	Multimedia
MME	Mobile management entity
MMI	Man machine interface
MNC	Mobile network code
MNP	Mobile number portability
MO	Mobile originated
MO-LR	Mobile originating location request
MO-SMS	Mobile originated short message service
MOHO	Mobile originated handover
MOS	Mean opinion score
MoU	Memorandum of understanding
MP	Multi-link PPP

MPEG	Moving Pictures Experts Group
MPH	(mobile) Management (entity) – Physical (layer) [primitive]
MPTY	Multiparty
MRF	Media resource function
MRP	Mouth reference point
MS	Mobile station
MSA	MCH subframe allocation
MSB	Most significant bit
MSC	Mobile switching centre
MSCM	Mobile station class mark
MSCU	Mobile station control unit
MSD	Maximum sensitivity degradation
MSE	MExE service environment
MSID	Mobile station identifier
MSD	Maximum sensitivity degradation
MSI	MCH scheduling information
MSIN	Mobile station identification number
MSISDN	Mobile subscriber isdn number
MSP	Multiple subscriber profile
MSR	Multi-standard radio
MSRN	Mobile station roaming number
MT	Mobile terminated
	Mobile termination
MTCH	Multicast traffic channel
MT-LR	Mobile terminating location request
MT-SMS	Mobile terminated short message service
MTM	Mobile-to-mobile (call)
MTP	Message transfer part
MTP3-B	Message transfer part level 3
MTU	Maximum transfer unit
MU	Mark up
MUI	Mobile user identifier
MUMS	Multi user mobile station
MVNO	Mobile virtual network operator

N

NACC	Network assisted cell change
NACK	Negative acknowledgement
NAD	Node address byte
NAI	Network access identifier
NAS	Non-access stratum
NBAP	Node B Application part
NB	Normal burst
NCELL	Neighbouring (of current serving) cell
NBAP	Node B application part
NBIN	A parameter in the hopping sequence
NCC	Network (PLMN) colour code
NCH	Notification channel
NCK	Network control key
NCP	Network control protocol
NDC	National destination code
NDUB	Network determined user busy
NE	Network element
NEF	Network element function
NEHO	Network evaluated handover
NET	Network
	Norme Européenne de Télécommunications
NEV	Never
NF	Network function
NI-LR	Network induced location request
NIC	Network independent clocking
NITZ	Network identity and time zone
NM	Network manager
NMC	Network management centre
NMR	Network measurement results
NMO	Network mode of operation
NMS	Network management subsystem
NMSI	National mobile station identifier
NNI	Network-node interface
NO	Network operator
NP	Network performance

NPA	Numbering plan area
NPI	Numbering plan identifier
NRI	Network resource identifier
NRM	Network resource model
NRT	Non-real time
NSAP	Network service access point
NSAPI	Network service access point identifier
NSCK	Network subset control key
NSDU	Network service data unit
NSS	Network sub system
Nt	Notification (SAP)
NT	Network termination
	Non transparent
NTAAB	New Type Approval Advisory Board
NTDD	Narrow-band time division duplexing
NUA	Network user access
NUI	National User / USIM identifier
	Network user identification
NUP	National user part (SS7)
NW	Network

O

O	Optional
O&M	Operations & Maintenance
OA	Outgoing access (CUG SS)
OACSU	Off-air-call-set-up
OCB	Outgoing calls barred within the CUG
OCCCH	ODMA common control channel
OCF	Open card framework
OCI	Outgoing call information
OCNG	OFDMA channel noise generator
OCNS	Orthogonal channel noise simulator
OCT	Outgoing call timer
OD	Optional for operators to implement for their aim
ODB	Operator determined barring
ODCCH	ODMA dedicated control channel
ODCH	ODMA dedicated channel

OLR	Overall loudness rating
ODMA	Opportunity driven multiple access
ODTCH	ODMA dedicated traffic channel
OID	Object identifier
OFDM	Orthogonal frequency division multiplex
	Orthogonal frequency division multiplexing
OFDMA	Orthogonal frequency division multiple access
OFM	Operational feature monitor
OMC	Operation and maintenance centre
OML	Operations and maintenance link
OOB	Out-of-band
OPLMN	Operator controlled PLMN (selector list)
OR	Optimal routeing
ORACH	ODMA random access channel
ORLCF	Optimal routeing for late call forwarding
OS	Operations system
OSA	Open service access
OSI	Open system interconnection
OSI RM	OSI reference model
OSP	Octet stream protocol
OSP:IHOSS	Octet stream protocol for internet hosted octet stream service
OTA	Over-the-air
OTDOA	Observed time difference of arrival (positioning method)
OTP	One time password
OVSF	Orthogonal variable Spreading factor
P	
P-CCPCH	Primary common control physical channel
P-CPIH	Primary common pilot channel
P-RNTI	Paging RNTI
P-TMSI	Packet TMSI
PA	Power amplifier
PAPR	Peak-to-average power ratio
PABX	Private automatic branch exchange
PACCH	Packet associated control channel
PAD	Packet assember/Disassembler
PAGCH	Packet access grant channel

PAP	Password authentication protocol
PAR	Peak to average ratio
PB	Pass band
PBID	Phonebook identifier
PBCCH	Packet broadcast control channel
PBCH	Physical broadcast channel
PBP	Paging block periodicity
PBX	Private branch exchange
PC	Power control
	Personal computer
PCB	Protocol control byte
PCCC	Parallel concatenated convolutional code
PCCCH	Packet common control channel
PCCH	Paging control channel
PCDE	Peak code domain error
PCell	Primary cell
PCFICH	Physical control format indicator channel
PCG	Project co-ordination group
PCH	Paging channel
PCK	Personalisation control key
PCM	Pulse code modulation
PCMCIA	Personal Computer Memory Card International Association
PCPCH	Physical common packet channel
PCS	Personal communication system
PCU	Packet control unit
PD	Protocol discriminator
	Public data
PDCCH	Physical downlink control channel
PDCP	Packet data convergence protocol
PDCH	Packet data channel
PDH	Plesiochronous digital hierarchy
PDN	Public data network
	Packet data network
PDP	Packet data protocol
PDSCH	Physical downlink shared channel
PDTCH	Packet data traffic channel

PDU	Protocol data unit
PG	Processing gain
PH	Packet handler
	Physical (layer)
PHF	Packet handler function
PHI	Packet handler interface
PHICH	Physical hybrid-ARQ indicator channel
PHS	Personal handyphone system
PHY	Physical layer
PhyCH	Physical channel
PI	Page indicator
	Presentation indicator
PICH	Page Indicator channel
PICS	Protocol implementation conformance statement
PID	Packet identification
PIN	Personal identification number
PIXT	Protocol implementation extra information for testing
PKCS	Public-key cryptography standards
PL	Preferred languages
PLMN	Public land mobile network
PMCH	Physical multicast channel
PMD	Physical media dependent
PMI	Precoding matrix indicator
PN	Pseudo noise
PNE	Présentation des Normes Européennes
PNP	Private numbering plan
POI	Point of interconnection (with PSTN)
PoR	Proof of receipt
POTS	Plain old telephony service
P-P	Point-to-point
PPCH	Packet paging channel
PPE	Primative procedure entity
PPF	Paging proceed flag
PPM	Parts per million
PPP	Point-to-point protocol
PPS	Protocol and parameter select (response to the ATR)

PRACH	Physical random access channel
	Packet random access channel
PRB	Physical resource block
Pref CUG	Preferential CUG
PRS	Positioning reference signal
PS	Packet switched
	Location probability
PSC	Primary synchronisation code
	Packet scheduling
PSCH	Physical shared channel
PSE	Personal service environment
PSPDN	Packet switched public data network
PSTN	Public switched telephone network
PTCCH	Packet Timing advance control channel
PTM	Point-to-multipoint
PTM-G	PTM group call
PTM-M	PTM multicast
PT-P	Point-to-point
PU	Payload unit
PUCCH	Physical uplink control channel
PUCT	Price per unit currency table
PUK	PIN unblocking key
PUSCH	Physical uplink shared channel
PVC	Permanent virtual circuit
PW	Password
PWS	Public warning system

Q

QA	Q (Interface) – Adapter
QAF	Q – Adapter function
QAM	Quadrature amplitude modulation
QCI	QoS class identifier
QoS	Quality of service
QPSK	Quadrature (Quaternary) phase shift keying
QZSS	Quasi-zenith satellite system

R

R	Value of reduction of the MS transmitted RF power relative to the maximum allowed output power of the highest power class of MS (A)
R-APDU	Response APDU
R-Block	Receive-ready block
R-PDCCH	Relay physical downlink control channel
R-SGW	Roaming signalling gateway
R-TPDU	Response TPDU
R99	Release 1999
RA	Routing area
	Random mode request information field
RA-RNTI	Random access RNTI
RAB	Radio access bearer
	Random access burst
RAC	Routing area code
RACH	Random access channel
RADIUS	Remote authentication dial in user service
RAI	Routing area identity
RAN	Radio access network
RANAP	Radio access network application part
RAND	RANDom number (used for authentication)
RAT	Radio access technology
RAU	Routing area update
RB	Radio bearer
RBC	Radio bearer control
RBER	Residual bit error ratio
RDF	Resource description format
RDI	Restricted digital information
RE	Resource element
REC	Recommendation
REG	Resource element group
REJ	Reject(ion)
REL	Release
Rel-4	Release 4
Rel-5	Release 5
REQ	Request

RES	User response
	64-bit signed response that is the output of the function f2 in a 3G AKA
RET	Remote electrical tilting
RETAP	Remote electrical tilting application part
RF	Radio frequency
RFC	Request for comments
	Radio frequency channel
RFCH	Radio frequency channel
RFE	Routing functional identity
RFN	Reduced TDMA frame number
RFU	Reserved for future use
RI	Rank indication
RIM	RAN information management
RL	Radio link
RLC	Radio link control
RLCP	Radio link control protocol
RLP	Radio link protocol
RLR	Receiver loudness rating
RLS	Radio link set
RMS	Root mean square (value)
RN	Relay node
RNC	Radio network controller
RNL	Radio network layer
RNS	Radio network subsystem
RNSAP	Radio network subsystem application part
RNTABLE	Table of 128 integers in the hopping sequence
RNTI	Radio network temporary identity
ROHC	Robust header compression
RPLMN	Registered public land mobile network
RPOA	Recognised private operating agency
RR	Radio resources
RRC	Radio resource control
RRM	Radio resource management
RS	Reference symbol
RSA	Algorithm invented by Rivest, Adleman and Shamir
RSCP	Received signal code power

RSE	Radio system entity
RSL	Radio signalling link
RSRQ	Reference signal received quality
RSSI	Received signal strength indicator
RST	Reset
RSTD	Reference signal time difference
RSVP	Resource reservation protocol
RSZI	Regional subscription zone identity
RT	Real time
RTE	Remote terminal emulator
RTP	Real time protocol
RU	Resource unit
RWB	Resolution bandwidth
RX	Receive
RXLEV	Received signal level
RXQUAL	Received signal quality

S

S1AP	S1 application protocol
S1-MME	S1 for the control plane
S1-U	S1 for the user plane
S-Block	Supervisory block
S-CCPCH	Secondary common control physical channel
S-CPICH	Secondary common pilot channel
S-CSCF	Serving CSCF
S-GW	Serving gateway
S-RNTI	SRNC radio network temporary identity
S-TMSI	SAE temporary mobile station identifier
SAAL	Signalling ATM adaptation layer
SABM	Set asynchronous balanced mode
SACCH	Slow associated control channel
SACCH/C4	Slow associated control channel/SDCCH/4
SACCH/C8	Slow associated control channel/SDCCH/8
SACCH/T	Slow associated control channel/traffic channel
SACCH/TF	Slow associated control channel/Traffic channel full rate
SACCH/TH	Slow associated control channel/Traffic channel half rate
SAD	Source address

SAE	System architecture evolution
SAP	Service access point
SAPI	Service access point identifier
SAR	Segmentation and reassembly
SAT	SIM application toolkit
SB	Synchronization burst
SBAS	Space based augmentation system
SBLP	Service based local policy
SBSC	Serving base station controller
SBSS	Serving base station subsystem
SC	Service centre (used for SMS)
	Service code
SC-FDMA	Single-carrier frequency division multiple access
SCCH	Synchronisation control channel
SCCP	Signalling connection control part
SCell	Secondary cell
SCF	Service control function (IN context), service capability feature (VHE/OSA context)
SCH	Synchronisation channel
SCI	Subscriber controlled input
SCN	Sub-channel number
SCP	Service control point
SCTP	S common transport protocol
SCUDIF	Service change and UDI/RDI fallback
SDCCH	Stand-alone dedicated control channel
SDH	Synchronous digital hierarchy
SDL	Specification description language
SDMA	Spatial division multiple access
SDN	Service dialling number
SDP	Service discovery protocol (Bluetooth related)
	Session description protocol
SDT	SDL development tool
SDU	Service data unit
SE	Security environment
	Sending entity
	Support entity
SEF	Support entity function

SET	SUPL enabled terminal
SF	Spreading factor
SFH	Slow frequency hopping
SFI	Short EF identifier
SFN	System frame number
SGSN	Serving GPRS support node
SHCCH	Shared channel control channel
SI	Screening indicator
	Service interworking
	Supplementary information (SIA = Supplementary information A)
	System information
SI-RNTI	System Information RNTI
SIB	System information block
SIC	Service implementation capabilities
SID	Silence descriptor
SIM	GSM subscriber identity module
SIP	Session initiated protocol
SIPTO	Selected IP traffic offload
SIR	Signal-to-interference ratio
SLA	Service level agreement
SLP	Supl location platform
SLPP	Subscriber LCS privacy profile
SLR	Send loudness rating
SLTM	Signalling link test message
SM	Session management
	Short message
SMDS	Switched multimegabit data service
SME	Short message entity
SMG	Special mobile group
SMI	Structure of management information (RFC 1155)
SMLC	Serving mobile location centre
SMS	Short message service
SMS-CB	SMS cell broadcast
SMS-PP	Short message service/Point-to-point
SMS-SC	Short message service - Service centre
Smt	Short message terminal

SN	Serial number
	Serving network
	Sequence number
	Subscriber number
SNDCP	Sub-network dependent convergence protocol
SNMP	Simple network management protocol
SNR	Serial number
	Signal-to-noise ratio
SOA	Suppress outgoing access (CUG SS)
SoLSA	Support of localised service area
SON	Self organizing networks
SoR	Steering of roaming
SP	Switching point
	Service provider
SPC	Signalling point code
	Suppress preferential CUG
SPCK	Service provider control key
SPI	Security parameters indication
SQN	Sequence number
SR	Scheduling request
SRB	Signalling radio bearer
SRES	Signed response (authentication value returned by the SIM or by the USIM in 2G AKA)
SRNC	Serving radio network controller
SRNS	Serving RNS
SRS	Sounding reference signal
SS	Supplementary service
	System simulator
SS7	Signalling System No. 7
SSC	Secondary synchronisation code
	Supplementary service control string
SSCOP	Service specific connection oriented protocol
SSCF	Service specific co-ordination function
SSCF-NNI	Service specific coordination function – Network node interface
SSCS	Service specific convergence sublayer
SSDT	Site selection diversity transmission

SSE	Service specific entities
SSF	Service switching function
SSN	Sub-system number
SSSAR	Service specific segmentation and re-assembly sublayer
STC	Signalling transport converter
STMR	Sidetone masking rating
STP	Signalling transfer point
STTD	Space time transmit diversity
SuM	Subscription management
SUPL	Secure user plane location
SV	Space vehicle
SVC	Switched virtual circuit
SVN	Software version number
SW	Status word
	Software
SW1/SW2	Status Word 1/Status Word 2
T	
T-SGW	Transport signalling gateway
T	Timer
	Transparent
	Type only
TA	Terminal adaptation
	Timing advance
	Tracking area
TAC	Type approval code
TAF	Terminal adaptation function
TAR	Toolkit application reference
TB	Transport block
TBD	To be defined
TBF	Temporary block flow
TBR	Technical basis for regulation
TC	Transaction capabilities
	Transcoder
	Transmission convergence
TCH	Traffic channel
TCH/F	A full rate TCH

TCH/F2,4   A full rate data TCH (≤ 2,4 kbit/s)

TCH/F4,8   A full rate date TCH (4,8 kbit/s)

TCH/F9,6   A full rate data TCH (9,6 kbit/s)

TCH/FS   A full rate speech TCH

TCH/H   A half rate TCH

TCH/H2,4   A half rate data TCH (≤ 2,4 kbit/s)

TCH/H4,8   A half rate data TCH (4,8 kbit/s)

TCH/HS   A half rate speech TCH

TC-TR   Technical Committee Technical Report

TCI   Transceiver control interface

TCP   Transmission control protocol

TD-CDMA   Time division-code division multiple access

TDD   Time division duplex (ing)

TDMA   Time division multiple access

TDoc   Temporary document

TE   Terminal equipment

TE9   Terminal equipment 9 (ETSI sub-technical committee)

Tei   Terminal endpoint identifier

TEID   Tunnel end point identifier

TF   Transport format

TFA   Transfer allowed

TFC   Transport format combination

TFCI   Transport format combination indicator

TFCS   Transport format combination set

TFI   Transport format indicator

            Temporary flow identity

TFIN   Transport format indicator

TFP   Transfer prohibited

TFS   Transport format set

TFT   Traffic flow template

TI   Transaction identifier

TLLI   Temporary logical link identity

TLM   TeLeMetry word

TLS   Transport layer security

TLV   Tag length value

TM	Telecom management
	Transparent mode
TMA	Tower mounted amplifier
TMAAP	Tower mounted amplifier application part
TMF	Telecom management Forum
TMN	Telecom management network
TMSI	Temporary mobile subscriber identity
TN	Termination node
	Timeslot number
TNL	Transport network layer
TO	Telecom operations map
TOA	Time of arrival
TON	Type of number
TP	Third party
TPC	Transmit power control
TPDU	Transfer protocol data unit
TR	Technical report
TRAU	Transcoder and rate adapter unit
TrCH	Transport channel
TRX	Transceiver
TS	Technical specification
	Teleservice
	Time slot
TSC	Training sequence code
TSDI	Transceiver speech & Data interface
TSG	Technical Specification Group
TSTD	Time switched transmit diversity
TTCN	Tree and tabular combined notation
TTI	Transmission timing interval
TUP	Telephone user part (SS7)
TV	Type and value
TX	Transmit
TXPWR	Transmit PoWeR; Tx power level in the MS_TXPWR_REQUEST and MS_TXPWR_CONF parameters

U

U-plane	User plane
U-RNTI	UTRAN radio network temporary identity
UARFCN	UTRA absolute radio frequency channel number
UARFN	UTRA absolute radio frequency number
UART	Universal asynchronous receiver and transmitter
UCS2	Universal character set 2
UDD	Unconstrained delay data
UDI	Unrestricted digital information
UDP	User datagram protocol
UDUB	User determined user busy
UDCH	User-plane dedicated channel
UE	User equipment
UE_R	User equipment with ODMA relay operation enabled
UEM	operating band unwanted emissions mask
UI	User interface
	Unnumbered information (Frame)
UIA	3G integrity algorithm
UIC	Union internationale des Chemins de Fer
UL	Uplink (reverse link)
UL-SCH	Uplink shared channel
UM	Unacknowledged mode
UML	Unified modelling language
UMS	User mobility server
UMSC	UMTS mobile services switching centre
UMTS	Universal mobile telecommunications system
UNI	User-network interface
UP	User plane
UPCMI	Uniform PCM interface (13-bit)
UPE	User plane entity
UPD	Up-to-date
UpPTS	Uplink pilot timeslot
UPT	Universal personal telecommunication
URA	User registration area
	UTRAN registration area
URAN	UMTS radio access network

URB	User radio bearer
URI	Uniform resource identifier
URL	Uniform resource locator
USAT	USIM application toolkit
USB	Universal serial bus
USC	UE service capabilities
USCH	Uplink shared channel
USF	Uplink state flag
USIM	Universal subscriber identity module
USSD	Unstructured supplementary service data
UT	Universal time
UTRA	Universal terrestrial radio access
UTRAN	Universal terrestrial radio access network
UUI	User-to-user information
UUS	Uu stratum
	User-to-user signalling

V

V	Value only
VA	Voice activity factor
VAD	Voice activity detection
VAP	Videotex access point
VASP	Value added service provider
VBR	Variable bit rate
VBS	Voice broadcast service
VC	Virtual circuit
VGCS	Voice group call service
VHE	Virtual home environment
VLR	Visitor location register
VMSC	Visited MSC
VoIP	Voice over IP
VPLMN	Visited public land mobile network
VPN	Virtual private network
VRB	Virtual resource block
VSC	Videotex service centre
V(SD)	Send state variable
VTX host	The components dedicated to videotex service

W

WA	Wide area
WAAS	Wide area augmentation system
WAE	Wireless application environment
WAP	Wireless application protocol
WBEM	Web based enterprise management
WCDMA	Wideband code division multiple access
WDP	Wireless datagram protocol
WG	Working Group
WGS-84	World geodetic system 1984
WIM	Wireless identity module
WIN	Wireless intelligent network
WLAN	Wireless local area network
WLAN UE	WLAN user equipment
WPA	Wrong password attempts (counter)
WS	Work station
WSP	Wireless session protocol
WTA	Wireless telephony applications
WTAI	Wireless telephony applications interface
WTDD	Wideband time division duplexing
WTLS	Wireless transport layer security
WTP	Wireless transaction protocol
WTX	Waiting time extension
WWT	Work waiting time
WWW	World wide web

X

X2-C	X2-control plane
X2-U	X2-user plane
XID	Exchange identifier
XMAC	Expected message authentication code (calculated by the USIM application in 3G AKA)
XML	Extensible markup language
XRES	Expected user response

Y

Z

ZC   Zone code

4.2.3   Abbreviations and acronyms of general nature related to IMT

0-9

3GPP   Third generation partnership project

A

AAS   Adaptive antenna system

ACI   Adjacent channel interference

ACI_{max} Maximum adjacent channel interference

ACIR   Adjacent channel interference ratio

ACLR   Adjacent channel leakage ratio

ACS   Adjacent channel selectivity

AM   Amplitude modulation

ARIB   Association of Radio Industries and Businesses

ARQ   Automatic repeat request

ATIS   Alliance for Telecommunications Industry Solutions

B

BER   Bit error ratio

BER   Bit error rate

BS   Base station

BW   Bandwidth

C

C/I Carrier power to interference power ratio

CCSA   China Communications Standards Association

CDF   Cumulative probability density function

CDMA   Code division multiple access

CDMA-DS   Code division multiple access-direct sequence

CDMA-TDD Code division multiple access-time division duplex

CTC   Convolutional turbo code

D

DECT   Digital enhanced cordless telecommunications

DL   Downlink (base station transmits, mobile station receives)

DOE   Direction of earth station

DVB   Digital video broadcasting

E

E_b/N_0 Energy per bit over noise power spectral density

EDGE   Enhanced data GSM environment

ETSI   European Telecommunications Standards Institute

E-UTRA   Evolved UTRA

F

FDD   Frequency division duplex

FDMA   Frequency division multiple access

FS   Fixed service

G

<void>

H

HRPD   High rate packet data

HSPA   High speed packet access

HSPA+   Evolved high-speed packet access

I

IEEE   Institute of Electrical and Electronics Engineers

IMT   Root name that encompasses both IMT-2000 and IMT-Advanced collectively

IMT-2000   International Mobile Telecommunications-2000

IMT-Advanced   Previously known as systems beyond IMT-2000

J

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K

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L

LNB   Low noise block downconverter

LoS   Line-of-sight

LTE   Long term evolution

M

MBWA   Mobile broadband wireless access

MC   Monte Carlo

MCL   Minimum coupling loss

MCS   Minimum carrier separation

MMDS   Multipoint multimedia distribution system

MS   Mobile station

N

NLoS   Non line-of-sight

O

OFDM   Orthogonal frequency division multiplexing

OFDMA   Orthogonal frequency division multiple access

P

PC   Power control

PER   Packet error rate

pfd   Power flux-density

Q

QAM   Quadrature amplitude modulation

QoS   Quality of service

QPSK   Quadrature phase shift keying

R

RF   Radio frequency

S

SINR   Signal-to-interference and noise ratio

SNR   Signal-to-noise ratio

SS   Subscriber station (applies only to 802.16 TDD)

T

TDD   Time division duplex

TDMA   Time division multiple access

TD-SCDMA Time division synchronous code division multiple access

TTA   Telecommunications Technology Association

TTC   Telecommunication Technology Committee

TX   Transmitter

U

UL   Uplink (mobile station transmits, base station receives)

UMB   Ultra mobile broadband

UMTS   Universal mobile telecommunication system

UTRA   Universal terrestrial radio access

UWC   Universal wireless communications

V

VSAT   Very small aperture terminal

W

WCDMA   Wideband code division multiple access

WiMAX   Worldwide interoperability for microwave access

WiMAX Forum Worldwide interoperability for microwave access forum

WMAN   Wireless metropolitan area network

X

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Y

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Z

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