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SERIES Q: SWITCHING AND SIGNALLING

Signalling requirements and protocols for IMT-2000

IMT-2000 references to Release 7 of GSM-evolved UMTS core network

Recommendation ITU-T Q.1741.5

ITU-T Q-SERIES RECOMMENDATIONS

SWITCHING AND SIGNALLING

For further details, please refer to the list of ITU-T Recommendations.

Recommendation ITU-T Q.1741.5

IMT-2000 references to Release 7 of GSM-evolved UMTS core network

Summary

Recommendation ITU-T Q.1741.5 identifies a release of the IMT-2000 Family Member, "GSM evolved UMTS Core Network". This release of the Family Member is known to the Standards Development Organizations (i.e., ARIB, CCSA, ETSI, ATIS, TTA, TTC) as the "3GPP Release 7". Earlier releases, known as "3GPP Release 99", "3GPP Release 4", "3GPP Release 5", and "3GPP Release 6", of this Family Member are specified in Recommendations ITU-T Q.1741.1, Q.1741.2, Q.1741.3, and Q.1741.4, respectively, while other IMT-2000 Family Members are specified in other ITU-T Recommendations in the Q.174x series.

This Recommendation combines and associates the relevant standards from a number of Standards Development Organizations for the core network for this IMT-2000 Family Member into a global Recommendation.

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications, information and communication technologies (ICTs). The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

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In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

Compliance with this Recommendation is voluntary. However, the Recommendation may contain certain mandatory provisions (to ensure e.g., interoperability or applicability) and compliance with the Recommendation is achieved when all of these mandatory provisions are met. The words "shall" or some other obligatory language such as "must" and the negative equivalents are used to express requirements. The use of such words does not suggest that compliance with the Recommendation is required of any party.

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As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementers are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database at http://www.itu.int/ITU-T/ipr/.

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1   Scope

This Recommendation identifies the IMT-2000 Family Member, "GSM evolved UMTS Core Network". This release of the Family Member is known to the Standards Development Organizations (i.e., ARIB, CCSA, ETSI, ATIS, TTA, TTC) as the "3GPP Release 7".

The core network interfaces identified in this Recommendation and the radio interfaces and radio access interfaces which are identified in [ITU-R M.1457-7] constitute a complete system specification for the 3rd generation mobile system for terrestrial usage of this IMT-2000 Family Member.

It is the intent of the ITU-T that the references in this Recommendation are only to specifications that specify the network aspects of this IMT-2000 Family Member. In the event that a referenced specification also includes material that specifies any of the radio aspects of this IMT-2000 family member, [ITU-R M.1457-7] shall take precedence.

NOTE – The structure and content of this Recommendation have been organized for ease of use by those familiar with the original source material; as such, the usual style of ITU-T Recommendations has not been applied.

2   References[1]

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

2.1   Normative references

[ITU-R M.1457-7]   Recommendation ITU-R M.1457-7 (2007), *Detailed specifications of the radio interfaces of International Mobile Telecomunications-2000 (IMT-2000).*

[ETSI TS 123 002]   ETSI TS 123 002 (2007), *Network architecture (Release 7).*

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[1]   Technical documents of Standards Development Organizations recognized under the provisions of Recommendation ITU-T A.5 can be found under:

ARIB   at http://www.arib.or.jp/english/index.html

CCSA   at http://www.ccsa.org.cn.

ETSI   at http://www.etsi.org/

ATIS   at https://www.atis.org/

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[TTC TS-3GA-23.271]	TTC TS-3GA-23.271 (2007), *Functional stage 2 description of location services.*
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[ISO/IEC 4335]	ISO/IEC 4335:1993, *Information technology – Telecommunications and information exchange between systems – High-level data link control (HDLC) procedures – Elements of procedures.*
[ISO/IEC 7498-1]	ISO/IEC 7498-1:1994, *Information processing systems – Open Systems Interconnection – Basic Reference Model: The Basic Model.*
[ISO/IEC 7809]	ISO/IEC 7809:1993, *Information technology – Telecommunication and information exchange between systems – High-level data link control (HDLC) procedures – Classes of procedures.*
[ISO/IEC 8886]	ISO/IEC 8886:1996, *Information technology – Open Systems Interconnection – Data link service definition.*
[ITU-T E.164]	Recommendation ITU-T E.164 (2005), *The international public telecommunication numbering plan.*
[ITU-T G.711]	Recommendation ITU-T G.711 (1988), *Pulse code modulation (PCM) of voice frequencies.*

[ITU-T H.245]	Recommendation ITU-T H.245 (2005), *Control protocol for multimedia communication.*
[ITU-T H.248.1]	Recommendation ITU-T H.248.1 (2005), *Gateway control protocol: Version 3.*
[ITU-T H.323]	Recommendation ITU-T H.323 (2003), *Packet-based multimedia communications systems.*
[ITU-T H.324]	Recommendation ITU-T H.324 (2005), *Terminal for low bit-rate multimedia communication.*
[ITU-T I.112]	Recommendation ITU-T I.112 (1993), *Vocabulary of terms for ISDNs.*
[ITU-T I.113]	Recommendation ITU-T I.113 (1997), *Vocabulary of terms for broadband aspects of ISDN.*
[ITU-T I.130]	Recommendation ITU-T I.130 (1988), *Method for the characterization of telecommunication services supported by an ISDN and network capabilities of an ISDN.*
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[ITU-T I.420]	Recommendation ITU-T I.420 (1988), *Basic user-network interface.*
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[ITU-T I.461]	Recommendation ITU-T I.461/X.30 (1993), *Support of X.21, X.21 bis and X.20 bis based Data Terminal Equipments (DTEs) by an Integrated Services Digital Network (ISDN).*
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[ITU-T I.463]	Recommendation ITU-T I.463/V.110 (2000), *Support by an ISDN of data terminal equipments with V-series type interfaces.*
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[ITU-T Q.921 *bis*]	Recommendation ITU-T Q.921 *bis* (1993), *Abstract test suite for LAPD conformance testing.*
[ITU-T Q.922]	Recommendation ITU-T Q.922 (1992), *ISDN data link layer specification for frame mode bearer services.*
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[ITU-T Q.1214]	Recommendation ITU-T Q.1214 (1995), *Distributed functional plane for intelligent network CS-1.*
[ITU-T Q.1902.1]	Recommendation ITU-T Q.1902.1 (2001), *Bearer Independent Call Control Protocol (Capability Set 2): Functional description.*
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[ITU-T Q.1902.3]	Recommendation ITU-T Q.1902.3 (2001), *Bearer Independent Call Control Protocol (Capability Set 2) and Signalling System No. 7 ISDN user part: Formats and codes.*
[ITU-T Q.1902.4]	Recommendation ITU-T Q.1902.4 (2001), *Bearer Independent Call Control Protocol (Capability Set 2): Basic call procedures.*
[ITU-T Q.1902.5]	Recommendation ITU-T Q.1902.5 (2001), *Bearer Independent Call Control Protocol (Capability Set 2): Exceptions to the Application transport mechanism in the context of BICC.*
[ITU-T Q.1902.6]	Recommendation ITU-T Q.1902.6 (2001), *Bearer Independent Call Control protocol (Capability Set 2): Generic signalling procedures for the support of the ISDN user part supplementary services and for bearer redirection.*
[ITU-T T.31]	Recommendation ITU-T T.31 (1995), *Asynchronous facsimile DCE control – Service Class 1.*
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[ITU-T V.14]	Recommendation ITU-T V.14 (1993), *Transmission of start-stop characters over synchronous bearer channels.*
[ITU-T V.21]	Recommendation ITU-T V.21 (1988), *300 bits per second duplex modem standardized for use in the general switched telephone network.*
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[ITU-T V.22 *bis*]	Recommendation ITU-T V.22 *bis* (1988), *2400 bits per second duplex modem using the frequency division technique standardized for use on the general switched telephone network and on point-to-point 2-wire leased telephone-type circuits.*
[ITU-T V.24]	Recommendation ITU-T V.24 (2000), *List of definitions for interchange circuits between data terminal equipment (DTE) and data circuit-terminating equipment (DCE).*

[ITU-T V.25 *bis*]	Recommendation ITU-T V.25 *bis* (1996), *Synchronous and asynchronous automatic dialling procedures on switched networks.*
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[ITU-T V.26 *ter*]	Recommendation ITU-T V.26 *ter* (1988), *2400 bits per second duplex modem using the echo cancellation technique standardized for use on the general switched telephone network and on point-to-point 2-wire leased telephone-type circuits.*
[ITU-T V.32]	Recommendation ITU-T V.32 (1993), *A family of 2-wire, duplex modems operating at data signalling rates of up to 9600 bit/s for use on the general switched telephone network and on leased telephone-type circuits.*
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[ITU-T F.703]	Recommendation ITU-T F.703 (2000), *Multimedia conversational services.*
[ITU-T I.363.2]	Recommendation ITU-T I.363.2 (2000), *B-ISDN ATM Adaptation Layer specification: Type 2 AAL.*
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[ETSI TS 102 484]	ETSI TS 102 484 V7.0.0 (2007), *Smart Cards: Secure channel between a UICC and an end-point terminal (Release 7).*

2.2 Informative references

[ARIB TR-T12-21.905]   ARIB TR-T12-21.905 (2007), *Vocabulary for 3GPP Specifications.*

[CCSA-TSD-121 905]   CCSA-TSD-121 905 (2007), *Vocabulary for 3GPP Specifications.*

[ETSI TR 121 905]   ETSI TR 121 905 (2007), *Vocabulary for 3GPP Specifications.*

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3 Definitions

The text is based on references in clause 2.2.

This Recommendation defines the following terms:

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

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

3.3 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.

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

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

3.6 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.

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

3.8 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.

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

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

3.11 bearer capability: A transmission function, which the UE requests to the network.

3.12 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.

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

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

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

3.16 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.

3.17 call: A logical association between several users (this could be connection-oriented or connectionless).

3.18 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.

3.19 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 or GERAN access point. A Cell in UTRAN is either FDD or TDD mode.

3.20 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.

3.21 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.

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

3.23 closed user group: A group with a predefined set of members. Only defined members may participate in a closed group.

3.24 confidentiality: The avoidance of disclosure of information without the permission of its owner.

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

3.26 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.

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

3.28 control channel: A logical channel that carries system control information.

3.29 core network: An architectural term relating to the part of a 3G system, which is independent of the connection technology of the terminal (e.g., radio, wired).

3.30 core network operator: Operator that offers core network services.

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

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

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

3.34   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.

3.35   coverage area: Area over which a 3G system service is provided with the service probability above a certain threshold.

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

3.37   current EF: The latest EF selected.

3.38   current serving cell: This is the cell on which the MS is camped.

3.39   data object: Information coded as TLV objects, i.e., consisting of a tag, a length and a value part.

3.40   dedicated channel: A channel dedicated to a specific UE.

3.41   de-personalization: The process of deactivating the personalization so that the ME ceases to carry out the verification checks.

3.42   dedicated file (DF): A file containing access conditions and, optionally, elementary files (EFs) or other dedicated files (DFs).

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

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

3.45   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).

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

3.47   directory: General term for the MF and/or a DF on the UICC.

3.48   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.

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

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

3.51 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.

3.52 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.

3.53 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 needs to use cell(s) controlled by this RNS is referred to as "Drift RNS".

3.54 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.

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

3.56 essential UE requirement (conditional): Requirement which has to be implemented under certain service conditions, e.g., AMR codec in UE which supports speech service.

3.57 essential UE requirement (unconditional): Requirement which has to be implemented in any 3G UE in order to exist in and communicate with the 3G network (e.g., chip rate of 3.84 Mcps).

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

3.59 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).

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

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

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

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

3.64 flexible layer one (FLO): GERAN feature that allows the channel coding of the layer one to be configured at call set-up.

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

3.66 functional group: A set of functions that may be performed by a single equipment (source: [ITU-T I.112]).

3.67 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.

3.68 GERAN radio network temporary identifier (G-RNTI): 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.

3.69 GPRS MS: An MS capable of GPRS services.

3.70 **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.

3.71 **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.

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

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

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

3.75 **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.

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

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

3.78 **GSM BSS**: Refers in this Recommendation to the GSM/GPRS access network.

3.79 **GSM core network**: Refers in this Recommendation to the GSM NSS and GPRS backbone infrastructure.

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

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

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

3.83 **handoff gain/loss (dB)**: This is the gain/loss factor (+ or –) brought by handoff to maintain specified reliability at the cell boundary.

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

3.85 **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.

3.86 **hard handover**: A category of handover procedures where all the old radio links in the UE are abandoned before the new radio links are established.

3.87 **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.

3.88 **home environment**: Responsible for overall provision and control of the personal service environment of its subscribers.

3.89   home PLMN: PLMN where the mobile country code (MCC) and mobile network code (MNC) of the PLMN identity are the same as the MCC and MNC of the IMSI.

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

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

3.92   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).

3.93   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.

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

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

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

3.97   integrity: (in the context of security) The avoidance of unauthorized modification of information.

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

3.99   inter-PLMN handover: Handover between different PLMNs, i.e., having different MCC-MNC.

3.100   inter-system handover: Handover between networks using different radiosystems, e.g., UMTS – GSM.

3.101   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: [ITU-T I.113]).

3.102   interface: The common boundary between two associated systems (source: [ITU-T I.112]).

3.103   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.

3.104   international mobile user number (IMUN): The international mobile user number is a diallable number allocated to a 3GPP system user.

3.105   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").

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

3.107   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.

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

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

3.109   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.

3.110   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.

3.111   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").

3.112   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.

3.113   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.

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

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

3.116   Iu: Interconnection point between an RNC and a core network. It is also considered as a reference point.

3.117   Iu-flex: Routing functionality for intradomain connection of RAN nodes to multiple CN nodes.

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

3.119   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.

3.120   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.

3.121   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.

3.122   localized service area (LSA): 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.

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

3.124   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.

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

3.126   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.

3.127   logical O&M: 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.

3.128   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.

3.129   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.

3.130   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.

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

3.132   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.

3.133   management infrastructure: The collection of systems (computers and telecommunications) a 3GPP System Organization has in order to manage a 3GPP System.

3.134   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).

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

3.136   maximum output power: For UE, this is a measure of the maximum power supported by the UE (i.e., the actual power as would be measured assuming no measurement error) (TS 25.101). For FDD BS, the mean power level per carrier of the base station measured at the antenna connector in a specified reference condition (TS 25.104). For TDD BS, this refers to the measure of power when averaged over the transmit timeslot at the maximum power setting (TS 25.105).

3.137   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.

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

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

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

3.141   medium access control: A sub-layer of radio interface layer 2 providing unacknowledged data transfer service on logical channels and access to transport channels.

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

3.143   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.

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

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

3.146   MExE service: A service enhanced (or made possible) by MExE technology.

3.147   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.

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

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

3.150   micro cells: "Micro cells" are small cells.

3.151   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 mininum transmit output power is required (TS 25.105).

3.152   mobile evaluated handover (MEHO): 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.

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

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

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

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

3.157   multi-mode terminal: UE that can obtain service from at least one UTRA radio access mode, and one or more different systems such as GSM bands or possibly other radio systems such as IMT-2000 Family Members.

3.158   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.

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

3.160   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.

3.161   name: A name is an alphanumeric label used for identification of end users and may be portable.

3.162   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.

3.163   network code: MCC and MNC.

3.164   network code group: Same as "network code".

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

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

3.167   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.

3.168   network operator: See "PLMN operator".

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

3.170   network resource model: A protocol-independent model describing managed objects representing network resources, e.g., an RNC or Node B.

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

3.172   **network subset code**: Digits 6 and 7 of the IMSI.

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

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

3.175   **nomadic operating mode**: Mode of operation where the terminal is transportable but being operated while stationary and may in addition require user cooperation (e.g., close to open spaces, antenna set-up, etc.).

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

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

3.178   **normal GSM operation**: Relating to general, CHV-related, GSM security-related and subscription-related procedures.

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

3.180   **narrow TDD (NTDD)**: The 1.28 Mcps chip rate UTRA-TDD option.

3.181   **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.

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

3.183   **open service architecture**: Concept for introducing a vendor-independent means for introduction of new services.

3.184   **operations system**: This term indicates a generic management system, independent of its location level within the management hierarchy.

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

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

3.187   **packet data protocol (PDP)**: Any protocol, which transmits data as discrete units known as packets, e.g., IP, or [ITU-T X.25].

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

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

3.190   **paging**: The act of seeking a user equipment.

3.191   **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.

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

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

3.194   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.

3.195   personalization: The process of storing information in the ME and activating the procedures, which verify this information against the corresponding information stored in the SIM whenever the ME is powered up or a SIM is inserted, in order to limit the SIMs with which the ME will operate.

3.196   personalization entity: Network, network subset, SP, Corporate or (U)SIM to which the ME is personalized.

3.197   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.

3.198   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.

3.199   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.

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

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

3.202   PLMN area: 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.

3.203   public land mobile network operator (PLMN operator): The entity which offers telecommunications services over an air interface.

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

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

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

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

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

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

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

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

3.212 **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.

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

3.214 **proactive SIM**: A SIM which is capable of issuing commands to the terminal. Part of SIM application toolkit.

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

3.216 **public land mobile network**: A telecommunications network providing mobile cellular services.

3.217 **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.

3.218 **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.

3.219 **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.

3.220 **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.

3.221 **radio access mode**: Mode of the cell, FDD or TDD.

3.222 **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.

3.223 **radio access network application part**: Radio network signalling over the Iu.

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

3.225 **radio access network technology**: UTRAN, GERAN, etc.

3.226   radio interface: The "radio interface" is the tetherless interface between user equipment and a UTRAN access point. This term encompasses all the functionality required to maintain such interfaces.

3.227   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.

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

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

3.230   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.

3.231   radio system: The selected 2nd or 3rd generation radio access technology.

3.232   real time: Time, typically in number of seconds, to perform the online mechanism used for fraud control and cost control.

3.233   received signal code power: Given only signal power is received, the average power of the received signal after despreading and combining.

3.234   receiver antenna gain (dBi): The maximum gain of the receiver antenna in the horizontal plane (specified as dB relative to an isotropic radiator).

3.235   receiver noise figure (dB): The noise figure of the receiving system referenced to the receiver input.

3.236   receiver sensitivity (dBm): This is the signal level needed at the receiver input that just satisfies the required Eb/(No+Io).

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

3.238   record: A string of bytes within an EF handled as a single entity (see clause 6).

3.239   record number: The number which identifies a record within an EF.

3.240   record pointer: The pointer which addresses one record in an EF.

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

3.242   reference point: A conceptual point at the conjunction of two non-overlapping functional groups (source: [ITU-T I.112]).

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

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

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

3.246   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.

3.247   relay: Terminal devices capable of ODMA relay communications.

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

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

3.250   release 99: A particular version of the 3G System standards produced by the 3GPP project. Also: Release 4, Release 5, Release 6, Release 7, etc.

3.251   repeater: A radio transceiver used to extend the transmission of a base station beyond its normal range.

3.252   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.

3.253   required Eb/(No+Io) (dB): The ratio between the received energy per information bit to the total effective noise and interference power density needed to satisfy the quality objectives.

3.254   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.

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

3.256   roaming: The ability for a user to function in a serving network different from the home network.

3.257   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.

3.258   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: Rec. ITU-T X.140).

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

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

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

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

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

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

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

3.262   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: Rec. ITU-T X.140).

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

3.263   seamless handover: A handover without perceptible interruption of the radio connection.

3.264   **sector**: 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.

3.265   **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.

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

3.267   **service area**: The service area is defined in the same way as the service area according to [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.

3.268   **service capabilities**: Bearers defined by parameters, and/or mechanisms needed to realize services. These are within networks and under network control.

3.269   **service capability feature**: Functionality offered by service capabilities that are accessible via the standardized application interface.

3.270   **service capability server**: Network functionality providing open interfaces towards the functionality offered by 3G System service capabilities.

3.271   **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.

3.272   **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.

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

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

3.275   **service subscriber**: The entity which subscribes to the general packet radio service (GPRS) service.

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

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

3.278   **settlement**: Payment of amounts resulting from the accounting process.

3.279   **shared network**: When two or more network operators share network elements.

3.280   **SIM personalization**: Enables a user to personalize a ME so that it may only be used with particular SIM(s).

3.281   **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: Rec. ITU-T I.350).

3.282   SRNC radio network temporary identifier (S-RNTI): A 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.

3.283   SRNS relocation: The change of Iu instance and transfer of the SRNS role to another RNS.

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

3.285   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).

3.286   subscribed QoS: The network will not grant a QoS greater than the subscribed QoS. 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.

3.287   subscriber: 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.

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

3.289   subscription management (SuM): Set of capabilities that allow operators, service providers, and indirectly subscribers, to provision, control, monitor the subscription profile.

3.290   suitable cell: This is a cell on which an UE may camp. It must satisfy certain conditions.

3.291   supplementary service: A service which modifies or supplements a basic telecommunication service. Consequently, it cannot be offered to a user as a stand-alone 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.

3.292   system area: 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.

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

3.294   teleservice: 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.

3.295   text conversation: Real-time transfer of text between users in at least two locations.

3.296   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: [ITU-T F.703]).

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

3.298   toolkit applet: An application on the UICC that generates proactive commands to the ME.

3.299   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: [ITU-T F.703]).

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

3.301   traffic channel: A logical channel, which carries user information.

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

3.303   transmission time interval: The inter-arrival time of transport block sets, i.e., the time it shall take to transmit a transport block set.

3.304   transmitter antenna gain (dBi): The maximum gain of the transmitter antenna in the horizontal plane (specified as dB relative to an isotropic radiator).

3.305   transport block: The basic data unit exchanged between L1 and MAC. An equivalent term for transport block is "MAC PDU".

3.306   transport block set: 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".

3.307   transport block set size: The number of bits in a transport block set.

3.308   transport block size: The size (number of bits) of a transport block.

3.309   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.

3.310   transport format: 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.

3.311   transport format combination: The combination of currently valid transport formats on all transport channels of an UE, i.e., containing one transport format from each transport channel.

3.312   transport format combination set: A set of transport format combinations to be used by an UE.

3.313   transport format combination indicator (TFCI): A representation of the current transport format combination.

3.314   transport format identification (TFI in UTRAN, TFIN in GERAN): A label for a specific transport format within a transport format set.

3.315   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.

3.316   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 kbit/s; a high-quality speech teleservice; an IP teleservice; a capability to forward a speech call.

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

3.318   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.

3.319   uplink: 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.

3.320   URA updating: 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.

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

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

3.323   user equipment: A device allowing a user access to network services. For the purpose of 3G specifications, the interface between the UE and the network is the radio interface. A user equipment can be subdivided into a number of domains, the domains being separated by reference points. Currently defined domains are the USIM and ME Domains. The ME Domain can further be subdivided into several components showing the connectivity between multiple functional groups. These groups can be implemented in one or more hardware devices. An example of such a connectivity is the TE-MT interface. Further, an occurrence of a user equipment is an MS for GSM.

3.324   UTRA radio access mode: The selected UTRA radio access mode, i.e., UTRA-FDD; UTRA-TDD.

3.325   UTRA-TDD: Time division duplex UTRA radio access mode.

3.326   UTRA-WTDD: Time division duplex UTRA access mode 3.84 Mcps option.

3.327   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 endpoint of a radio link.

3.328   UTRAN registration area: An area covered by a number of cells. The URA is only internally known in the UTRAN.

3.329   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.

3.330   user profile: The set of information necessary to provide a user with a consistent, personalized service environment, irrespective of the user's location or the terminal used (within the limitations of the terminal and the serving network).

3.331 Uu: The Radio interface between UTRAN and the user equipment.

3.332 value-added service provider: Provides services other than basic telecommunications service for which additional charges may be incurred.

3.333 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: [ITU-T I.113]).

3.334 virtual home environment: A concept for personal service environment portability across network boundaries and between terminals.

3.335 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.

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

3.337 wide TDD (WTDD): The 3.84 Mcps chip rate UTRA-TDD option.

3.338 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 Abbreviations and acronyms

This Recommendation uses the following abbreviations:

2G	Second Generation
3G	Third Generation
3GMS	Third Generation Mobile Communication System
3GPP	Third Generation Partnership Project
AAL 2	ATM Adaptation Layer type 2
AC	Access Class, Access Condition, Application Context
ACC	Automatic Congestion Control
ACELP	Algebraic Code-Excited Linear Prediction
AES	Advanced Encryption Standard
A-GNSS	Advanced Global Navigation Satellite System
AID	Application IDentifier
AKA	Authentication and Key Agreement
AKI	Asymmetric Key Index
AMF	Authentication Management Field
AMR	Adaptive Multi Rate (also appears as "Adaptive Multi-Rate")
AMR-WB	Adaptive Multi Rate WideBand
ANP	Access Network Provider
AoC	Advice of Charge

AoCC	Advice of Charge Charging (also appears as "Advice of Charge (Charging)")
AoCI	Advice of Charge Information (also appears as "Advice of Charge (Information)")
API	Application Programming Interface
AS	Application Server
ASE	Application Service Element
ASQ	Automatic Repeat ReQuest
AT-command	ATtention Command
ATM	Asynchronous Transfer Mode
AuC	Authentication Centre
BAIC	Barring of All Incoming Calls supplementary service (also appears without "supplementary service")
BAOC	Barring of All Outgoing Calls supplementary service (also appears without "supplementary service")
BER	Bit Error Rate; Basic Encoding Rules (of ASN.1)
BGCF	Breakout Gateway Control Function
BICC	Bearer Independent Call Control
BIC-Roam	Barring of Incoming Calls when Roaming outside the home PLMN country
BOIC	Barring of Outgoing International Calls
BOIC-exHC	Barring of Outgoing International Calls except those directed to the Home PLMN Country
BS	Base Station
BS	Bearer Service
BSC	Base Station Controller
BSS	Base Station Subsystem
BSSMAP	Base Station Subsystem Management Application Part
BTS	Base Transceiver Station
CAI	Charge Advise Information
CAMEL	Customized Applications for Mobile network Enhanced Logic
CAP	CAMEL Application Part
CB	Call Barring
CBC	Cell Broadcast Centre
CBS	Cell Broadcast Service
CC	Call Control
CCBS	Completion of Calls to Busy Subscriber (also appears as "Call Completion to Busy Subscriber")
CD	Call Deflection
CDR	Charging Data Record
CF	Call Forwarding

CFB	Call Forwarding on mobile subscriber Busy
CFNRc	Call Forwarding on mobile subscriber Not Reachable supplementary service (also appears without "supplementary service")
CFNRy	Call Forwarding on No Reply supplementary service (also appears without "supplementary service")
CFU	Call Forwarding Unconditional
CGF	Charging Gateway Function
CLI	Calling Line Identity
CLIP	Calling Line Identification Presentation
CLIR	Calling Line Identification Restriction
CM	Configuration Management
CMIP	Common Management Information Protocol
CN	Core Network
CNAP	Calling Name Presentation
COLP	Connected Line identification Presentation
COLR	Connected Line identification Restriction
CORBA	Common Object Request Broker Architecture
CS	Circuit Switched
CSCF	Call Session Control Function
CSE	CAMEL Service Environment
CSICS	Circuit Switched IMS Combinational Service
CS-MGW	Circuit Switched Media GateWay
CTM	Cellular Text telephone Modem
CUG	Closed User Group
CW	Call Waiting
DCE	Data Circuit-terminating Equipment
DTE	Data Terminal Equipment
DTMF	Dual Tone Multiple Frequency
DTX	Discontinuous Transmission
ECT	Explicit Call Transfer supplementary service
EDGE	Enhanced Data rates for GSM Evolution
EF	Elementary File
EFR	Enhanced Full Rate
EGPRS	Enhanced GPRS
EIR	Equipment Identity Register
EM	Element Manager

eMLPP	Enhanced Multi-Level Precedence and Pre-emption (also appears as "enhanced Multi-Level Precedence and Pre-emption service")
EP	Elementary Procedure
EP	Entry Point
FDD	Frequency Division Duplex
FM	Fault Management
GAD	Geographical Area Description
GBS	General Bearer Services
GERAN	GSM/EDGE Radio Access Network
GGSN	Gateway GPRS Support Node
GLR	Gateway Location Register
GMLC	Gateway Mobile Location Centre
GMSC	Gateway Mobile Switching Centre
GPRS	General Packet Radio Service
gprsSSF	GPRS Service Switching Function
GPS	Global Positioning System
GSM	Global System for Mobile communications
GSM-EFR	GSM Enhanced Full Rate speech Codec
gsmSCF	GSM Service Control Function
gsmSRF	GSM Specialized Resource Function
gsmSSF	GSM Service Switching Function
GSN	GPRS Support Nodes
GT	Global Title
GTP	GPRS Tunnelling Protocol
GTT	Global Text Telephony
HDLC	High Level Data Link Control
HE	Home Environment
HLR	Home Location Register
HPLMN	Home Public Land Mobile Network
HSCSD	High Speed Circuit Switched Data
IC	Integrated Circuit (also appears as "Integrated Circuits")
ICC	Integrated Circuit Card
IDL	Interface Definition Language
IM	IP Multimedia
IMEI	International Mobile Equipment Identity
IM-GSN	Intermediate GPRS Serving Node
IM-MGW	Intermediate Media GateWay

IM-MSC	Intermediate Mobile-services Switching Centre
IMS	IP Multimedia Subsystem
IMSI	International Mobile Subscriber Identity (also appears as "International Mobile Station Identity")
IN	Intelligent Network
INAP	Intelligent Network Application Protocol
IP	Internet Protocol
IP-CAN	IP-Connectivity Access Network
IPDL	Idle Period Downlink
IPLMN	Interrogating PLMN
IrDA	Infrared Data Association
IRP	Integration Reference Point
IS	Information Service
ISDN	Integrated Services Digital Network
ISUP	ISDN User Part
Itf-N	Interface N
IWF	InterWorking Function
K	Subscriber key
LAN	Local Area Network
LCS	Location Services
LMSI	Local Mobile Station Identity
LMU	Location Measurement Unit
LR	Location Registration
MAC	Media Access Control
MAC	Message Authentication Code
MAP	Mobile Application Part
MC	Multicall
ME	Mobile Equipment
MExE	Mobile station application Execution Environment, aka Mobile Execution Environment
MGC	Media Gateway Controller
MGCF	Media Gateway Control Function
MGW	Media GateWay
MIM	Management Information Model
MIME	Multipurpose Internet Mail Extensions
MLC	Mobile Location Centre
MM	Mobility Management

MMI	Man-Machine Interface
MMS	Multimedia Messaging Service
MNP	Mobile Number Portability
MO	Mobile Originated
MO-LR	Mobile Originating Location Request
MPTY	MultiParty
MR	Multi Rate
MRFC	Multimedia Resource Function Controller
MRFP	Multimedia Resource Function Processor
MS	Mobile Station
MSC	Mobile Switching Centre (also appears as "Mobile-services Switching Centre")
MSISDN	Mobile Subscriber ISDN number (also appears as "Mobile Station International ISDN Number(s)")
MSP	Multiple Subscriber Profile
MSRN	Mobile Station Roaming Number
MT	Mobile Terminal
MT	Mobile Termination
MTP	Message Transfer Part
NE	Network Element
NITZ	Network Identity and Time Zone
NM	Network Manager
NRM	Network Resource Model
NSS	Network Subsystem
NW	Network
OACSU	Off-Air Call Set-Up
ODB	Operator Determined Barring
OoBTC	Out of Band Transcoder Control
OP	OPerator
OS	Operations System
OSA	Open Service Architecture
OSI	Open Systems Interconnection
OTDOA	Observed Time Difference Of Arrival
PBX	Private Branch eXchange
PCM	Pulse Code Modulation
PDC	Personal Digital Communication
PDC-EFR	ARIB PDC-EFR 6.7 kbit/s speech Codec
PDN	Public Data Network

PDP	Packet Data Protocol
PDU	Protocol Data Unit
PI	Presentation Indicator
PIX	Proprietary application Identifier eXtension
PLMN	Public Land Mobile Network
PM	Performance Management
PNM	Personal Network Management
PP	Point-to-Point
PS	Packet Switched
PSAP	Public Service Access Point
PSE	Personal Service Environment
PSS	Packet-switched Streaming Service
PSTN	Public Switched Telephone Network
QoS	Quality of Service
RANAP	Radio Access Network Application Part
RAND	RANDom number (used for authentication)
RID	Registered application provider Identifier
RLC/MAC	Radio Link Control/Media Access Control
RLP	Radio Link Protocol
RNC	Radio Network Controller
RNS	Radio Network Subsystem (also appears as "Radio Network System")
RR	Radio Resources
RTP	Real Time Protocol
SAGE	Security Algorithms Group of Experts
SAT	SIM Application Toolkit
SC	Service Centre (used for SMS)
SCCP	Signalling Connection Control Part
SCF	Service Control Function (IN context), Service Capability Feature (VHE/OSA context)
SCIM	Service Capability Interaction Manager
SCR	Source Controlled Rate
SCTP	Stream Control Transmission Protocol
SDL	Specification Description Language
SGSN	Serving GPRS Support Node
SGW	Signalling GateWay
SID	Silence Descriptor
SIM	GSM Subscriber Identity Module

SIWFS	Shared InterWorking Function Server
SLF	Subscription Locator Function
SM	Session Management
SM	Short Message
SMC	Short Message Control
SMIL	Synchronized Multimedia Integration Language
SMLC	Serving Mobile Location Centre
SM-RL	Short Message Relay Layer
SMS	Short Message Service
SMTP	Simple Mail Transfer Protocol
SOR	Support of Optimal Routing
SP	Service Provider
SP	Switching Point
SQN	Sequence Number
SRNC	Serving Radio Network Controller
SRNS	Serving RNS
SS	Solution Set
SS	Supplementary Service
SS7	Signalling System No. 7
SSAP	Supplementary Service Application Part
SSF	Service Switching Function
TA	Terminal Adaptation
TA	Terminal Adapter
TAF	Terminal Adaptation Function
T-BCSM	Terminating Basic Call State Model
TCAP	Transaction Capabilities
TCH/F	A full rate Traffic CHannel
TDD	Time Division Duplex
TDMA	Time Division Multiple Access
TDMA_EFR	TIA IS-641 Enhanced speech Codec
TDMA_USI	TIA TDMA-US1 (12.2 kbit/s Codec, similar to GSM-EFR)
TE	Terminal Equipment
TFO	Tandem Free Operation
TMSI	Temporary Mobile Subscriber Identity (also appears as "Temporary Mobile Station Identity")
TrFO	Transcoder Free Operation
TUP	Telephone User Part (SS7)

UDP	User Datagram Protocol
UE	User Equipment
UI	User Interaction
UI	User Interface
UICC	Universal IC Card
UIM	User Identity Module
UMTS	Universal Mobile Telecommunications System
USAT	USIM Application Toolkit
USIM	Universal Subscriber Identity Module
USSD	Unstructured Supplementary Service Data
UTRA	Universal Terrestrial Radio Access
UTRA-FDD	Universal Terrestrial Radio Access – Frequency Division Duplex
UTRAN	Universal Terrestrial Radio Access Network
UTRA-TDD	Universal Terrestrial Radio Access – Time Division Duplex
UUS	User-to-User Signalling
VAD	Voice Activity Detector
VBS	Voice Broadcast Service
VGCS	Voice Group Call Service
VHE	Virtual Home Environment
VLR	Visitor Location Register
VMSC	Visited Mobile Switching Centre
VPLMN	Visited Public Land Mobile Network
WAP	Wireless Application Protocol
XML	eXtensible Markup Language

5 Introduction

The core network for this IMT-2000 Family Member, referred to as "3GPP Release 7", is based on an evolved core network from the 3rd generation releases 1999 through to Release 6. The Technical Specifications have been developed in a partnership project and transposed to the involved Standards Development Organizations (SDOs). The system will support different applications ranging from narrow-band to wideband communications capability with integrated personal and terminal mobility to meet the user and service requirements.

Release 7 is the fifth release of this 3rd generation of mobile communications technology. The core network interfaces identified in this Recommendation constitute a complete mobile core network system for this IMT-2000 Family Member. The core network of 3GPP Release 7 supports both 2nd and 3rd generation radio access networks as options.

Refer to clause 10.2.40, Service principles, for more information.

The descriptions of the Technical Specifications listed in clause 10 are for informative purposes only. Normative information is in the table for the respective specification.

3GPP Release 7 introduces a range of new features under control of the 3GPP Workplan. At the September 2007 plenary of 3GPP, the following feature set was approved:

- IMS-related new features:
  - Identification of communication services in IMS
  - Supporting globally routable user agent URIs in IMS
  - IMS support of conferencing and messaging group management
  - Multimedia telephony service for IMS
  - Performance characterization of VoIMS over HSDPA\EUL channels
- Location-related new features:
  - Advanced global navigation satellite system (A-GNSS) concept
  - A-GPS minimum performance
  - UE positioning Rel-7
  - Velocity
- Combinational services
- System enhancements for fixed broadband access to IMS
- Access class barring and overload protection
- USSD message delivery and transfer to USIM
- Protocol-related new features:
  - IMS Stage 3 IETF Protocol alignment
  - DIAMETER on the GGSN Gi interface
  - DIAMETER on the PDG Wi inteface
- Mp (MRFC-MRFP) interface
- Support of SMS over generic 3GPP IP access
- Dynamic and interactive multimedia scenes
- Security-related new features:
  - Liberty Alliance and 3GPP Security Interworking
  - Trust requirements for open platforms in 3GPP
  - Development of UEA2 and UIA2
  - Lawful interception in the 3GPP Rel-7 architecture
  - Access security enhancements
- One tunnel solution for optimization of packet data traffic
- End-to-end multimedia services performance metrics
- ISIM API for Java Card
- Network vomposition
- Key establishment between a UICC and a terminal
- Selective disabling of UE capabilities
- Personal network management (PNM)
- CSI terminating session handling
- Interoperability between VGCS/VBS and A/Gb flexibility

6   Basic architecture for the UMTS IMT-2000 Family Member

This text is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 5.1.

The basic configuration of a public land mobile network (PLMN) supporting GPRS and the interconnection to the PSTN/ISDN and PDN is presented in Figure 6-1. This configuration presents signalling and user traffic interfaces which can be found in a PLMN. Implementations may be different: some particular functions may be gathered in the same equipment and then some interfaces may become internal interfaces.

In the basic configuration presented in Figure 6-1, all the functions are considered implemented in different equipments. Therefore, all the interfaces within PLMN are external. This Recommendation will only describe the internal interfaces in the core network (CN) and the external interfaces to and from CN. Interfaces Iu, Iur and Iub are defined in the 25.7xx-series of Technical Specifications, which are outside the scope of this Recommendation. Interfaces A and A*bis* are defined in the 48-series of Technical Specifications, which are also outside the scope of this Recommendation. Interfaces C, D, E, F and G need the support of the mobile application part of Signalling System No. 7 to exchange the data necessary to provide the mobile service. No protocols for the H-interface and for the I-interface are standardized. All the GPRS-specific interfaces (G-series) are defined in the 23-series and 24-series of Technical Specifications. Interfaces Mc, Nb, and Nc are defined in 23.705 and in the 29-series of Technical Specifications.

From this configuration, all the possible PLMN organizations can be deduced. In the case when some functions are contained in the same equipment, the relevant interfaces become internal to that equipment.
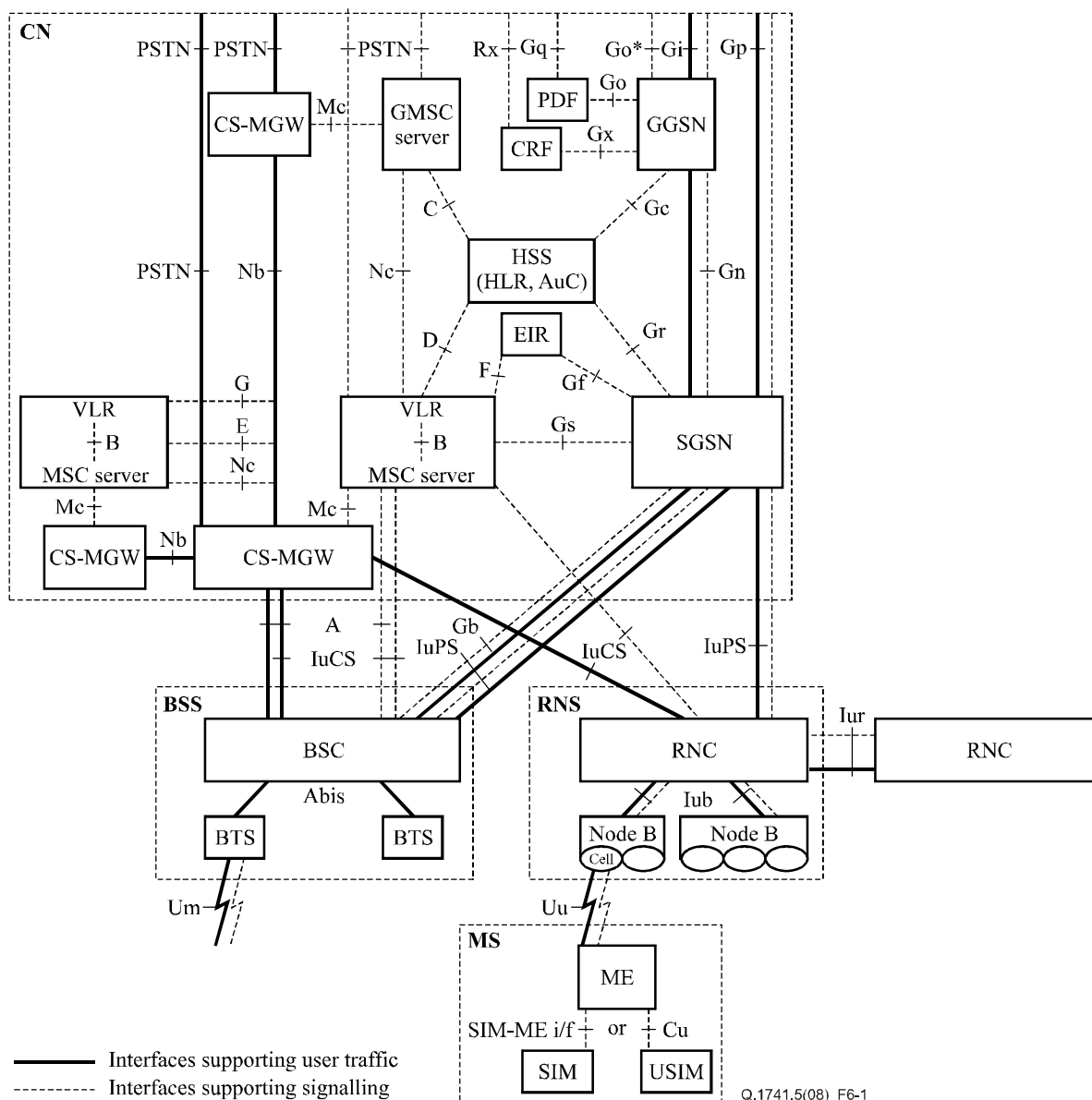
NOTE 1 – The figure shows direct interconnections between the entities. The actual links may be provided by an underlying network (e.g., SS7 or IP): this needs further studies.

NOTE 2 – When the MSC and the SGSN are integrated in a single physical entity, this entity is called UMTS MSC (UMSC).

NOTE 3 – A (G)MSC server and associated CS-MGW can be implemented as a single node: the (G)MSC.

NOTE 4 – The Gn interface (between two SGSNs) is also part of the reference architecture, but is not shown for layout purposes only.

NOTE 5 – The Go interface marked with a '*' has been included to this figure for backwards compatibility only, in order to support connecting to Release-5 IM CN subsystem configurations.

Figure 6-1 – Basic configuration of a PLMN supporting CS and PS services and interfaces

The following text is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 5.2.1.

The configuration of LCS entities for GSM GERAN is presented in Figure 6-2. In the figure, all the functions are considered implemented in different logical nodes. If two logical nodes are implemented in the same physical equipment, the relevant interfaces may become internal to that equipment.
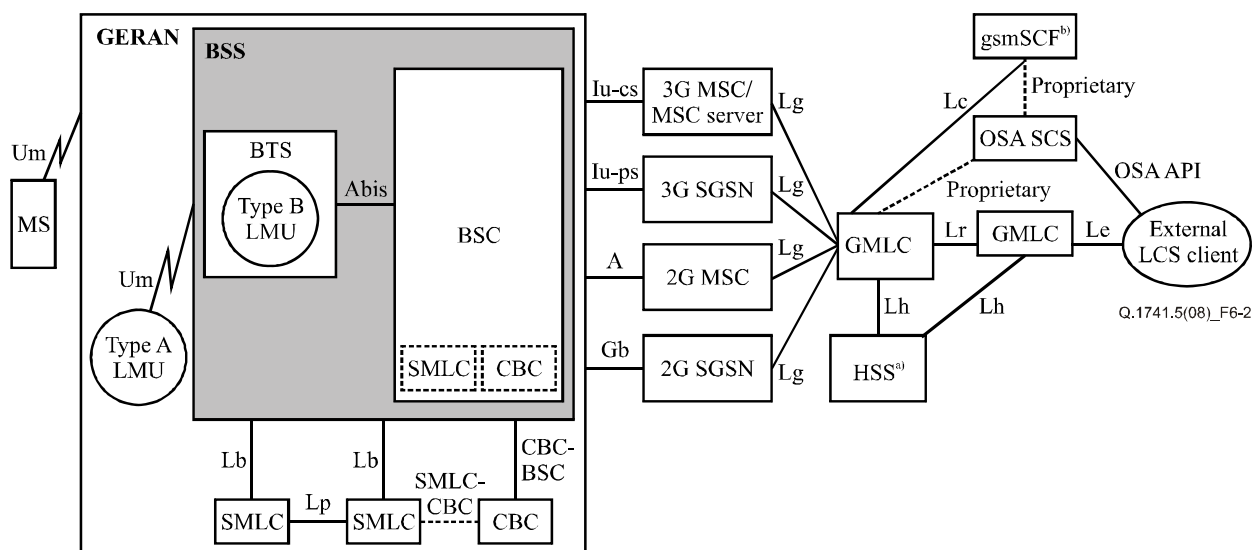
a) HSS includes both 2G-HLR and 3G-HLR functionality.
b) As one alternative, the LCS client may get location information directly from GMLC, which may
   contain OSA mobility SCS with support for the OSA user location interfaces.

Figure 6-2 – Configuration of LCS entities for a GERAN PLMN

The following text is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 5.2.2.

The basic configuration of UTRAN LCS is presented in Figure 6-3. The SMLC functionality is integrated in SRNC or, in case a stand-alone SMLC (SAS) entity is present, split between SRNC and SMLC.
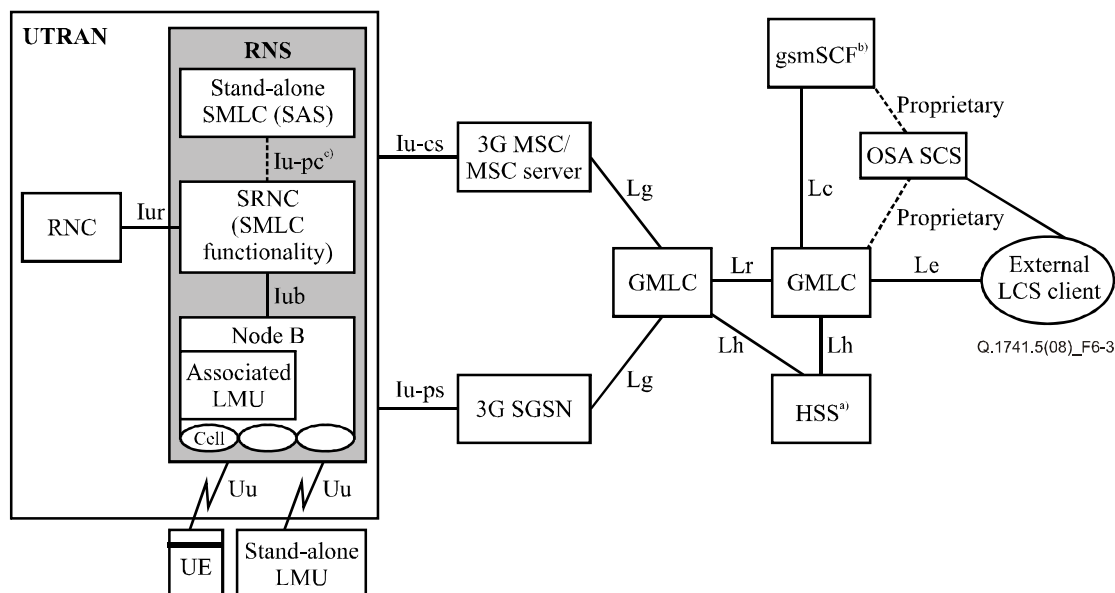
a) The HSS includes both 2G-HLR and 3G-HLR functionality.
b) As one alternative, the LCS client may get location information directly from GMLC, which may contain OSA mobility SCS with support for the OSA user location interfaces.
c) The SMLC may be either a stand-alone network element (SAS) or an internal function of the RNC.

Figure 6-3 – Configuration of LCS entities for a UTRAN PLMN

The following text is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clauses 4a.4 and 5.3.

Figure 6-4 shows the interconnection of the CAMEL-specific entities with the rest of the network. Only the interfaces specifically involved in CAMEL provisioning are shown, i.e., all the GMSC, MSC, SGSN and HLR interfaces depicted in Figure 6-4 are still supported by these entities even if not shown.

NOTE 1 – Most CAMEL-specific interfaces have no particular name. They are designated by the name of the two entities they link together, e.g., "the gsmSSF-gsmSCF interfaces".
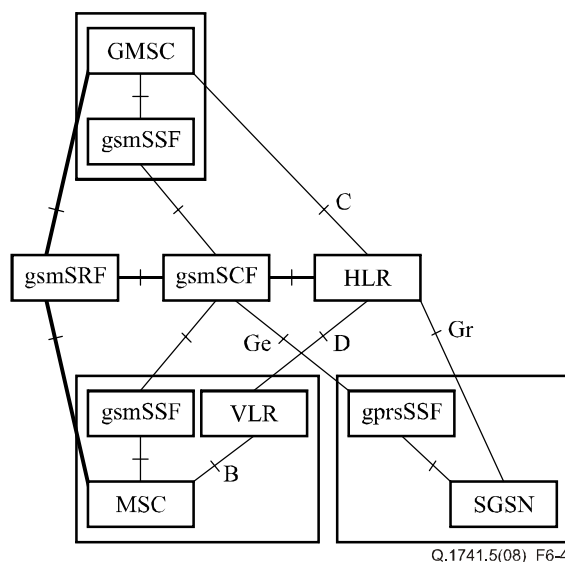
Figure 6-4 – Configuration of CAMEL entities

The bold lines are used for interfaces supporting user data only; the dashed lines are used for interfaces supporting signalling only.

The following text is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clauses 4a.5 and 5.4.

The cell broadcast service (CBS) is a teleservice, which enables an Information Provider to submit short messages for broadcasting to a specified area within the PLMN.
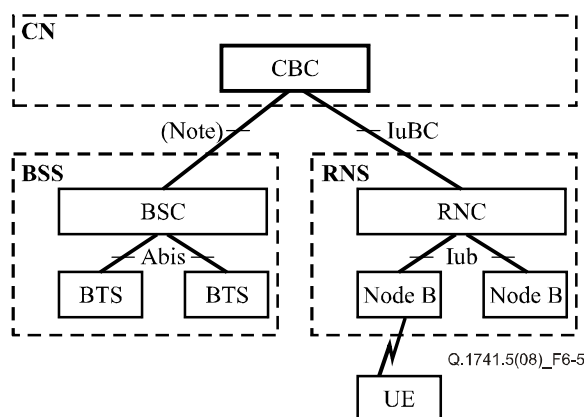
NOTE – Interface outside the scope of 3GPP/GSM.

Figure 6-5 – Configuration of a PLMN supporting Cell Broadcast Service entities

The following text is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 5.5.

The configuration of IM CN subsystem entities is presented in Figure 6-6. In the figure, all the functions are considered implemented in different logical nodes. If two logical nodes are implemented in the same physical equipment, the relevant interfaces may become internal to that equipment.

Only the interfaces specifically linked to the IM subsystem are shown, i.e., all the SGSN, GGSN and HSS interfaces depicted in Figure 6-6 are still supported by these entities even if not shown.
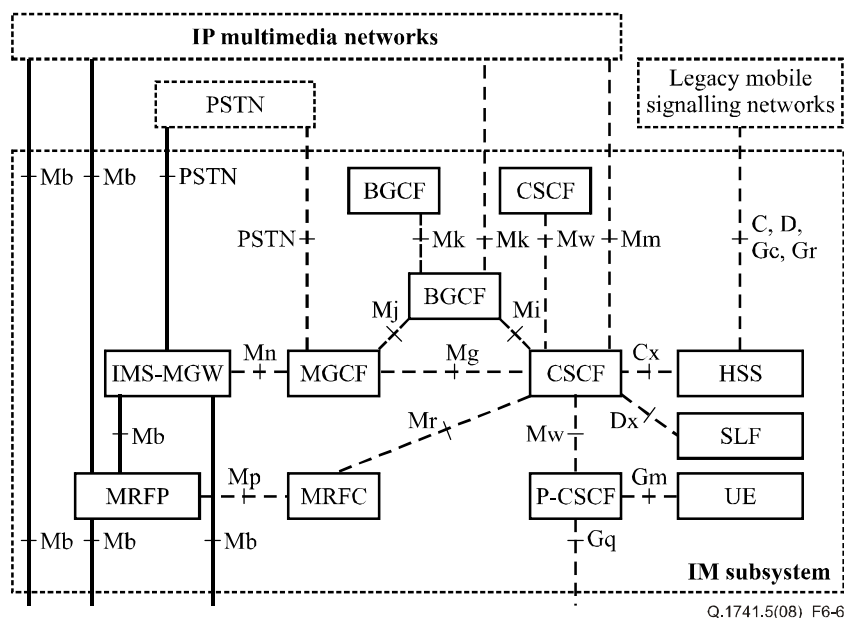
Figure 6-6 – Configuration of IM subsystem entities

Figure 6-7 depicts an overall view of the functional architecture for services.
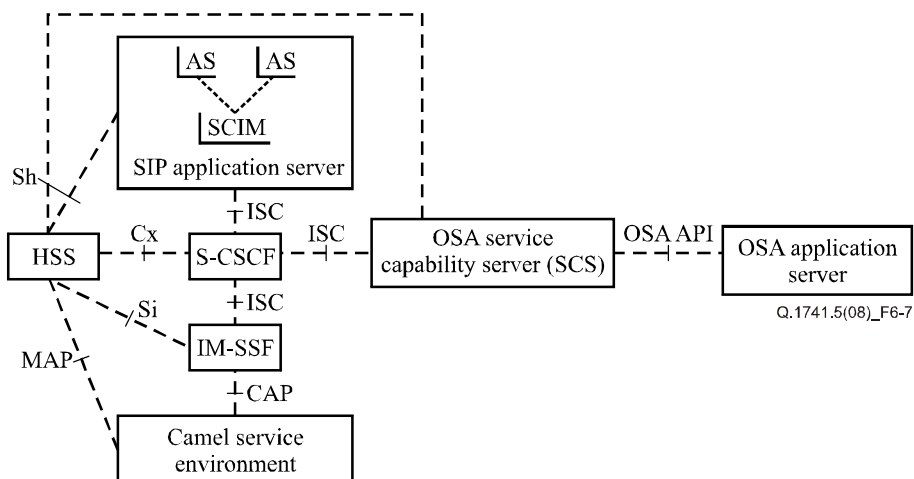
Figure 6-7 – Functional architecture for the provision of service in the IMS

The purpose of the IM SSF is to host the CAMEL network features (i.e., trigger detection points, CAMEL service switching finite state machine, etc.) and to interwork with CAP.

The IM SSF and the CAP interface support legacy services only.

The application server may contain "service capability interaction manager" (SCIM) functionality and other application servers. The SCIM functionality is an application which performs the role of interaction management. The internal components are represented by the "dotted boxes" inside the SIP application server. The internal structure of the application server is outside the standards. The Sh interface shall have sufficient functionality to enable this scenario.

Figure 6-7a depicts an overall view of the functional architecture for enabling the management of the user's service related information via the Ut interface.
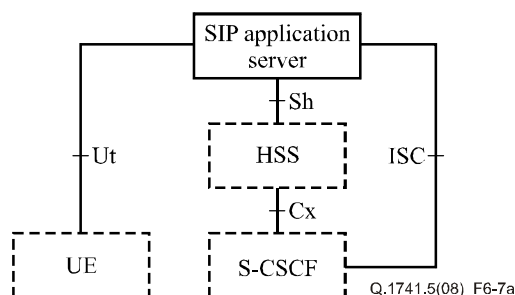
**Figure 6-7a – Functional architecture for the management
of the user's service related information**

The following text is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 5.6.

The signalling gateway function is used to interconnect different signalling networks, i.e., SCTP/IP-based signalling networks and SS7 signalling networks. The application layer (e.g., ISUP, BICC, MAP or CAP) is not affected. The signalling gateway function may be implemented as a stand-alone entity or inside another entity.
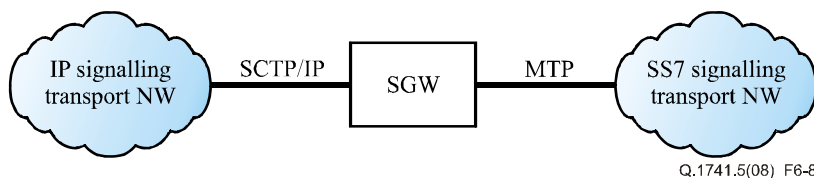
Figure 6-8 – Configuration of a Signalling Gateway function

NOTE 2 – SS7 application transport and SCTP/IP adaptation protocols are not shown.

The following text is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 5.7 "Configuration of 3GPP/WLAN Interworking".

The configuration of the 3GPP/WLAN interworking function is presented in Figure 6-8a. The figure shows all network entities and reference points for the roaming scenario when a WLAN UE accesses PS-based services in the home network. PS-based services in the visited network are accessed via a packet data gateway in the visited 3GPP network. Reference point Ww between WLAN UE and WLAN is outside the scope of 3GPP and is only shown for completeness.

Q.1741.5(08)_F6-8a
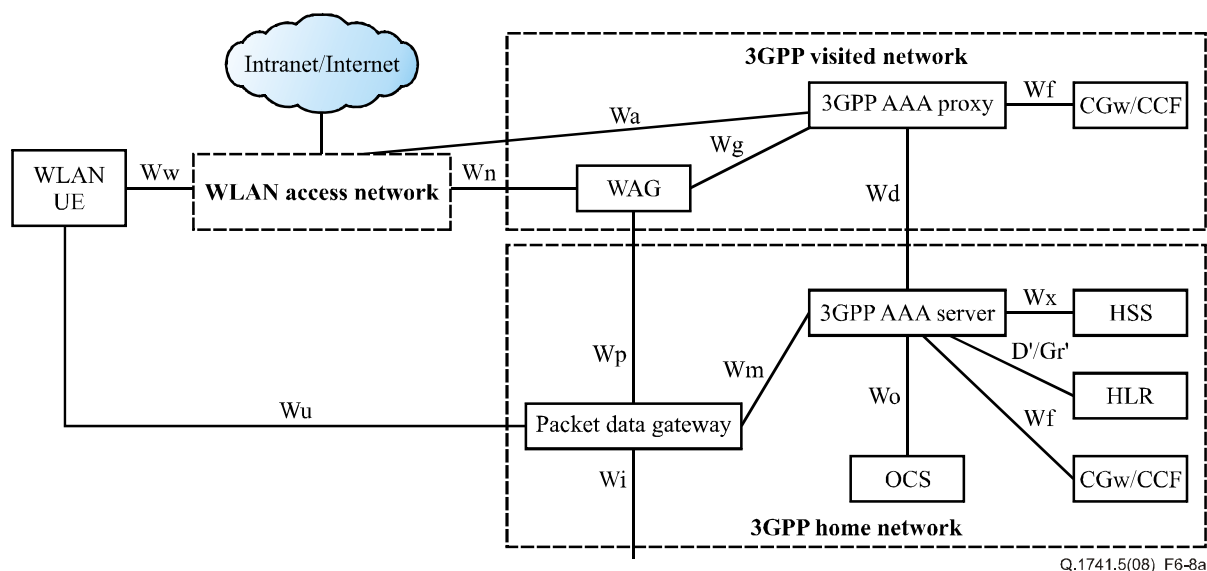
Figure 6-8a – Configuration of a 3GPP/WLAN interworking function

The following text is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 5.8 "Configuration of Presence service".

The reference architecture model, the reference points and the functional entities to support the Presence Service are described in 3G TS 23.141.

The following text is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], Annex A.

Gateway location register (GLR) is an optional functional entity to optimize signalling traffic between PLMNs. This entity handles location management of a roaming subscriber in the visited network without involving HLR. The location register function in the GLR stores subscription information and routeing information for both CS services and PS services. This entity can be only located in a visited PLMN.

In the basic configuration with GLR introduction presented in Figure 6-9, all the functions related to GLR introduction are considered implemented in different equipments. Therefore, all the interfaces within PLMN are external. Interfaces GLa, GLb, GLc, GLd, GLf, GLg, GLh, and GLi need the support of the mobile application part of Signalling System No. 7 to exchange the data necessary to provide the mobile service. No protocols for the GLe interface are standardized. GLj and GLk need the support of the GPRS tunnelling protocol control to provide the packet domain services.
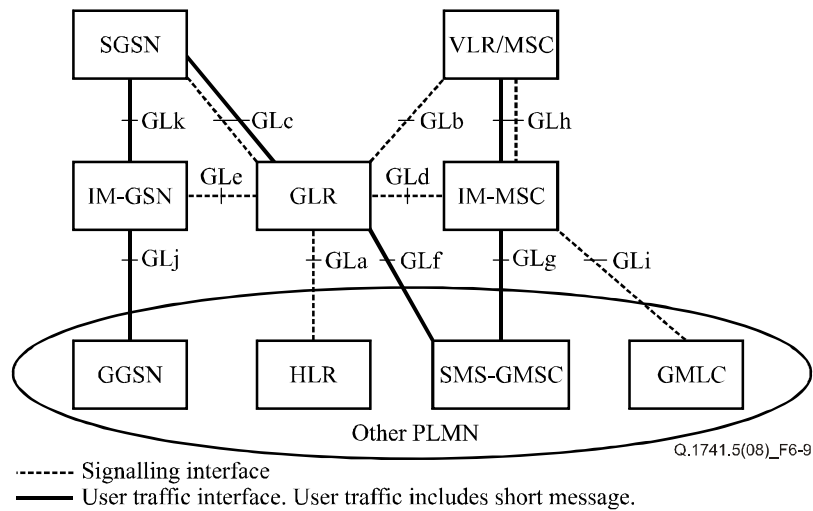
Figure 6-9 – Configuration of a PLMN and interfaces with GLR

7 Network entities

7.1 Gateway mobile switching centre (GMSC)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4.1.2.2.

The mobile switching centre (MSC), which performs the routing function to the actual location of the mobile station (MS), is called the gateway MSC (GMSC).

If a network delivering a call to the PLMN cannot interrogate the home location register (HLR), the call is routed to an MSC. This MSC will interrogate the appropriate HLR and then route the call to the MSC where the mobile station is located.

The acceptance of an interrogation to an HLR is the decision of the operator.

The choice of which MSCs can act as gateway MSCs is for the operator to decide (i.e., all MSCs or some designated MSCs).

When needed, the GMSC can be implemented in two different entities: the GMSC server, handling only signalling, as defined below, and the CS-MGW, defined below. A GMSC server and a CS-MGW make up the full functionality of a GMSC.

7.1.1 Gateway MSC server (GMSC server)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4.1.2.2.1.

The GMSC server mainly comprises the call control and mobility control parts of a GMSC.

7.2 Mobile switching centre and visitor location register (MSC/VLR)

7.2.1 Mobile switching centre (MSC)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4.1.2.1.

The mobile-services switching centre (MSC) constitutes the interface between the radio system and the fixed networks. The MSC performs all necessary functions in order to handle the circuit-switched services to and from the mobile stations.

In order to obtain radio coverage of a given geographical area, a number of BSS and/or RNS are normally required; i.e., each MSC would thus have to interface to one or more BSS(s) and/or RNS(s). In addition, several MSCs may be required to cover a country.

When intra-domain connection of RAN nodes to multiple CN nodes is applied, all the MSCs serving a pool-area share the responsibility to serve the MSs located in the pool-area. All these MSCs interface to all the BSS(s) and/or RNS(s) forming the pool-area.

The mobile-services switching centre is an exchange that performs all the switching and signalling functions for mobile stations located in a geographical area designated as the MSC area. When intra-domain connection of RAN nodes to multiple CN nodes is applied, one or more MSCs serve a pool-area, but each individual MS is served by only one out of these MSCs, as described in 3G TS 23.236. The main difference between a MSC and an exchange in a fixed network is that the MSC has to take into account the impact of the allocation of radio resources and the mobile nature of the subscribers and has to perform in addition, at least the following procedures:

–   procedures required for the location registration;

–   procedures required for handover.

When needed, the MSC can be implemented in two different entities: the MSC server, handling only signalling, and the CS-MGW, handling user's data. A MSC server and a CS-MGW make up the full functionality of a MSC.

7.2.2   Mobile switching centre server (MSC server)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4.1.2.1.1.

The MSC server mainly comprises the call control (CC) and mobility control parts of a MSC.

The MSC server is responsible for the control of mobile originated and mobile terminated CC CS domain calls. It terminates the user-network signalling and translates it into the relevant network-network signalling. The MSC server also contains a VLR to hold the mobile subscriber's service data and CAMEL related data.

The MSC server controls the parts of the call state that pertain to connection control for media channels in a CS-MGW.

7.2.3   Visitor location register (VLR)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4.1.1.2.

A mobile station roaming in an MSC area is controlled by the visitor location register (VLR) in charge of this area. When a mobile station (MS) enters a new location area, it starts a registration procedure. The MSC in charge of that area notices this registration and transfers to the visitor location register the identity of the location area where the MS is situated. If this MS is not yet registered, the VLR and the HLR exchange information to allow the proper handling of calls involving the MS.

A VLR may be in charge of one or several MSC areas.

The VLR contains also the information needed to handle the calls set up or received by the MSs registered in its database (for some supplementary services the VLR may have to obtain additional information from the HLR). The following elements are included:

–   the international mobile subscriber identity (IMSI);

–   the mobile station international ISDN number (MSISDN);

–   the mobile station roaming number (MSRN);

–   the temporary mobile station identity (TMSI), if applicable;

–   the local mobile station identity (LMSI), if used;

–   the location area where the mobile station has been registered;

–   the identity of the SGSN where the MS has been registered. Only applicable to PLMNs supporting GPRS and which have a Gs interface between MSC/VLR and SGSN;

–   the last known location and the initial location of the MS.

The VLR also contains supplementary service parameters attached to the mobile subscriber and received from the HLR.

7.3   Home subscriber server (HSS)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4.1.1.1.

The HSS is the master database for a given user. It is the entity containing the subscription-related information to support the network entities actually handling calls/sessions.

A home network may contain one or several HSSs: it depends on the number of mobile subscribers, on the capacity of the equipment and on the organization of the network.

As an example, the HSS provides support to the call control servers in order to complete the routing/roaming procedures by solving authentication, authorization, naming/addressing resolution, location dependencies, etc.

The HSS is responsible for holding the following user-related information:

•   user identification, numbering and addressing information;

•   user security information: Network access control information for authentication and authorization;

•   user location information at inter-system level: The HSS supports the user registration, and stores inter-system location information, etc.;

•   user profile information.

The HSS also generates user security information for mutual authentication, communication integrity check and ciphering.

Based on this information, the HSS also is responsible for supporting the call control and session management entities of the different domains and subsystems (defined in clause 3) of the operator as shown in Figure 7.3-1.
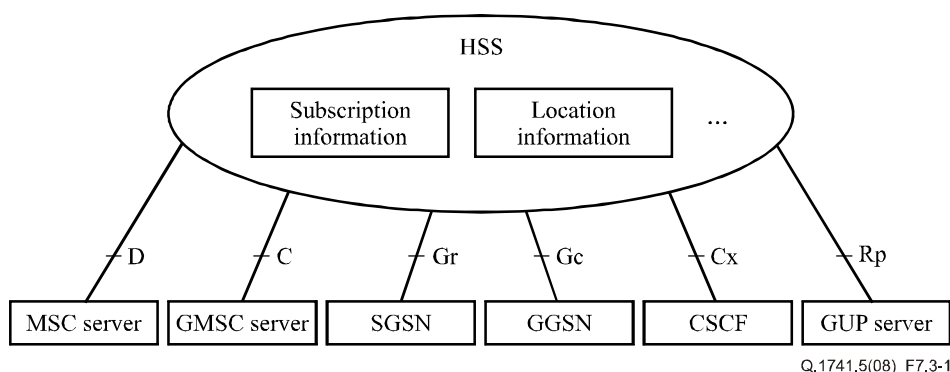
Figure 7.3-1 – Example of a generic HSS structure and basic interfaces

The HSS may integrate heterogeneous information, and enable enhanced features in the core network to be offered to the application and services domain, at the same time hiding the heterogeneity.

The HSS consists of the following functionalities:

- IP multimedia functionality to provide support to control functions of the IM subsystem such as the CSCF. It is needed to enable subscriber usage of the IM CN subsystem services. This IP multimedia functionality is independent of the access network used to access the IM CN subsystem.

- The subset of the HLR/AUC functionality required by the PS domain.

- The subset of the HLR/AUC functionality required by the CS domain, if it is desired to enable subscriber access to the CS domain or to support roaming to legacy GSM/UMTS CS domain networks.

The organization of the subscriber data is outlined in 3GPP TS 23.008. It also indicates which numbers, addresses and identifiers specified in 3G TS 23.003 are stored in HSS.

7.3.1 Home location register (HLR)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4.1.1.1.1.

The HLR can be considered a subset of the HSS that holds the following functionalities:

- The functionality required to provide support to PS domain entities such as the SGSN and GGSN, through the Gr and Gc interfaces. It is needed to enable subscriber access to the PS domain services.

- The functionality required to provide support to CS domain entities such as the MSC/MSC server and GMSC/GMSC server, through the C and D interfaces. It is needed to enable subscriber access to the CS domain services and to support roaming to legacy GSM/UMTS CS domain networks.

7.3.2 Authentication centre (AuC)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4.1.1.1.2.

The AuC can be considered a subset of the HSS that holds the following functionalities for the CS domain and PS domain:

- The AuC is associated with an HLR and stores an identity key for each mobile subscriber registered with the associated HLR. This key is used to generate security data for each mobile subscriber:
  - data which are used for mutual authentication of the international mobile subscriber identity (IMSI) and the network;
  - a key used to check the integrity of the communication over the radio path between the mobile station and the network;
  - a key used to cipher communication over the radio path between the mobile station and the network.

- The AuC communicates only with its associated HLR over a non-standardized interface denoted the H interface. The HLR requests the data needed for authentication and ciphering from the AuC via the H interface, stores them and delivers them to the VLR and SGSN which need them to perform the security functions for a mobile station.

7.3.3   HSS logical functions

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4.1.1.1.3.

This clause provides a high level and not exhaustive description of HSS functionality.
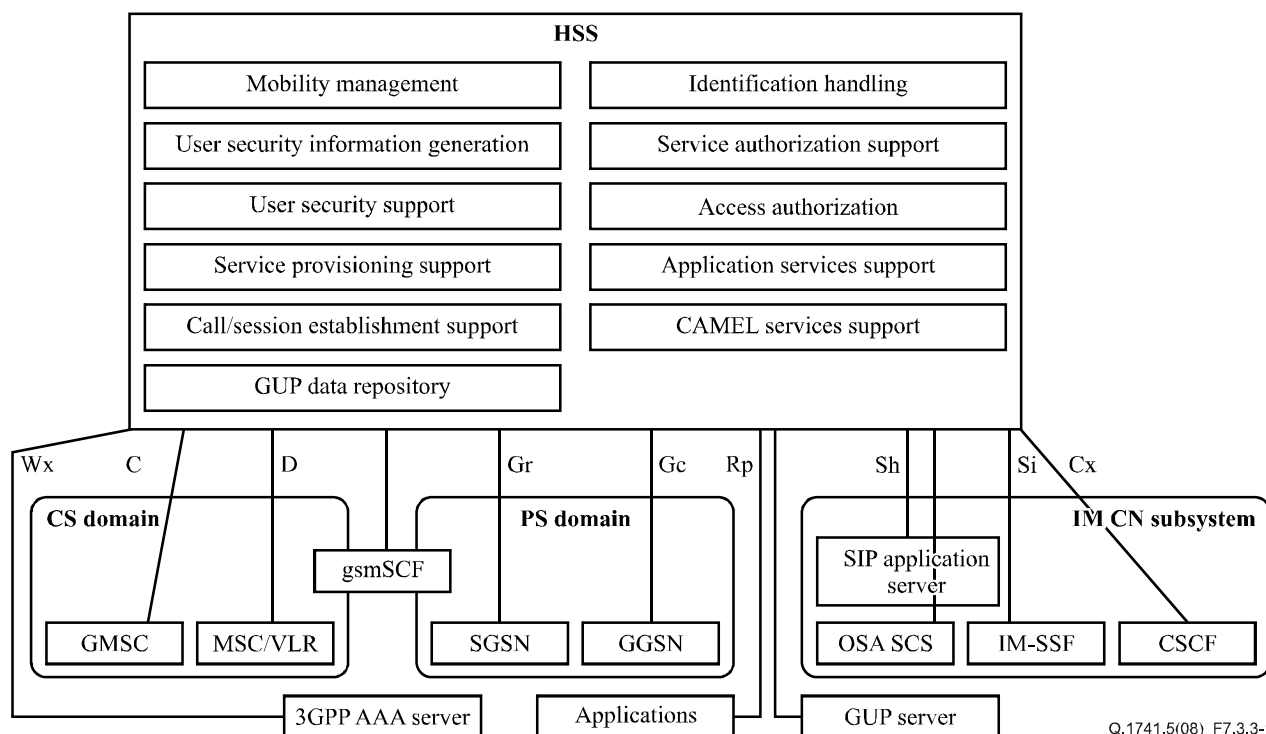
Figure 7.3.3-1 – HSS logical functions

- *Mobility management*

  This function supports the user mobility through CS domain, PS domain and IM CN subsystem.

- *Call and/or session establishment support*

  The HSS supports the call and/or session establishment procedures in CS domain, PS domain and IM CN subsystem. For terminating traffic, it provides information on which call and/or session control entity currently hosts the user.

- *User security information generation*

  The HSS generates user authentication, integrity and ciphering data for the CS and PS domains and for the IM CN subsystem.

- *User security support*

  The HSS supports the authentication procedures to access CS domain, PS domain and IM CN subsystem services by storing the generated data for authentication, integrity and ciphering and by providing these data to the appropriate entity in the CN (i.e., MSC/VLR, SGSN or CSCF).

- *User identification handling*

  The HSS provides the appropriate relations among all the identifiers uniquely determining the user in the system: CS domain, PS domain and IM CN subsystem (e.g., IMSI and MSISDNs for CS domain; IMSI, MSISDNs and IP addresses for PS domain, private identity and public identities for IM CN subsystem).

- *Access authorization*

    The HSS authorizes the user for mobile access when requested by the MSC/VLR, SGSN or CSCF, by checking that the user is allowed to roam to that visited network.

- *Service authorization support*

    The HSS provides basic authorization for MT call/session establishment and service invocation. Besides, the HSS updates the appropriate serving entities (i.e., MSC/VLR, SGSN, CSCF) with the relevant information related to the services to be provided to the user.

- *Service provisioning support*

    The HSS provides access to the service profile data for use within the CS domain, PS domain and/or IM CN subsystem.

- *Application services and CAMEL services support*

    The HSS communicates with the SIP application server and the OSA-SCS to support application services in the IM CN subsystem. It communicates with the IM-SSF to support the CAMEL services related to the IM CN subsystem. It communicates with the gsmSCF to support CAMEL services in the CS domain and PS domain.

7.4 Equipment identity register (EIR)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4.1.1.4.

The equipment identity register (EIR) is the logical entity, which is responsible for storing in the network the international mobile equipment identities (IMEIs) used.

The equipment is classified as "white listed", "grey listed", "black listed", or it may be unknown.

This functional entity contains one or several databases which store(s) the IMEIs used.

The mobile equipment may be classified as "white listed", "grey listed" and "black listed" and therefore may be stored in three separate lists.

An IMEI may also be unknown to the EIR.

An EIR shall as a minimum contain a "white list" (Equipment classified as "white listed").

7.5 SMS gateway MSC (SMS-GMSC)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4.1.1.5.

The SMS gateway MSC (SMS-GMSC) acts as an interface between a short message service centre and the PLMN, to allow short messages to be delivered to mobile stations from the service centre (SC).

The choice of which MSCs can act as SMS gateway MSCs is a network operator matter (e.g., all MSCs or some designated MSCs).

7.6 SMS interworking MSC

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4.1.1.6.

The SMS Interworking MSC acts as an interface between the PLMN and a short message service centre (SC) to allow short messages to be submitted from mobile stations to the SC.

The choice of which MSCs can act as SMS interworking MSCs is a network operator matter (e.g., all MSCs or some designated MSCs).

7.7   Gateway GPRS support node (GGSN)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clauses 4.1.3 and 4.1.3.2.

The UMTS GPRS support nodes (GSN) is the gateway GSN (GGSN) and the serving GSN (SGSN). They constitute the interface between the radio system and the fixed networks for packet-switched services. The GSN performs all necessary functions in order to handle the packet transmission to and from the mobile stations.

Gateway GPRS support node (GGSN): The location register function in the GGSN stores subscriber data received from the HLR and the SGSN. There are two types of subscriber data needed to handle originating and terminating packet data transfer:

–   Subscription information:

  •   the IMSI;

  •   zero or more PDP addresses.

–   Location information:

  •   the SGSN address for the SGSN where the MS is registered.

7.8   Serving GPRS support node (SGSN)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clauses 4.1.3 and 4.1.3.1.

The UMTS GPRS support nodes (GSN) is the gateway GSN (GGSN) and the serving GSN (SGSN). They constitute the interface between the radio system and the fixed networks for packet-switched services. The GSN performs all necessary functions in order to handle the packet transmission to and from the mobile stations.

Serving GPRS support node (SGSN): The location register function in the SGSN stores two types of subscriber data needed to handle originating and terminating packet data transfer:

–   Subscription information:

  •   the IMSI;

  •   one or more temporary identities;

  •   zero or more PDP addresses.

–   Location information:

  •   depending on the operating mode of the MS, the cell or the routeing area where the MS is registered;

  •   the VLR number of the associated VLR (if the Gs interface is implemented);

  •   the GGSN address of each GGSN for which an active PDP context exists.

7.9   Circuit switched – Media gateway function (CS-MGW)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4.1.2.1.2.

NOTE – In this Recommendation, the term "Media Gateway Function (MGW)" is used when there is no need to differentiate between the CS domain entity and the IP multimedia CN subsystem entity. When referring specifically to the CS domain entity, the term "CS-MGW" is used. When referring specifically to the IP multimedia CN subsystem entity, the term "IM-MGW" is used.

This component is PSTN/PLMN transport termination point for a defined network and interfaces UTRAN with the core network over Iu.

A CS-MGW may terminate bearer channels from a switched-circuit network and media streams from a packet network (e.g., RTP streams in an IP network). Over Iu, the CS-MGW may support media conversion, bearer control and payload processing (e.g., codec, echo canceller, conference bridge) for support of different Iu options for CS services (AAL 2/ATM-based as well as RTP/UDP/IP-based).

The CS-MGW:

– interacts with MGCF, MSC server and GMSC server for resource control;

– owns and handles resources such as echo cancellers, etc.;

– may need to have codecs.

The CS-MGW will be provisioned with the necessary resources for supporting UMTS/GSM transport media. Further tailoring (i.e., packages) of the H.248.1 may be required to support additional codecs and framing protocols, etc.

The CS-MGW bearer control and payload processing capabilities will also need to support mobile specific functions such as SRNS relocation/handover and anchoring. It is expected that current H.248.1 standard mechanisms can be applied to enable this.

7.10   IP multimedia (IM) core network (CN) subsystem entities

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4a.7.

7.10.1   Call session control function (CSCF)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4a.7.1.

The CSCF can act as proxy CSCF (P-CSCF), serving CSCF (S-CSCF) or interrogating CSCF (I-CSCF). The P-CSCF is the first contact point for the UE within the IM subsystem (IMS); the S-CSCF actually handles the session states in the network; the I-CSCF is mainly the contact point within an operator's network for all IMS connections destined to a subscriber of that network operator, or a roaming subscriber currently located within that network operator's service area. Further definitions of the P-, S- and I-CSCF are provided in 3G TS 23.228.

7.10.2   Media gateway control function (MGCF)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4a.7.2.

The MGCF:

– controls the parts of the call state that pertain to connection control for media channels in an IMS-MGW;

– communicates with CSCF;

– selects the CSCF depending on the routing number for incoming calls from legacy networks;

– performs protocol conversion between ISUP and the IM subsystem call control protocols;

– out-of-band information assumed to be received in MGCF and may be forwarded to CSCF/IMS-MGW.

7.10.3   IP multimedia subsystem – Media gateway function (IMS-MGW)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4a.7.3.

NOTE – In this Recommendation, the term "Media Gateway Function (MGW)" is used when there is no need to differentiate between the CS domain entity and the IP multimedia CN subsystem entity. When referring specifically to the CS domain entity, the term "CS-MGW" is used. When referring specifically to the IP multimedia CN subsystem entity, the term "IMS-MGW" is used.

An IMS-MGW may terminate bearer channels from a switched-circuit network and media streams from a packet network (e.g., RTP streams in an IP network). The IMS-MGW may support media conversion, bearer control and payload processing (e.g., codec, echo canceller, conference bridge), it:

–   interacts with the MGCF for resource control;

–   owns and handles resources such as echo cancellers, etc.;

–   may need to have codecs.

The IMS-MGW will be provisioned with the necessary resources for supporting UMTS/GSM transport media. Further tailoring (i.e., packages) of the H.248.1 may be required to support additional codecs and framing protocols, etc.

7.10.4   Multimedia resource function controller (MRFC)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4a.7.4.

The MRFC:

–   controls the media stream resources in the MRFP;

–   interprets information coming from an AS and S-CSCF (e.g., session identifier) and controls MRFP accordingly;

–   generates CDRs.

7.10.5   Multimedia resource function processor (MRFP)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4a.7.4a.

The MRFP:

–   controls bearers on the Mb reference point;

–   provides resources to be controlled by the MRFC;

–   mixes incoming media streams (e.g., for multiple parties);

–   sources media streams (for multimedia announcements);

–   processes media streams (e.g., audio transcoding, media analysis).

7.10.6   Subscription locator function (SLF)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4a.7.5.

The SLF:

–   is queried by the I-CSCF during the registration and session setup to get the name of the HSS containing the required subscriber specific data. Furthermore, the SLF is also queried by the S-CSCF during the registration;

–   is accessed via the Dx interface.

The SLF is not required in a single HSS environment. An example for a single HSS environment is a server farm architecture.

7.10.7 Breakout gateway control function (BGCF)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4a.7.6.

The breakout gateway control function (BGCF) selects the network in which PSTN breakout is to occur and – within the network where the breakout is to occur – selects the MGCF.

7.10.8 Application server (AS)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4a.7.7.

An application server (AS) i.e., SIP application server, OSA application server, or CAMEL IM-SSF, offers value-added IM services and resides either in the user's home network or in a third-party location. The third party could be a network or simply a stand-alone AS.

NOTE – The OSA application server does not directly interact with the IMS network entities but through the OSA service capability servers (OSA SCSs). Further information on OSA is provided in 3G TS 22.127.

The AS (SIP application server and/or the OSA service capability server and/or IM-SSF) can communicate with the HSS. The Sh and Si interfaces are used for this purpose.

The serving-CSCF to AS interface is used to provide services residing in an AS. Two cases were identified:

–   Serving-CSCF to an AS in home network;

–   Serving-CSCF to an AS in a trusted external network (e.g., third party or visited). The S-CSCF does not provide authentication and security functionality for secure direct third party access to the IM subsystem. The OSA framework provides a standardized way for third party access to the IM subsystem.

An Application Server may influence and impact the SIP session on behalf of the services supported by the operator's network. An AS may host and execute services.

7.11   Signalling gateway function (SGW)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4a.8.

The SGW performs the signalling conversion (both ways) at transport level between the SS7-based transport and the IP-based transport of signalling (i.e., between Sigtran SCTP/IP and SS7 MTP). The SGW does not interpret the application layer (e.g., MAP, CAP, BICC, ISUP) messages but may have to interpret the underlying SCCP or SCTP layer to ensure proper routing of the signalling.

7.12   Global text telephony specific entities

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4a.9.

Interworking between cellular text modem (CTM) and text telephony standards (e.g., V.18) used in external networks can be supported by three methods:

–   Routing calls through a CTM special resource function (CTM-SRF) in the core network. The CTM-SRF is linked into the call path via CAMEL procedures. Depending on operator configuration, the CTM-SRF may also be linked into the call path for emergency calls.

–   A CTM/text telephone converting function included along the speech call path selected by the network after an indication from the terminal that CTM is required.

–   A CTM/text telephone converting function included in all speech call paths.

Further information of the support for text telephony is found in 3G TS 23.226.

For further details of CTM, see 3G TS 26.226.

7.13   Security gateway (SEG)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4a.10.

The UMTS network domain shall be logically and physically divided into security domains in order to protect IP-based control plane signalling. These security domains typically coincide with operator borders.

The interface between different security domains is protected by security gateways (SEGs). The SEGs are responsible for enforcing the security policy of an IP security domain towards other SEGs in the destination IP security domain. All NDS/IP traffic shall pass through a SEG before entering or leaving a security domain. The security policy between security domains is subject to inter-domain agreements. This may differ from the security policy within the same security domain, which is optional to implementation and unilaterally decided by the security domain operator. For further details of SEG, see 3G TS 33.210.

7.14   Gateway mobile location centre (GMLC)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4a.3.2.

The gateway mobile location centre (GMLC) is the first node an external location application accesses in the PLMN. The GMLC performs registration authorization and requests routing information from the HLR. There may be more than one GMLC in a PLMN.

7.15   GPRS service switching function (gprsSSF)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4a.4.4.

GPRS service switching function (gprsSSF) is a functional entity that interfaces the SGSN to the gsmSCF. The concept of the gprsSSF is derived from the IN SSF, but uses different triggering mechanisms because of the nature of the mobile network.

7.16   GSM service control function (gsmSCF)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4a.4.1.

GSM service control function (gsmSCF) is a functional entity that contains the CAMEL service logic to implement operator specific service. It interfaces with the gsmSSF, the gsmSRF and the HLR.

7.17   GSM service switching function (gsmSSF)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4a.4.2.

GSM service switching function (gsmSSF) is a functional entity that interfaces the MSC/GMSC to the gsmSCF. The concept of the gsmSSF is derived from the IN SSF, but uses different triggering mechanisms because of the nature of the mobile network.

7.18 GSM specialized resource function (gsmSRF)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 4a.4.3.

GSM specialized resource function (gsmSRF) is a functional entity, which provides various specialized resources. It interfaces with the gsmSCF and with the MSC. This entity is defined in [ITU-T Q.1214] with variations defined in 3G TS 23.078.

7.19 Gateway location register (GLR)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause A.2.1.

The gateway location register (GLR) handles location management of roaming subscriber in visited network without involving HLR. The location register function in the GLR stores subscription information and routeing information for both CS services and PS services. This entity can be located only in a visited PLMN. The GLR is an optional function entity to optimize signalling traffic between PLMNs.

7.20 Intermediate GPRS serving node (IM-GSN)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause A.2.3.

The intermediate GPRS serving node (IM-GSN) is used as serving GSN towards home network and relay some PDU notification messages between serving GSN and gateway GSN. This entity can be located only in a visited PLMN.

7.21 Intermediate mobile-service switching centre (IM-MSC)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause A.2.2.

The intermediate mobile-services switching centre (IM-MSC) is used as serving MSC towards home network and relays some messages between home network and serving MSC. This entity can be located only in a visited PLMN.

8 Interfaces and reference points

8.1 C interface (Gateway mobile switching centre server (GMSC server) – Home location register (HLR))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6.4.1.2.

The gateway MSC server must interrogate the HLR of the required subscriber to obtain routeing information for a call or a short message directed to that subscriber.

Signalling on this interface uses the mobile application part (MAP), which in turn uses the services of transaction capabilities.

For customized application for mobile network enhanced logic (CAMEL) purposes, this interface is used, e.g., at terminating calls to exchange routeing information, subscriber status, location information, subscription information, etc.

8.2 D interface (Visitor location register (VLR) – Home location register (HLR))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6.4.1.3.

This interface is used to exchange the data related to the location of the mobile station and to the management of the subscriber. The main service provided to the mobile subscriber is the capability to set up or to receive calls within the whole service area. To support this, the location registers have to exchange data. The VLR informs the HLR of the location of a mobile station managed by the latter and provides it (either at location updating or at call set-up) with the roaming number of that station. The HLR sends to the VLR all the data needed to support the service to the mobile subscriber. The HLR then instructs the previous VLR to cancel the location registration of this subscriber. Exchanges of data may occur when the mobile subscriber requires a particular service, when he wants to change some data attached to his subscription or when some parameters of the subscription are modified by administrative means.

Signalling on this interface uses the mobile application part (MAP), which in turn uses the services of transaction capabilities.

For customized application for mobile network enhanced logic (CAMEL) purposes, this interface is used to send the CAMEL related subscriber data to the visited PLMN and for provision of mobile station roaming number (MSRN). The interface is also used for the other purposes, e.g., to retrieve subscriber status and location information of the mobile subscriber or to indicate suppression of announcement for a CAMEL service.

8.3 E interface (Mobile switching centre server (MSC server) – Mobile switching centre server (MSC server))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6.4.1.4.

When a mobile station moves from one MSC area to another during a call, a handover procedure has to be performed in order to continue the communication. For that purpose, the MSC servers have to exchange data to initiate and then to realize the operation.

After the handover operation has been completed, the MSC servers will exchange information to transfer A-interface or Iu-interface signalling as defined in 3G TS 23.009.

When a short message is to be transferred between a mobile station and short message service centre (SC), in either direction, this interface is used to transfer the message between the MSC server serving the mobile station and the MSC server, which acts as the interface to the SC.

Signalling on this interface uses the mobile application part (MAP), which in turn uses the services of transaction capabilities (see 3G TS 29.002).

8.4 F interface (Mobile switching centre server (MSC server) – Equipment identity register (EIR))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6.4.1.5.

This interface is used between MSC server and EIR to exchange data, in order that the EIR can verify the status of the IMEI retrieved from the mobile station.

Signalling on this interface uses the mobile application part (MAP), which in turn uses the services of transaction capabilities.

8.5 G interface (Visitor location register (VLR) – Visitor location register (VLR))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6.4.1.6.

When a mobile subscriber moves from a VLR area to another location registration procedure will happen. This procedure may include the retrieval of the IMSI and authentication parameters from the old VLR.

Signalling on this interface uses the mobile application part (MAP), which in turn uses the services of transaction capabilities.

8.6 Gc interface (Home location register (HLR) – Gateway GPRS support node (GGSN))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6.4.2.3.

This optional signalling path may be used by the GGSN to retrieve information about the location and supported services for the mobile subscriber, to be able to activate a packet data network address.

There are two alternative ways to implement this signalling path:

– If an SS7 interface is implemented in the GGSN, signalling between the GGSN and the HLR uses the mobile application part (MAP), which in turn uses the services of transaction capabilities (TCAP);

– If there is *no* SS7 interface in the GGSN, any GSN in the same PLMN and which has an SS7 interface installed can be used as a GTP to MAP protocol converter, thus forming a signalling path between the GGSN and the HLR.

8.7 Gf interface (Equipment identity register (EIR) – Serving GPRS support node (SGSN))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6.4.2.4.

This interface is used between SGSN and EIR to exchange data, in order that the EIR can verify the status of the IMEI retrieved from the mobile station.

Signalling on this interface uses the mobile application part (MAP), which in turn uses the services of transaction capabilities (TCAP).

8.8 Reference point GGSN – Packet data networks (Gi reference point)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 7.2.

This is the reference point between the GGSN and a packet data network. It may be an operator external public or private packet data network or an intra operator packet data network, e.g., for provision of IMS services.

8.9 GLa interface (Gateway location register (GLR) – Home location register (HLR))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause A.5.1.

In circuit switched domain, this interface is the same as that between the VLR and the HLR. The HLR regards the GLR as the VLR via this interface. On the other hand, in packet switched domain, this interface is the same as that between the SGSN and the HLR. The HLR regards the GLR as the SGSN via this interface.

8.10 GLb interface (Gateway location register (GLR) – Visitor location register (VLR))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause A.5.2.

This interface is the same as those between the VLR and the HLR. The VLR regards the GLR as the HLR via this interface.

8.11 GLc interface (Gateway location register (GLR) – Serving GPRS support node (SGSN))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause A.5.3.

This interface is the same as those between the SGSN and the HLR. The SGSN regards the GLR as the HLR via this interface.

8.12 GLd interface (Gateway location register (GLR) – Intermediate mobile-services switching centre (IM-MSC))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause A.5.4.

In the network with the GLR, when the IM-MSC receives a message, it interrogates the GLR for the routing information of the MSC. However, this interface is internal because GLR and IM-MSC are implemented in the same physical node and the protocol on this interface is not specified.

8.13 GLe interface (Gateway location register (GLR) – Intermediate GPRS serving node (IM-GSN))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause A.5.5.

In the network with the GLR when the IM-GSN receiving a PDU notification from the GGSN, the IM-GSN relays the notification to the SGSN by interrogating via the interface the routeing information to the GLR. The interrogation uses the same operation on the interface between the SGSN and the HLR.

8.14 GLf interface (Gateway location register (GLR) – Short message service-gateway mobile switching centre (SMS-GMSC))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause A.5.6.

This interface is used to forward mobile-terminated short messages in the network with the GLR in case of SMS transfer over GPRS. Signalling on this interface uses the mobile application part (MAP).

The SMS-GMSC regards the GLR as the SGSN via this interface.

8.15 GLg interface (Intermediate mobile-services switching centre (IM-MSC) – Short message service-gateway mobile switching centre (SMS-GMSC))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause A.5.7.

This interface is used to forward short messages in the network with the GLR in case of SMS transfer over non-GPRS. Signalling on this interface uses the mobile application part (MAP).

The SMS-GMSC regards the IM-MSC as the MSC via this interface.

8.16 GLh interface (Intermediate mobile-services switching centre (IM-MSC) – Mobile switching centre (MSC))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause A.5.8.

This interface is used to forward short messages in the network with the GLR in case of SMS transfer over non-GPRS. Also this interface is used to exchange data needed by the MSC to perform subscriber authorization and allocate network resources. Signalling on this interface uses the mobile application part (MAP).

8.17 GLi interface (Intermediate mobile-services switching centre (IM-MSC) – Gateway mobile location centre (GMLC))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause A.5.9.

Also this interface is used to exchange data needed by the MSC to perform subscriber authorization and allocate network resources. Signalling on this interface uses the mobile application part (MAP).

The GMLC regards the IM-MSC as the MSC via this interface.

8.18 GLj interface (Intermediate GPRS serving node (IM-GSN) – Gateway GPRS support node (GGSN))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause A.5.10.

In the network with the GLR when receiving a PDP PDU from the external network, the GGSN sends a notification to the IM-GSN by the routing information from the HLR. The GGSN regards the IM-GSN as the SGSN via this interface.

8.19 GLk interface (Intermediate GPRS serving node (IM-GSN) – Serving GPRS support node (SGSN))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause A.5.11.

In the network with the GLR when receiving a PDP notification from the GGSN, the IM-GSN relays the notification to the SGSN by the routing information from the GLR. The SGSN regards the IM-GSN as the GGSN via this interface.

8.20 Gn interface (Gateway GPRS support node (GGSN) – Serving GPRS support node (SGSN))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6.4.2.2.

This interface is used to support mobility between the SGSN and GGSN. The Gn interface is used when GGSN and SGSN are located inside one PLMN. The Gn interface also includes a part which allows SGSNs to communicate subscriber and user data, when changing SGSN.

Signalling on this interface uses the user datagram protocol, UDP/IP.

8.21 Gp interface (Serving GPRS support node (SGSN) – External data network)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6.4.2.2.

The Gp interface is used if GGSN and SGSN are located in different PLMNs. The Gp interface also includes a part that allows SGSNs to communicate subscriber and user data, when changing SGSN.

Signalling on this interface uses the user datagram protocol, UDP/IP.

8.22 Gr interface (Home location register (HLR) – Serving GPRS support node (SGSN))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6.4.2.1.

This interface is used to exchange the data related to the location of the mobile station and to the management of the subscriber. The main service provided to the mobile subscriber is the capability to transfer packet data within the whole service area. The SGSN informs the HLR of the location of a mobile station managed by the latter. The HLR sends to the SGSN all the data needed to support the service to the mobile subscriber. Exchanges of data may occur when the mobile subscriber requires a particular service, when he wants to change some data attached to his subscription or when some parameters of the subscription are modified by administrative means.

Signalling on this interface uses the mobile application part (MAP), which in turn uses the services of transaction capabilities (TCAP).

8.23 Gs interface (Mobile switching centre (MSC)/Visitor location register (VLR) – Serving GPRS support node (SGSN))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6.4.3.1.

The SGSN may send location information to the MSC/VLR via the optional Gs interface. The SGSN may receive paging requests from the MSC/VLR via the Gs interface. The MSC/VLR may indicate to an SGSN, via the Gs interface, that an MS is engaged in a service handled by the MSC.

Signalling on this interface uses connectionless SCCP (without TCAP). SCCP global title (GT) is used for addressing.

8.24 gsmSCF – HLR interface

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.4.4.

This interface is used by the gsmSCF to request information from the HLR. As a network operator option, the HLR may refuse to provide the information requested by the gsmSCF.

This interface is also used for USSD operations, both for gsmSCF-initiated dialogues and MS-initiated dialogues (relayed via HLR). It is a network operator option whether to support or not USSD operations on this interface.

8.25 gsmSCF – gsmSRF interface

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.4.5.

This interface is used by the gsmSCF to instruct the gsmSRF to play tones/announcements to the users.

8.26 gsmSSF – gsmSCF interface

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.4.2.

This interface is used by the gsmSCF to control a call in a certain gsmSSF and to request the gsmSSF to establish a connection with a gsmSRF. Relationships on this interface are opened as a result of the gsmSSF sending a request for instructions to the gsmSCF.

8.27 gprsSSF – gsmSCF interface

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.4.8.

This interface is used by the gsmSCF to control a GPRS session or individual PDP Context in a certain gprsSSF. Relationships between the gprsSSF and the gsmSCF (GPRS dialogues) on this interface are opened as a result of the gprsSSF sending a request for instructions to the gsmSCF.

8.28 H interface (Home location register (HLR) – Authentication centre (AuC))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6.4.3.2.

When an HLR receives a request for authentication and ciphering data for a mobile subscriber and it does not hold the requested data, the HLR requests the data from the AuC. The protocol used to transfer the data over this interface is not standardized.

8.29 IuBC interface (Cell broadcast centre (CBC) – Radio network subsystem (RNS))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.5.1.

The IuBC interface between the CBC and the RNS is specified in the 25.41x-series of 3G Technical Specifications.

The CBC-RNS interface is used to carry information concerning:

– the CBS messages itself; and
– CBS delivery parameter.

8.30 IuCS interface (Mobile switching centre (MSC) – RNS or BSS)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clauses 6.2.1.2 and 6.2.1.3.

The IuCS interface between the MSC and its RNS or BSS is specified in the 25.41x-series of UMTS Technical Specifications.

The RNS-MSC interface is used to carry information concerning:

– RNS management;
– call handling;
– mobility management.

8.31 IuPS interface (Serving GPRS support node (SGSN) – RNS or BSS))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clauses 6.2.2.2 and 6.2.2.3.

The IuPS interface between SGSN and RNS/BSS is used to carry information concerning:

– packet data transmission;
– mobility management.

The IuPS interface is defined in the 25.41x-series of 3G Technical Specifications.

8.32 A interface (Mobile switching centre (MSC) – Base station system (BSS))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6.2.1.1.

The A interface between the MSC and its BSS is specified in the 48-series of Technical Specifications.

The BSS-MSC interface is used to carry information concerning:

– BSS management;
– call handling;
– mobility management.

8.33 Gb interface (Serving GPRS support node (SGSN) – Base station system (BSS))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6.2.2.1.

The BSS-SGSN interface is used to carry information concerning:

– packet data transmission;
– mobility management.

The Gb interface is defined in 3G TS 48.014, 3G TS 48.016 and 3G TS 48.018.

8.34 Reference point GMLC – external LCS client (Le reference point)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 7.3.

At this reference point, external LCS clients request services from the PLMN.

8.35 LCS interfaces using MAP

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.3.1.

The following interfaces are based on MAP in LCS.

8.35.1 Lh interface (interface between GMLC and HLR)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.3.1.

This interface is used by the GMLC to request the address of the visited MSC or SGSN for a particular target UE whose location has been requested (see 3G TS 29.002).

8.35.2 Lg interface (interface between GMLC – MSC and GMLC – SGSN)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.3.1.

This interface is used by the GMLC to convey a location request to the MSC or SGSN currently serving a particular target UE whose location was requested. The interface is used by the MSC or SGSN to return location results to the GMLC (see 3G TS 29.002).

8.35.3 Lc interface (between GMLC and gsmSCF, CAMEL)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.3.1.

This interface is used to get location information for CAMEL-based services GMLC (see 3G TS 29.002).

8.36 Mc reference point (Mobile switching centre server (MSC Server) – Circuit switched media gateway (CS-MGW))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6.4.1.7.

The Mc reference point describes the interfaces between the MGCF and IMS-MGW, between the MSC server and CS-MGW, and between the GMSC Server and CS-MGW. It has the following properties:

– Full compliance with [ITU-T H.248.1].

– Flexible connection handling that allows support of different call models and different media processing purposes not restricted to H.323 usage.

– Open architecture where extensions/packages definition work on the interface may be carried out.

– Dynamic sharing of MGW physical node resources. A physical MGW can be partitioned into logically separate virtual MGWs/domains consisting of a set of statically allocated terminations.

– Dynamic sharing of transmission resources between the domains as the MGW controls bearers and manage resources according to the H.248.1 protocols.

The functionality across the Mc reference point will need to support mobile specific functions such as SRNS relocation/handover and anchoring. It is expected that current H.248.1/IETF Megaco standard mechanisms can be applied to enable this.

8.37 Mobile switching centre (MSC) – gsmSCF interface

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.4.6.

This interface is used by the MSC to send supplementary service invocation notifications to the gsmSCF.

8.38 Nb reference point (Circuit switched media gateway (CS-MGW) – Circuit switched media gateway (CS-MGW))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6.4.1.9.

Over the Nb reference point the bearer control and transport are performed. The transport may be RTP/UDP/IP [IETF RFC 1889] and [IETF RFC 768] or AAL 2 [ITU-T I.363.2] for transport of user data. In the R00 architecture, different options for user data transport and bearer control shall be possible on Nb, for example: AAL 2/Q.AAL 2, STM/none, RTP/H.245, IPBC.

8.39 Nc reference point (Mobile switching centre server (MSC server) – Gateway mobile switching centre server (GMSC server))

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6.4.1.8.

Over the Nc reference point, the network-network-based call control is performed. Examples of this are ISUP or an evolvement of ISUP for bearer independent call control (BICC). Different options for signalling transport on Nc shall be possible including IP.

8.40   Reference point fixed networks – MSC

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 7.1.

The MSC is based on a normal ISDN exchange. It has, for call control, the same reference points as the fixed network exchanges. The signalling reference point considered in the Technical Specifications is related to the Signalling System No. 7 user parts TUP and ISUP associated to the circuits used for incoming and outgoing calls.

8.41   IM subsystem reference points

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.7.

8.41.1   Reference point HSS – CSCF (Cx reference point)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.7.1.

The Cx reference point supports information transfer between CSCF and HSS.

The main procedures that require information transfer between CSCF and HSS are:

1)   Procedures related to serving CSCF assignment.

2)   Procedures related to routing information retrieval from HSS to CSCF.

3)   Procedures related to authorization (e.g., checking of roaming agreement).

4)   Procedures related to authentication: transfer of security parameters of the subscriber between HSS and CSCF.

5)   Procedures related to filter control: transfer of filter parameters of the subscriber from HSS to CSCF.

Further information on the Cx reference point is provided in 3G TS 23.228.

8.41.2   Reference point CSCF – UE (Gm reference point)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.7.2.

The Gm reference point supports the communication between UE and IM CN subsystem, e.g., related to registration and session control.

The protocol used for the Gm reference point is SIP (as defined by IETF RFC 3261], other relevant RFCs, and additional enhancements introduced to support 3GPP's needs).

8.41.3   Reference point MGCF – IMS-MGW (Mn reference point)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.7.3.

The Mn reference point describes the interfaces between the MGCF and IMS-MGW in the IMS. It has the following properties:

–   Full compliance with the H.248.1 standard functions for IMS-PSTN/PLMN interworking.

–   Flexible connection handling which allows support of different call models and different media processing purposes not restricted to [ITU-T H.323] usage.

–   Open architecture where extensions/Packages definition work on the interface may be carried out.

– Dynamic sharing of IMS-MGW physical node resources. A physical IMS-MGW can be partitioned into logically separate virtual MGWs/domains consisting of a set of statically allocated Terminations.

– Dynamic sharing of transmission resources between the domains as the IMS-MGW controls bearers and manage resources according to the H.248.1 protocols and functions for IMS.

8.41.4 Reference point MGCF – CSCF (Mg reference point)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.7.4.

The Mg reference point allows the MGCF to forward incoming session signalling (from the PSTN) to the CSCF for the purpose of interworking with PSTN networks.

The protocol used for the Mg reference point is SIP (as defined by [IETF RFC 3261], other relevant RFCs, and additional enhancements introduced to support 3GPP's needs).

8.41.5 Reference point CSCF – MRFC (Mr reference point)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.7.6.

The Mr reference point allows interaction between an S-CSCF and an MRFC.

The protocol used for the Mr reference point is SIP (as defined by [IETF RFC 3261], other relevant RFCs, and additional enhancements introduced to support 3GPP's needs).

8.41.6 Reference point MRFC – MRFP (Mp reference point)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.7.6a.

The Mp reference point has the following properties:

– Full compliance with [ITU-T H.248.1].

– Open architecture where extensions (packages) definition work on the interface may be carried out.

8.41.7 Reference point CSCF – CSCF (Mw reference point)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.7.7.

The Mw reference point allows the communication and forwarding of signalling messaging between CSCFs, e.g., during registration and session control.

8.41.8 Reference point GGSN – PDF (Go reference point)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.7.9.

This interface allows the policy decision function (PDF) to apply policy to the bearer usage in the GGSN.

The policy decision function (PDF) is a logical entity of the P-CSCF. If the PDF is implemented in a separate physical node, the interface between the PDF and the P-CSCF is not standardized.

8.41.9 Reference point CSCF – BGCF (Mi reference point)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.7.10.

This reference point allows the serving CSCF to forward the session signalling to the breakout gateway control function for the purpose of interworking to the PSTN networks.

The Mi reference point is based on external specifications, i.e., SIP [IETF RFC 3261].

8.41.10 Reference point BGCF – MGCF (Mj reference point)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.7.11.

This reference point allows the breakout gateway control function to forward the session signalling to the media gateway control function for the purpose of interworking to the PSTN networks.

The Mj reference point is based on external specifications, i.e., SIP [IETF RFC 3261].

8.41.11 Reference point BGCF – BGCF (Mk reference point)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.7.12.

This reference point allows the breakout gateway control function to forward the session signalling to another breakout gateway control function.

The Mk reference point is based on external specifications, i.e., SIP [IETF RFC 3261].

8.41.12 Reference point CSCF – SLF (Dx reference point)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.7.13.

This interface between CSCF and SLF is used to retrieve the address of the HSS which holds the subscription for a given user.

This interface is not required in a single HSS environment. An example for a single HSS environment is a server farm architecture.

Details are described in 3G TS 23.228, subclause 5.8.1.

8.41.13 Reference point to IPv6 network services (Mb reference point)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.7.14.

Via the Mb reference point, IPv6 network services are accessed. These IPv6 network services are used for user data transport. Note that GPRS provides IPv6 network services to the UE, i.e., the GPRS Gi reference point and the IMS Mb reference point may be the same.

8.41.14 Reference point CSCF – AS (ISC reference point)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.7.15.

This interface between CSCF and the application servers (i.e., SIP application server, OSA service capability server, or CAMEL IM-SSF) is used to provide services for the IMS.

Details are described in 3G TS 23.228, subclause 4.2.4.

8.41.15 Reference point HSS – SIP AS or OSA SCS (Sh reference point)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.7.16.

The application server (SIP application server and/or the OSA service capability server) may communicate the HSS. The Sh interface is used for this purpose. Details are described in 3G TS 23.228, subclause 4.2.4.

8.41.16 Reference point HSS – CAMEL IM-SSF (Si reference point)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 6a.7.17.

The CAMEL application server (IM-SSF) may communicate to the HSS. The Si interface is used for this purpose. Details are described in 3G TS 23.228, subclause 4.2.4.

8.42   Reference point CSCF – Multimedia IP networks (Mm reference point)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 7.4.

This is an IP interface between CSCF and IP networks. This interface is used, for example, to receive a session request from another SIP server or terminal.

8.43   Reference point PDG – Packet data networks (Wi reference point)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 7.6.

This is the reference point between the PDG and a packet data network. It may be an operator external public or private packet data network or an intra operator packet data network, e.g., for provision of IMS services.

8.44   Reference point WAG – WLAN access network (Wn reference point)

The text in this clause is based on the text in references [ETSI TS 123 002], [TTC TS-3GA-23.002], [ATIS 3GPP 23.002], [TTA TTAT.3G-23.002] and [CCSA-TSD-123 002], clause 7.7.

This is the reference point between the WAG and the WLAN access network. It is used to force traffic between a WLAN UE and PDG to go through the WAG.

9   Technical specifications structure

This clause provides an overview of the specifications for this IMT-2000 Family Member based on GSM evolved UMTS core network. Details for these specifications may be found in clause 10.

The following text describes the numbering scheme for the specifications and reports for the 3GPP 3rd generation mobile system.

Specifications for Release 7 of the 3rd generation mobile system are identified by the "ab.cde" numbering scheme.

The following series titles and descriptions are used for guidance only and may be further developed with experience.

The specification series are:

21-series   Requirements specifications

22-series   Service aspects

23-series   Technical realization

24-series   Signalling protocols (UE – CN network)

25-series   UTRA aspects (Note 1)

26-series   Codecs (speech, video, etc.)

27-series   Data

28-series   Signalling protocols (RSS – CN)

29-series   Signalling protocols

30-series   Programme management (Note 2)

31-series   User identity module (UIM)

32-series   Operation and maintenance

33-series   Security aspects

34-series   Test specifications (Note 2)

35-series   Algorithm specifications

48-series   GERAN aspects (Note 1)

NOTE 1 – Technical Specifications in this series are not included in the scope for this Recommendation. They are described in [ITU-R M.1457-7].

NOTE 2 – Technical Specifications in these series are not included in the scope for this Recommendation.

10   Technical specifications

The working procedures within the 3GPP allow a continuous improvement of their specifications by means of a change request procedure. The Change Requests are reviewed by each 3GPP working group and provided for approval to the quarterly 3GPP TSG plenary meetings. Therefore, the SDO standards/specifications can be updated after each 3GPP TSG plenary meetings. In this context, it is recommended to the reader to retrieve the latest version of the SDO Standards/Specifications from the location indicated within the template.

NOTE – The format of the "issued date" column in clause 10 is **yyyy-mm-dd** (for year-month-day) or Month-yyyy, respectively, in case the day of month has not been specified.

10.1   21-series, Requirements specifications

10.1.1   TS 21.101 technical specifications and technical reports for a UTRAN-based 3GPP system (Release 7)

The document identifies the 3rd generation mobile system specifications for Release 7. The specifications and reports of 3G Release 7 have a major version number 7 (e.g., 7.x.y).

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-21.101V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/21/A21101-700.pdf
CCSA	CCSA-TSD-121 101	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 121 101	7.0.0	Published	2007-10-16	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0021101v700
ATIS	ATIS.3GPP.21.101 V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-21.101(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-21.101(R7-7.0.0).zip
TTC	TS-3GA-21.101(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts21101rel7v700.pdf

10.1.2 TS 21.111 USIM and IC card requirements

This document defines the requirements of the USIM (universal subscriber identity module) and the IC card for 3G (UICC). These are derived from the service and security requirements defined in 3G TS 22.100 and 3G TS 22.101. The USIM is a 3G application on an IC card. It inter-operates with a 3G terminal and provides access to 3G services. This document is intended to serve as a basis for the detailed specification of the USIM and the UICC, and the interface to the 3G terminal.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-21.111V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/21/A21111-700.pdf
CCSA	CCSA-TSD-121 111	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 121 111	7.0.0	Published	2007-04-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0621111v700
ATIS	ATIS.3GPP.21.111V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-21.111(R7-7.0.0)	7.0.0	Approved	2007-12-24	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-21.111(R7-7.0.0).zip

10.2 22-series, Service aspects

10.2.1 TS 22.001 Principles of circuit telecommunication services supported by a public land mobile network (PLMN)

The document covers the definition of the circuit telecommunication services supported by a PLMN. The purpose of the document is to provide a method for the characterization and the description of these telecommunication services.

TS 22.101 describes overall service principles of a PLMN.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-22.001V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/22/A22001-700.pdf
CCSA	CCSA-TSD-122 001	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 001	7.0.0	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122001v700
ATIS	ATIS.3GPP.22.001V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.001(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.001(R7-7.0.0).zip

10.2.2 TS 22.002 Circuit bearer services (BS) supported by a public land mobile network (PLMN)

The document defines a set of circuit bearer services to be provided to PLMN subscribers by a PLMN itself and in connection with other networks. This Technical Specification should also be used as a reference for defining the corresponding required mobile network capabilities.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-22.002V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/22/A22002-700.pdf
CCSA	CCSA-TSD-122 002	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 002	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122002v700
ATIS	ATIS.3GPP.22.002 V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.002(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.002(R7-7.0.0).zip

10.2.3 TS 22.003 Circuit teleservices supported by a public land mobile network (PLMN)

This Technical Specification (TS) describes and defines a recommended set of circuit teleservices to be supported by a PLMN in connection with other networks as a basis for defining the network capabilities required.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-22.003V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/22/A22003-700.pdf
CCSA	CCSA-TSD-122 003	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 003	7.0.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122003v700
ATIS	ATIS.3GPP.22.003V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.003(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.003(R7-7.0.0).zip

10.2.4 TS 22.004 General on supplementary services

The purpose of the document is to define a recommended set of supplementary services to the teleservices and bearer services, which will be supported by a PLMN in connection with other networks as a basis for the definition of the network capabilities, required.

Supplementary services not covered in TS 22.004 cannot be introduced unilaterally in any PLMN if they require modification of the signalling specifications.

Technical realization of supplementary services is described in TS 23.011 and 24.010.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-122 004	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 004	7.0.0	Published	2007-04-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122004v700
ATIS	ATIS.3GPP.22.004V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.004(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.004(R7-7.0.0).zip
TTC	TS-3GA-22.004(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22004rel7v700.pdf

10.2.5 TS 22.011 Service accessibility

The purpose of this Technical Specification is to describe the service access procedures as presented to the user.

Definitions and procedures are provided in this Technical Specification for international roaming, national roaming and regionally provided service. These are mandatory in relation to the technical realization of the mobile station (UE).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-122 011	7.7.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 011	7.7.0	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122011v770
ATIS	ATIS.3GPP.22.011V770-2007	7.7.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.011(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.011(R7-7.2.0).zip
TTC	TS-3GA-22.011(Rel7)v7.7.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22011rel7v770.pdf

10.2.6 TS 22.016 International mobile station equipment identities (IMEI)

The document defines the principal purpose and use of international mobile station equipment identities (IMEI).

TS 23.003 describes the technical manner of numbering, addressing and identification.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-22.016V7.0.1	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/22/A22016-701.pdf
CCSA	CCSA-TSD-122 016	7.0.1	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 016	7.0.1	Published	2007-06-21	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122016v701
ATIS	ATIS.3GPP.22.016V701-2007	7.0.1	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.016(R7-7.0.1)	7.0.1	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.016(R7-7.0.1).zip

10.2.7 TS 22.022 Personalization of mobile equipment (ME); Mobile functionality specification

The document provides functional specifications of five features to personalize mobile equipment (ME) for GSM and 3G systems. These features are called:

– Network personalization;

– Network subset personalization;

– Service provider (SP) personalization;

– Corporate personalization;

– SIM/USIM personalization (SIM for GSM systems or USIM for 3G systems).

The document specifies requirements for MEs that provide these personalization features.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-22.022V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/22/A22022-700.pdf
CCSA	CCSA-TSD-122 022	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 022	7.0.0	Published	2007-06-22	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0322022v700
ATIS	ATIS.3GPP.22.022V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.022(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.022(R7-7.0.0).zip

10.2.8 TS 22.024 Description of charge advice information (CAI)

The charging supplementary service is described in TS 22.086. These services are designed to supply to a mobile user sufficient information to allow a real-time estimate to be made of the bill that will eventually be levied in the home PLMN on the mobile station (MS) subscriber.

In the case of certain MS uses, for example a mobile payphone, this estimate could be subject to further processing (e.g., to present the charges in currency, rather than units, this may include an additional mark up). This additional processing is not described in this document in order to avoid constraining the evolution of the MS product in this area.

This document gives an overall view of how this supplementary service shall operate both in the PLMN and within the MS. Text given in this document is required to define functionality and is not intended to constrain implementation.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-122 024	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 024	7.0.0	Published	2007-07-05	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122024v700
ATIS	ATIS.3GPP.22.024V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.024(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.024(R7-7.0.0).zip
TTC	TS-3GA-22.024(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22024rel7v700.pdf

10.2.9 TS 22.030 Man-machine interface (MMI) of the user equipment (UE)

The document defines the requirements for and gives guidelines on the MMI on the user equipment (UE). This includes the requirements of the user procedures for call control and supplementary service control, the requirements on the physical input media and the output, such as indications and displayed information.

This document includes requirements only to UE connected to CS Domain. See TS 22.101 for overall service principles and TS 22.001 for circuit telecommunication services.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-22.030V7.0.1	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/22/A22030-701.pdf
CCSA	CCSA-TSD-122 030	7.0.1	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 030	7.0.1	Published	2006-01-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122030v701
ATIS	ATIS.3GPP.22.030V701-2007	7.0.1	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.030(R7-7.0.1)	7.0.1	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.030(R7-7.0.1).zip

10.2.10 TS 22.031 Fraud information gathering system (FIGS); Service description; Stage 1

This Technical Specification specifies the stage 1 description of the fraud information gathering system (FIGS) feature which provides the means for the HPLMN to monitor the activities of its subscribers in a VPLMN.

The purpose of this network feature is to enable the HPLMN to monitor the activities of its subscribers while they are roaming. The VPLMN collects information about a defined set of activities on monitored subscribers and sends this information back to the HPLMN. This enables the HPLMN to clear certain types of calls and so stop fraudulent use of the GSM system.

This specification enables service providers/network operators to use FIGS, and service limitation controls such as operator determined barring (ODB) and immediate service termination (IST), to limit their financial exposure to subscribers producing large unpaid bills.

HPLMNs may also choose to monitor the activities of its subscribers within the HPLMN.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-22.031V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/22/A22031-700.pdf
CCSA	CCSA-TSD-122 031	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 031	7.0.0	Published	2007-06-25	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0322031v700
ATIS	ATIS.3GPP.22.031V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.031(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.031(R7-7.0.0).zip

10.2.11 TS 22.032 Immediate service termination (IST); Service description; Stage 1

The document specifies the Stage 1 description of the immediate service termination (IST) service which provides the means for the HPLMN to terminate all the activities of an HPLMN subscriber in a VPLMN.

The purpose of this network feature is to enable the HPLMN to control the activities of its subscribers, particularly while they are roaming. If the HPLMN decides (based upon information received via fraud information gathering system (FIGS) or other systems) that a roaming subscriber is behaving in a fraudulent or suspicious manner, the HPLMN can terminate all activities of the subscriber, including calls (including transferred and diverted calls) that are in progress.

This procedure can also be used to terminate all the activities of a subscriber when the subscription has ended.

The primary aim is to enable service providers/network operators to use IST to reduce the amount of money that they lose because of roaming fraud.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-22.032V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/22/A22032-700.pdf
CCSA	CCSA-TSD-122 032	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 032	7.0.0	Published	2007-06-22	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0322032v700
ATIS	ATIS.3GPP.22.032V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.032(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.032(R7-7.0.0).zip

10.2.12 TS 22.034 High speed circuit switched data (HSCSD); Stage 1

The document specifies the Stage 1 description of high speed circuit switched data (HSCSD). HSCSD is a feature that introduces general bearer services and a multislot mechanism is used for user rates that can be achieved with one or more TCH/F. Multislot also defines a flexible use of air interface resources that makes efficient and flexible use of higher user rates feasible.

The multislot mechanism is only applicable to GERAN.

At UTRAN radio access parameters used for GBS user data are specified at TS 23.107.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-22.034V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/22/A22034-700.pdf
CCSA	CCSA-TSD-122 034	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 034	7.0.0	Published	2007-07-05	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122034v700
ATIS	ATIS.3GPP.22.034V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.034(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.034(R7-7.0.0).zip

10.2.13 TS 22.038 USIM application toolkit (USAT); Service description; Stage 1

This technical specification defines the Stage 1 description of the USIM application toolkit (USAT). Stage 1 is an overall service description, primarily from the subscriber's and serving environment's points of view, and does not deal with the details of the human interface itself.

This Technical Specification includes information applicable to network operators, serving environments and terminal, switch and database manufacturers.

This technical specification contains the core requirements for a USIM application toolkit (USAT) that are sufficient to provide a complete service.

It is highly desirable, however, that technical solutions for a USIM application toolkit (USAT) are sufficiently flexible to allow for possible enhancements. Additional functionalities not documented in this technical specification may implement requirements that are considered outside the scope of this technical specification. This additional functionality may be on a network-wide basis, nationwide basis or particular to a group of users. Such additional functionality shall not compromise conformance to the core requirements of the service.

As indicated in Figure 10.2.13-1, the scope of this technical specification encompasses the USAT functionality in the UE (comprising USIM and ME) and the interaction with the PLMN environment. The USAT server is not necessarily a separate entity as shown in the figure; nodes providing USAT services may also exist within the PLMN. The functionalities of the USAT servers (such as charging aspects, security level classification, etc.) are not covered by this specification.
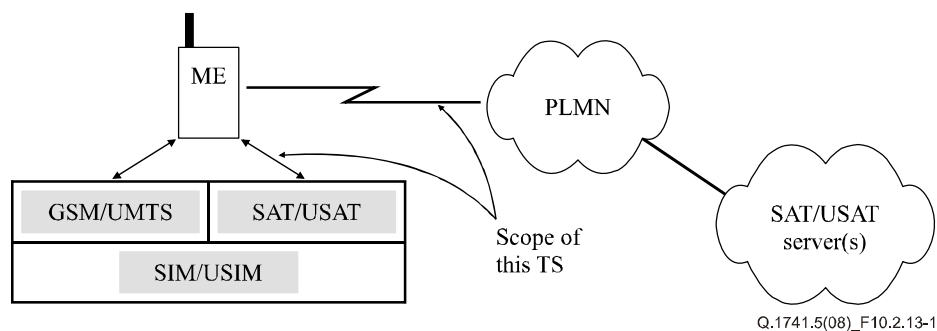
Figure 10.2.13-1 – Scope of Technical Specification 22.038

The requirements are considered to be applicable to both GSM and UMTS systems.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-22.038V7.5.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/22/A22038-750.pdf
CCSA	CCSA-TSD-122 038	7.5.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 038	7.5.0	Published	2006-01-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122038v750
ATIS	ATIS.3GPP.22.038V750-2007	7.5.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.038(R7-7.5.0)	7.5.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.038(R7-7.5.0).zip

10.2.14 TS 22.041 Operator determined barring (ODB)

The document describes the network feature operator determined barring (ODB).

This allows the network operator or service provider to regulate, by means of an exceptional procedure, access by the subscribers to services (both circuit and packet oriented), by the barring of certain categories of outgoing or incoming calls/packet oriented services or of roaming. ODB shall take effect immediately and shall terminate ongoing calls and bar future calls/packet oriented services.

The purpose of this network feature is to be able to limit the service provider's financial exposure to new subscribers, or to those who have not promptly paid their bills. It may only be applied to the service provider's own subscribers.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-122 041	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 041	7.0.0	Published	2007-04-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122041v700
ATIS	ATIS.3GPP.22.041V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.041(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.041(R7-7.0.0).zip
TTC	TS-3GA-22.041(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22041rel7v700.pdf

10.2.15 TS 22.042 Network identity and time zone (NITZ); Service description; Stage 1

The document describes the feature network identity and time zone (NITZ).

This feature provides the means for serving PLMNs to transfer current identity, time, daylight saving time and the local time zone to mobile stations (MS)s, and for the MSs to store and use this information. This enhances roaming by permitting accurate indication of PLMN identities that are either newer than the mobile equipment (ME) or have changed their name since the ME was sold. Additionally, time, daylight saving time, and time zone information can be utilized by MEs as desired.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-122 042	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 042	7.0.0	Published	2007-07-05	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122042v700
ATIS	ATIS.3GPP.22.042V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.042(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.042(R7-7.0.0).zip
TTC	TS-3GA-22.042(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22042rel7v700.pdf

10.2.16 TS 22.053 Tandem free operation (TFO); Service description; Stage 1

The document specifies the stage 1 description for the tandem free operation (TFO) feature that provides the capability to avoid tandeming speech codecs in mobile-to-mobile speech calls. The primary aim is to realize improvements in speech quality. The TFO mode of operation could also be used to reduce inter-mobile service switching centre (MSC) transmission bandwidth requirements.

In analogy with [ITU-T I.130], Stage 1 is an overall service description, from the service subscriber's and user's standpoints, that views the network as a single entity which provides services to the user.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-22.053V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/22/A22053-700.pdf
CCSA	CCSA-TSD-122 053	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 053	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0422053v700
ATIS	ATIS.3GPP.22.053V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.053(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.053(R7-7.0.0).zip

10.2.17 TS 22.057 Mobile execution environment (MExE); Service description; Stage 1

MExE provides a standardized execution environment in an UE, and an ability to negotiate its supported capabilities with a MExE service provider, allowing applications to be developed independently of any UE platform. The UE (consisting of the ME and SIM/USIM) can then be targeted at a range of implementations for MExE from small devices with low bandwidth, limited displays, low processor speeds, limited memory, MMI, etc., to sophisticated devices with a complete MExE execution environment.

This Technical Specification defines the Stage 1 description of the mobile execution environment (MExE). Stage 1 is an overall service description, primarily from the subscriber's and service providers' points of view, and does not deal with the details of the human interface itself.

This Technical Specification includes information applicable to network operators, service providers and terminal, switch and database manufacturers.

This Technical Specification contains the core requirements for a mobile execution environment (MExE) that is sufficient to provide a complete service.

It is highly desirable, however, that technical solutions for a mobile execution environment (MExE) be sufficiently flexible to allow for possible enhancements. Additional functionalities not documented in this Technical Specification may implement requirements that are considered outside the scope of this Technical Specification. This additional functionality may be on a network-wide basis, nationwide basis or particular to a group of users. Such additional functionality shall not compromise conformance to the core requirements of the service.

As indicated in Figure 10.2.17-1, the scope of this Technical Specification encompasses the MExE functionality in the UE, interaction with the MExE service environment. The MExE service environment is not necessarily restricted to the PLMN, and nodes providing MExE services (i.e., MExE servers) may also exist outside the PLMN. Aspects of the support provided by MExE servers within the MExE service environment (such as charging aspects, security level classification, etc.) are covered by this specification, but not the MExE servers themselves.
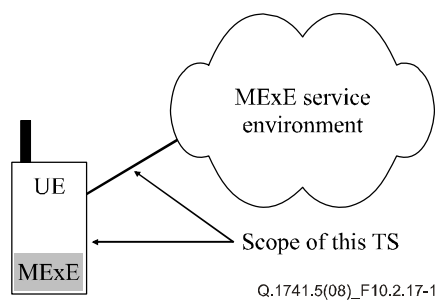
Figure 10.2.17-1 – Scope of Technical Specification 22.057

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ARIB	ARIB STD-T63-22.057V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/22/A22057-700.pdf
CCSA	CCSA-TSD-122 057	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 057	7.0.0	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122057v700
ATIS	ATIS.3GPP.22.057V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.057(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.057(R7-7.0.0).zip

10.2.18 TS 22.060 General packet radio service (GPRS); Service description; Stage 1

This Technical Specification defines the Stage 1 description of the general packet radio service (GPRS). Stage 1 is an overall service description, primarily from the service subscriber's and user's points of view, but does not deal with the details of the human interface itself. This Technical Specification includes information applicable to network operators, service providers and terminal, switch and database manufacturers.

This Technical Specification contains the core requirements for the packet-switched 3G networks that are sufficient to provide a complete service. It defines a set of bearer services that provide packet mode transmission within the PLMN and interwork with external networks.

The term "GPRS" shall be used in this document to refer the GPRS service offered via GERAN and UTRAN and the PS Domain of the 3G PLMN.

The GPRS shall not prevent the user's operation of other 3GPP services.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-122 060	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 060	7.0.0	Published	2007-07-05	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122060v700
ATIS	ATIS.3GPP.22.060V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.060(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.060(R7-7.0.0).zip
TTC	TS-3GA-22.060(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22060rel7v700.pdf

10.2.19 TS 22.066 Support of mobile number portability (MNP); Service description; Stage 1

This Technical Specification defines the Stage 1 description of the support of mobile number portability between networks in the same country as well as North America cross-sector portability (i.e., number portability between fixed and 3GPP system). Stage 1 is an overall service description, primarily from the service subscriber's and user's points of view, but does not deal with the details of the human interface itself.

Mobile number portability (MNP) is applicable only to those telecommunication services identified by an MSISDN.

This specification includes information applicable to network operators, service providers and terminal, switch and database manufacturers.

This specification contains the core requirements for the support of mobile number portability between network operators in the same country as well as North America cross-sector portability that are sufficient to provide a complete service.

Other cross-sector portability options (e.g., number portability between fixed and mobile networks outside the North American region) are outside the scope of this Technical Specification. It is highly desirable, however, that technical solutions for MNP should be sufficiently flexible to allow for possible enhancements, e.g., cross-sector number portability, and MNP between analogue and digital mobile networks. Additional functionalities not documented in this specification may implement requirements that are considered outside the scope of this specification. This additional functionality may be on a network-wide basis, nationwide basis or particular to a group of users. Such additional functionality shall not compromise conformance to the core requirements of the service.

Porting between service providers (i.e., service provider portability) that does not involve a change of network operator is outside the scope of this specification.

The relationship between service providers and network operators is outside the scope of this specification.

The relationship between a service provider and subscriber is outside the scope of this specification. The interface between the user equipment (UE) and any external applications are outside the scope of this specification. Charging principles are outside the scope of this specification, except where explicitly stated in the text.

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CCSA	CCSA-TSD-122 066	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 066	7.0.0	Published	2007-07-05	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122066v700
ATIS	ATIS.3GPP.22.066V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.066(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.066(R7-7.0.0).zip
TTC	TS-3GA-22.066(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22066rel7v700.pdf

10.2.20 TS 22.067 Enhanced multi-level precedence and pre-emption service (eMLPP); Stage 1

The document specifies the Stage 1 description of the enhanced multi-level precedence and pre-emption service (eMLPP). This service has two parts: precedence and pre-emption. Precedence involves assigning a priority level to a call in combination with fast call set-up. Pre-emption involves the seizing of resources, which are in use by a call of a lower precedence, by a higher-level precedence call in the absence of idle resources. Pre-emption can also involve the disconnection of an ongoing call of lower precedence to accept an incoming call of higher precedence.

The eMLPP service is provided as a network operator's option to a domain of a network. The domain can be the whole network or a subset of the network. The eMLPP service applies to all network resources in the domain that is in common use. The eMLPP service is applicable to all mobile stations in the domain with all or some mobile stations having a respective subscription assigning precedence according to the eMLPP service.

eMLPP is a supplementary service and shall be provided to a subscriber for all basic services subscribed to and for which eMLPP applies.

The service is described from the service subscriber's and user's point of view, in particular:

– the procedure for normal operation with successful outcome;

– the action to be taken in exceptional circumstances;

– the interaction with other services and features.

The document does not deal with the man-machine interface (MMI) requirements, but makes reference to the appropriate specifications.

The document is applicable to teleservices 1x and 6x and to all bearer services used in a mobile network if eMLPP is provided.

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ARIB	ARIB STD-T63-22.067V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/22/A22067-700.pdf
CCSA	CCSA-TSD-122 067	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 067	7.0.0	Published	2007-04-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122067v700
ATIS	ATIS.3GPP.22.067V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.067(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.067(R7-7.0.0).zip

10.2.21 TS 22.071 Location services (LCS); Service description; Stage 1

This document provides the Stage 1 description of location services (LCS). A Stage 1 description provides an overall service description, primarily from the service subscriber's and user's points of view, but not dealing with the details of the man-machine interface (MMI). This Technical Specification includes information applicable to network operators, service providers and terminal, base station system, switch, and database manufacturers.

NOTE – Location services may be considered as a network-provided enabling technology consisting of standardized service capabilities that enable the provision of location-based applications. These applications may be service provider specific. The description of the numerous and varied possible location applications which are enabled by this technology are outside the scope of this specification. However, clarifying examples of how the functionality being specified may be used to provide specific location services is included in various clauses of the specification.

This document provides core requirements to an extent sufficient to derive a complete definition of location services at the service level. However, this document also provides additional requirements that may suggest in a non-normative manner certain ways the system may be implemented to support location services.

LCS can be offered without subscription to basic telecommunication services. LCS is available to the following categories of LCS clients:

– Value-added services LCS clients – Use LCS to support various value-added services. These clients can include UE subscribers as well as non-subscribers to other services.

– PLMN operator LCS clients – Use LCS to enhance or support certain O&M related tasks, supplementary services, IN-related services and bearer services and teleservices.

– Emergency services LCS clients – Use LCS to enhance support for emergency calls from subscribers.

– Lawful intercept LCS clients – Use LCS to support various legally required or sanctioned services.

LCS is applicable to any target UE whether or not the UE supports LCS, but with restrictions on the choice of the positioning method or notification of a location request to the UE user when the LCS or the individual positioning methods, respectively, are not supported by the UE.

LCS is being developed in phases with enhancements added in yearly releases.

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ARIB	ARIB STD-T63-22.071V7.4.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/22/A22071-740.pdf
CCSA	CCSA-TSD-122 071	7.4.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 071	7.4.0	Published	2006-01-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122071v740
ATIS	ATIS.3GPP.22.071V740-2007	7.4.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.071(R7-7.3.0)	7.3.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.071(R7-7.3.0).zip

10.2.22 TS 22.072 Call deflection service description; Stage 1

Call deflection (CD) enables the served mobile subscriber to respond to an incoming call offered by the network by requesting redirection of this call to another number specified in the response. The CD supplementary service can only be invoked before the connection is established by the served mobile subscriber, i.e., in response to the offered call, or during the period that the served subscriber is being informed of the call. The served subscriber's ability to originate calls is unaffected by the CD supplementary service.

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CCSA	CCSA-TSD-122 072	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 072	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122072v700
ATIS	ATIS.3GPP.22.072V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.072(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.072(R7-7.0.0).zip
TTC	TS-3GA-22.072(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22072rel7v700.pdf

10.2.23 TS 22.076 Noise suppression for the AMR codec; Service description; Stage 1

This document specifies the Stage 1 description for the noise suppression feature for the AMR codec that enhances the input speech signal corrupted by acoustic noise. In analogy with [ITU-T I.130], Stage 1 is an overall service description, from the service subscriber's and user's standpoints, that views the network as a single entity which provides services to the user.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-22.076V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/22/A22076-700.pdf
CCSA	CCSA-TSD-122 076	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 076	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0422076v700
ATIS	ATIS.3GPP.22.076V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.076(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.076(R7-7.0.0).zip

10.2.24 TS 22.078 Customized applications for mobile network enhanced logic (CAMEL); Service description; Stage 1

This standard specifies the Stage 1 description for the CAMEL feature (customized applications for mobile network enhanced logic) that provides the mechanisms to support services consistently independently of the serving network. The CAMEL features shall facilitate service control of operator specific services external from the serving PLMN. The CAMEL feature is a network feature and not a supplementary service. It is a tool to help the network operator to provide the subscribers with the operator specific services even when roaming outside the HPLMN.

If an IPLMN or VPLMN supports CAMEL Phase 4, it shall also provide the functionality of all previous CAMEL phases.

Phase 4 network signalling shall support interworking with CAMEL Phases 3 and 2.

The CAMEL feature is applicable:

– to mobile originated and mobile terminated call related activities;

– to supplementary service invocations;

– to SMS MO, to GPRS sessions and PDP contexts, to the control of HLR subscriber data, to the control of network signalling load.

The mechanism described addresses especially the need for information exchange among the VPLMN, HPLMN and the CAMEL service environment (CSE) for support of such operator specific services. Any user procedures for operator specific services are outside the scope of this standard.

This specification describes the interactions between the functions of the VPLMN, HPLMN, IPLMN and the CSE.

The second phase of CAMEL enhances the capabilities of phase 1 where the following capabilities have been added:

– Additional event detection points.

– Interaction between a user and a service using announcements, voice prompting and information collection via in-band interaction or USSD interaction.

– Control of call duration and transfer of advice of charge information to the mobile station.

– The CSE can be informed about the invocation of the supplementary services ECT, CD and MPTY.

–   For easier post-processing, charging information from a serving node can be integrated in normal call records.

The third phase of CAMEL enhances the capabilities of phase 2. The following capabilities are added:

–   Support of facilities to avoid overload.

–   Capabilities to support dialled services.

–   Capabilities to handle mobility events, such as (Not-)reachability and roaming.

–   Control of GPRS sessions and PDP contexts.

–   Control of mobile originating SMS through both circuit-switched and packet-switched serving network entities.

–   Interworking with SoLSA (support of localized service area). Support for this interworking is optional.

–   The CSE can be informed about the invocation of the supplementary service CCBS.

Detailed information is given in the respective clauses.

The fourth phase of CAMEL enhances the capabilities of phase 3. The following capabilities are added:

–   CAMEL support for optimal routeing of circuit-switched mobile-to-mobile calls.

–   The capability for the CSE to create additional parties in an existing call.

–   The capability for the CSE to create a new call unrelated to any other existing call.

–   Capabilities for the enhanced handling of call party connections.

–   The capability for the CSE to control sessions in the IP multimedia subsystem.

–   Enhanced CSE capability for dialled services.

–   The capability to report basic service changes during ongoing call.

With CAMEL Phase 4, it is possible that only a limited subset of the new functionalities is supported, in addition to the complete support of CAMEL Phase 3.

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CCSA	CCSA-TSD-122 078	7.6.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
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ATIS	ATIS.3GPP.22.078V 760-2007	7.6.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.078(R7-7.5.0)	7.5.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.078(R7-7.5.0).zip
TTC	TS-3GA-22.078(Rel7)v7.6.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22078rel7v760.pdf

10.2.25 TS 22.079 Support of optimal routing (SOR); Stage 1

This Stage 1 description of the first phase of support of optimal routing (SOR):

–   compiles the basic service requirements for SOR;

– describes the interactions for supplementary services (SS) in order to cater for SOR;

– refers to modifications to network features required by SOR.

This specification does not address the following:

– There is no need for optimization of the routing of calls originally directed to a fixed network subscriber, because the physical address of a fixed network terminating line cannot differ from its logical address.

– SOR in non-PLMNs is not a subject of this Technical Specification, but might be possible by bilateral arrangement between PLMN operators and those non-PLMN operators.

The purpose of SOR is to reduce the number of unnecessary inter-PLMN call legs.

The first phase of SOR applies to:

– Optimal routing for the benefit of the B party, i.e., mobile terminated calls with late call forwarding to the home or visited country (scenarios 1 and 2),

and optionally:

– Optimal routing for the benefit of the A party, e.g., mobile-to-mobile calls where both mobile subscribers are in the same country (scenarios 3 to 10).

The complete set of scenarios included in the phase 1 of optimal routing is presented in the paragraph for normal procedures. All other scenarios are excluded from Phase 1 of optimal routing.

Note that optimal routing is applicable to national roaming situations, that is to calls directed to a mobile subscriber roaming in his or her home country, but registered in a PLMN different from his or her HPLMN.

All further call scenarios, including multiple call forwarding, are left to subsequent phases of SOR. Subsequent phases of SOR shall be backwards compatible with this first phase.

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CCSA	CCSA-TSD-122 079	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 079	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122079v700
ATIS	ATIS.3GPP.22.079V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.079(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.079(R7-7.0.0).zip
TTC	TS-3GA-22.079(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22079rel7v700.pdf

10.2.26 TS 22.081 Line identification supplementary services; Stage 1

The document describes the supplementary services belonging to the group line identification supplementary services.

The general aspects, including definitions and recommended provision, of the description of the supplementary services are given in TS 22.004.

The group of line identification supplementary services is divided into the following four supplementary services:

CLIP   Calling line identification presentation;

CLIR   Calling line identification restriction;

COLP   Connected line identification presentation;

COLR   Connected line identification restriction.

Definition of line identity: The line identity is made up of a number of information units:

–   The subscriber's national ISDN/MSISDN number (MSISDN number is the number stored in the VLR).

–   The country code.

–   Optionally, subaddress information. The PLMN cannot be responsible for the content of this subaddress. (For definition of the subaddress, see [ITU-T E.164]).

–   In a full ISDN environment, the line identity shall include all the address information necessary to unambiguously identify a subscriber.

–   The calling line identity is the line identity of the calling party.

–   The connected line identity is the line identity of the connected party.

If for the line identity of the calling party or the connected party, additional line identification is received (additional calling party/connected party number) in a PLMN this additional line identification shall be used for the presentation purpose of the line identification presentation services.

Definition of presentation and screening indicators: In addition to or instead of the line identity, the network may give a presentation indicator (PI) and/or a screening indicator (SI) to the served subscriber. The following information may be given:

–   Presentation indicator showing:

    a)   presentation allowed; or

    b)   presentation restricted; or

    c)   number not available due to interworking.

If presentation indicator is set to "Presentation Restricted", then the MS can get additional information on the cause of no CLI, if provided by the network.

The cause of no CLI value may be one of the following:

–   unavailable;

–   reject by user;

–   interaction with other services;

–   coin line/pay phone;

–   Screening indicator showing:

    a)   user provided, verified and passed; or

    b)   user provided, not screened; or

    c)   network provided.

If the line identity is that of a PLMN subscriber, then:

–   the national number and the country code shall always be provided by the network;

–   the subaddress shall only be included if it is provided by the user (or user equipment);

–   the screening indicator shall indicate "network provided".

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CCSA	CCSA-TSD-122 081	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 081	7.0.0	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122081v700
ATIS	ATIS.3GPP.22.081V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.081(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.081(R7-7.0.0).zip
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10.2.27 TS 22.082 Call forwarding (CF) supplementary services; Stage 1

This specification describes the supplementary services belonging to the group CALL OFFERING SUPPLEMENTARY SERVICES.

The general aspects, including definitions and recommended provision, of the description of the supplementary services are given in Specification TS 22.004.

The group of supplementary services CALL OFFERING SUPPLEMENTARY SERVICES is divided into four different supplementary services:

– call forwarding unconditional;

– call forwarding on mobile subscriber busy;

– call forwarding on no reply;

– call forwarding on mobile subscriber not reachable.

Indication of active call forwarding supplementary service

An indication that a call forwarding service is currently active and operative on a number will be given to the forwarding party each time an outgoing call is made. There will be one indication for unconditional call forwarding and another common indication for the conditional call forwarding services.

Note on the use of the forwarded-to number at registration

If the forwarded-to number is a number in the HPLMN country, it may be entered by the served mobile subscriber in three different formats, independent of his or her actual location, according to the schemes:

1) National (significant) number.

2) National (trunk) prefix plus national (significant) number.

3) International prefix*, country code, national (significant) number.

Scheme 3) Storage of numbers in this format is mandatory for all PLMN operators.

If the forwarded-to number is a number in a country other than the HPLMN country, it shall be entered by the served mobile subscriber, independent of his or her actual location, according to the following scheme:

– International prefix (Note), country code, national (significant) number.

NOTE – The MMI for entering of international prefix is defined in TS 22.030.

The maximum forwarded-to number length is 28 digits.

Principles for interaction with the barring of outgoing calls supplementary services

Numbers allowed to call according to the barring of outgoing call service condition are allowed as forwarded-to numbers for the served mobile subscriber.

Numbers not allowed to call according to the barring of outgoing call service condition are not allowed as forwarded-to numbers for the served mobile subscriber.

For unconditional call forwarding, the forwarded leg is treated as an outgoing call from the HPLMN country.

For the conditional call forwarding services, the forwarded leg is treated as an outgoing call from the LPLMN (HPLMN or VPLMN) country.

Principles for interaction with the barring of incoming calls supplementary services

When barring of all incoming calls is active for the served mobile subscriber – no call forwarding services are allowed.

When barring of all incoming calls when roaming outside the HPLMN country is active and operative – i.e., the served mobile subscriber is roaming outside the HPLMN country, the conditional call forwarding services are not allowed.

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CCSA	CCSA-TSD-122 082	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 082	7.0.0	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122082v700
ATIS	ATIS.3GPP.22.082V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.082(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.082(R7-7.0.0).zip
TTC	TS-3GA-22.082(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22082rel7v700.pdf

10.2.28 TS 22.083 Call waiting (CW) and call hold (HOLD) supplementary services; Stage 1

The document describes the supplementary services belonging to the group call completion supplementary services.

The general aspects, including definitions and recommended provision, of the description of supplementary services are given in TS 22.004.

The group of call completion supplementary services is divided into the following two supplementary services:

–   Call waiting;

–   Call hold.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-122 083	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 083	7.0.0	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122083v700
ATIS	ATIS.3GPP.22.083V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.083(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.083(R7-7.0.0).zip
TTC	TS-3GA-22.083(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22083rel7v700.pdf

10.2.29 TS 22.084 Multi-party (MPTY) supplementary service; Stage 1

The document describes the supplementary services belonging to the group multi-party supplementary services.

The general aspects, including definitions and recommended provision, of the description of the supplementary services are given in TS 22.004.

The group of multi-party supplementary services consists of one supplementary service:

– Multi-party service.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-122 084	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 084	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122084v700
ATIS	ATIS.3GPP.22.084V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.084(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.084(R7-7.0.0).zip
TTC	TS-3GA-22.084(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22084rel7v700.pdf

10.2.30 TS 22.085 Closed user group (CUG) supplementary services; Stage 1

The document describes the supplementary services belonging to the group community of interest supplementary services.

The general aspects, including definitions and recommended provision, of the description of the supplementary services are given in TS 22.004.

The group of community of interest supplementary services includes one supplementary service:

– Closed user group.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-122 085	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 085	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122085v700
ATIS	ATIS.3GPP.22.085V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.085(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.085(R7-7.0.0).zip
TTC	TS-3GA-22.085(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22085rel7v700.pdf

10.2.31 TS 22.086 Advice of charge (AoC) supplementary services; Stage 1

The document describes the supplementary services belonging to the group charging supplementary services.

The general aspects, including definitions and recommended provision, of the description of the supplementary services are given in TS 22.004.

Charging services are the supplementary services associated with charging aspects. The group of supplementary services charging supplementary services comprises two services:

– Advice of charge (Information);
– Advice of charge (Charging).

Advice of charge (AoC) supplementary services will use the charge advice information described in TS 22.024.

In principle, the same type of mobile station (MS) can be used for both services of advice of charge (AoC), except where the application demands special features – e.g., the payment mechanism in a payphone.

Only one of these services may be subscribed to at any one time.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-122 086	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 086	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122086v700
ATIS	ATIS.3GPP.22.086V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.086(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.086(R7-7.0.0).zip
TTC	TS-3GA-22.086(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22086rel7v700.pdf

10.2.32 TS 22.087 User-to-user signalling (UUS); Stage 1

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

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CCSA	CCSA-TSD-122 087	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 087	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122087v700
ATIS	ATIS.3GPP.22.087V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.087(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.087(R7-7.0.0).zip
TTC	TS-3GA-22.087(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22087rel7v700.pdf

10.2.33 TS 22.088 Call barring (CB) supplementary services; Stage 1

The document describes the supplementary services belonging to the group call restriction supplementary services.

The general aspects – including definitions and recommended provision – of the description of the supplementary services are given in TS 22.004.

The call restriction supplementary services allow the possibility for a mobile subscriber to have barring of certain categories of outgoing or incoming calls at the mobile subscribers access.

The group of call restriction services includes two supplementary services:

– barring of outgoing calls;
– barring of incoming calls.

By use of subscription options, the mobile subscriber can at provision time select a set of one or more barring programs to determine the categories of calls to be barred. The following categories are defined:

– all outgoing calls;
– outgoing international calls;
– outgoing international calls except those directed to the home PLMN country;
– all incoming calls;
– incoming calls when roaming outside the home PLMN country.

NOTE 1 – Each category (barring program) is handled as a single supplementary service.

NOTE 2 – The call barring program "incoming calls when roaming outside the home PLMN country" is only relevant if, as a general rule, the called mobile subscriber pays the charges for the forwarded part of the call from his home PLMN country to any other country.

The barring services can be offered to a mobile subscriber with a password option allowing the activation and deactivation by the subscriber. One password per mobile subscriber is supported by the network for all barring services. For the definition of the password, the description of its use and its management, see TS 22.004.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-122 088	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 088	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122088v700
ATIS	ATIS.3GPP.22.088V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.088(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.088(R7-7.0.0).zip
TTC	TS-3GA-22.088(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22088rel7v700.pdf

10.2.34 TS 22.090 Unstructured supplementary service data (USSD); Stage 1

The document defines the Stage 1 description of unstructured supplementary service data (USSD) for use in one or a number of public land mobile networks (PLMNs).

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CCSA	CCSA-TSD-122 090	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 090	7.0.0	Published	2006-09-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122090v700
ATIS	ATIS.3GPP.22.090V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.090(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.090(R7-7.0.0).zip
TTC	TS-3GA-22.090(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22090rel7v700.pdf

10.2.35 TS 22.091 Explicit call transfer (ECT); Stage 1

The document specifies the Stage 1 description of explicit call transfer (ECT) from the service subscriber's and user's points of view, in particular:

– the procedures for normal operation with successful outcome;

– the action to be taken in exceptional circumstances;

– the interaction with other supplementary services.

The document does not deal with the man-machine interface (MMI) requirements, but makes reference to the appropriate Technical Specifications.

The charging principles applied to ECT are established in the document in terms of the charging information required to be collected. Any subsequent charging implications are outside of the scope of the document.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-122 091	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 091	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122091v700
ATIS	ATIS.3GPP.22.091V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.091(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.091(R7-7.0.0).zip
TTC	TS-3GA-22.091(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22091rel7v700.pdf

10.2.36 TS 22.093 Completion of calls to busy subscriber (CCBS); Service description; Stage 1

The document specifies the Stage 1 description of completion of calls to busy subscriber (CCBS) from the subscriber's and user's points of view; in particular:

– the procedures for normal operation with successful outcome;

– the action to be taken in exceptional circumstances;

– the interaction with other supplementary services;

The document does not deal with the man-machine interface (MMI) requirements, but makes reference to the appropriate specifications.

The charging principles applied to CCBS are outside of the scope of this specification.

Any interactions with other networks not dealt with in the document an outside the scope of the document.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-122 093	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 093	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122093v700
ATIS	ATIS.3GPP.22.093V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.093(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.093(R7-7.0.0).zip
TTC	TS-3GA-22.093(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22093rel7v700.pdf

10.2.37 TS 22.094 Follow me service description; Stage 1

The document specifies the Stage 1 description for the follow me feature.

The follow me feature enables a mobile subscriber A to manipulate the follow me data of a party B in such a way that – under certain conditions – subsequent calls directed to party B will be forwarded to subscriber A.

The feature is described from the service subscriber's and user's point of view, in particular:

– the procedure for normal operation with successful outcome;

– the action to be taken in exceptional circumstances;

– the interaction with other GSM services and features.

This Technical Specification does not deal with the man-machine interface (MMI) requirements, but makes reference to the appropriate specifications.

Any interaction with other services and/or networks not dealt with in this specification is outside the scope of this Technical Specification.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-122 094	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 094	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122094v700
ATIS	ATIS.3GPP.22.094V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.094(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.094(R7-7.0.0).zip
TTC	TS-3GA-22.094(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22094rel7v700.pdf

10.2.38 TS 22.096 Name identification supplementary service; Stage 1

The document describes the supplementary services belonging to the group name identification supplementary services.

The general aspects, including definitions and recommended provision, of the description of the supplementary services are given in TS 22.004.

The group of name identification supplementary services is divided into the following supplementary services:

– Calling name presentation (CNAP).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-122 096	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 096	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122096v700
ATIS	ATIS.3GPP.22.096V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.096(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.096(R7-7.0.0).zip
TTC	TS-3GA-22.096(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22096rel7v700.pdf

10.2.39 TS 22.097 Multiple subscriber profile (MSP) Phase 1; Service description; Stage 1

The document gives an overall view of how this service shall operate both in the PLMN and within the mobile station (MS). This Technical Specification defines functionality and is not intended to constrain implementation.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-122 097	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 097	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122097v700
ATIS	ATIS.3GPP.22.097V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.097(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.097(R7-7.0.0).zip
TTC	TS-3GA-22.097(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22097rel7v700.pdf

10.2.40 TS 22.101 Service aspects; Service principles

This Technical Specification (TS) describes the service principles for PLMNs. Principles and requirements for interworking with WLAN are covered in TS 22.234.

3G specifications define integrated personal communications services. The system will support different applications ranging from narrow-band to wideband communications capability with integrated personal and terminal mobility to meet the user and service requirements of the 21st century.

The specifications allow the realization of a new generation of mobile communications technology for a world in which personal communications services should allow person-to-person calling, independent of location, the terminal used, the means of transmission (wired or wireless) and the choice of technology. Personal communication services should be based on a combination of fixed and wireless/mobile services to form a seamless end-to-end service for the user.

The specifications should be in compliance with the following objectives:

a) to provide a single integrated system in which the user can access services in an easy and uniform way to use in all environments;

b) to allow differentiation between service offerings of various serving networks and home environments;

c) to provide a wide range of telecommunication services including those provided by fixed networks and requiring user bit rates of up to 2 Mbit/s as well as services special to mobile communications. These services should be supported in residential, public and office environments and in areas of diverse population densities. These services are provided with a quality comparable with that provided by fixed networks such as ISDN;

d) to provide services via handheld, portable, vehicular-mounted, movable and fixed terminals (including those which normally operate connected to fixed networks), in all environments (in different service environments – residential, private domestic and different radio environments) provided that the terminal has the necessary capabilities;

e) to provide support of roaming users by enabling users to access services provided by their home environment in the same way even when roaming;

f)   to provide audio, data, video and particularly multimedia services;

g)   to provide for the flexible introduction of telecommunication services;

h)   to provide within the residential environment the capability to enable a pedestrian user to access all services normally provided by fixed networks;

i)   to provide within the office environment the capability to enable a pedestrian user to access all services normally provided by PBXs and LANs;

j)   to provide a substitute for fixed networks in areas of diverse population densities, under conditions approved by the appropriate national or regional regulatory authority;

k)   to provide support for interfaces which allow the use of terminals normally connected to fixed networks.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-22.101V7.9.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/22/A22101-790.pdf
CCSA	CCSA-TSD-122 101	7.9.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 101	7.9.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122101v790
ATIS	ATIS.3GPP.22.101V790-2007	7.9.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.101(R7-7.3.0)	7.3.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.101(R7-7.3.0).zip

10.2.41 TS 22.105 Services and service capabilities

Existing systems have largely standardized the complete sets of bearer services, teleservices and supplementary services that they provide. 3G specifications specify service capabilities rather than services, allowing service differentiation and system continuity. This Technical Specification (TS) describes how and what kind of services the user has access to.

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ARIB	ARIB STD-T63-22.105V7.1.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/22/A22105-710.pdf
CCSA	CCSA-TSD-122 105	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 105	7.1.0	Published	2007-04-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122105v710
ATIS	ATIS.3GPP.22.105V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.105(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.105(R7-7.1.0).zip

10.2.42 TS 22.112 USAT interpreter; Stage 1

This document specifies a system to make mobile operator services, based on USIM application toolkit (USAT) functionality and USIM-based security functionality, available to an Internet environment. This is achieved by specifying the necessary components and protocols for a secure narrow-band channel between the Internet application and an USAT interpreter on the USIM. The actual application could be developed using the application language of choice. Two types of applications interfaces are used as examples, i.e., mark-up language based on XML and remote procedure call (RPC).

The interpreter and the secure narrow-band channel form a core platform to enable services like:

• advanced security functionality, e.g., digital signatures in m-commerce applications;

• value-added services based on position and roaming;

• controlled activation and management of other applications, e.g., multimedia and payment type of applications.

The secure narrow-band channel is achieved by specifying the following:

• specific application and content-related functionalities of the interface between the application system and the USAT gateway;

• specific functionalities and protocols of the interface between the USAT gateway and the USAT interpreter associated with a USIM, achieved by defining a low-level command set for interpretation by the USAT interpreter;

• defined level of functionality available to the application server for the implementation of USIM-based services such as PKI, location services, push and broadcast services, event-based services, etc.

This document does not specify any elements of the protocol stack between the application server and the USAT gateway, the mark-up language definition, and the transport protocols between the USAT gateway and the USAT interpreter.

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ARIB	ARIB STD-T63-22.112V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/22/A22112-700.pdf
CCSA	CCSA-TSD-122 112	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 112	7.0.0	Published	2007-06-22	http://webapp.etsi.org/workprogram/Report_WorkItem.asp?WKI_ID=26515
ATIS	ATIS.3GPP.22.112V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.112V700-2007	7.0.0	Approved	2007-12-24	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.112(R7-7.0.0).zip

10.2.43 TS 22.115 Service aspects; Charging and billing

The document describes the service aspects of charging and billing of the 3GPP system.

The document is not intended to duplicate existing standards or standards being developed by other groups on these topics, and will reference these where appropriate. The document will elaborate on

the charging requirements described in the charging principles in TS 22.001 service principles. It will allow the generation of accurate charging information to be used in the commercial and contractual relationships between the parties concerned.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-122 115	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 115	7.1.0	Published	2007-10-12	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122115v710
ATIS	ATIS.3GPP.22.115V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.115(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.115(R7-7.1.0).zip
TTC	TS-3GA-22.115(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22115rel7v710.pdf

10.2.44 TS 22.127 Service requirement for the open services access (OSA); Stage 1

This document specifies the Stage 1 requirements for realization of an open service access (OSA).

OSA enables applications to make use of network functionality through an open standardized interface (the OSA API). OSA provides the glue between applications and network functionality. In this way applications implementing the services become independent from the underlying network technology.

Applications that make use of network functionality offered through the OSA interface are not standardized.

OSA is one toolkit, amongst others, that enables certain aspects of the requirements of the virtual home environment (VHE) concept to be realized.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-122 127	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 127	7.1.0	Published	2006-04-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122127v710
ATIS	ATIS.3GPP.22.127V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.127(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.127(R7-7.1.0).zip
TTC	TS-3GA-22.127(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22127rel7v710.pdf

10.2.45 TS 22.129 Handover requirements between UTRAN and GERAN or other radio systems

The scope of this document includes service requirements for handover maintaining continuity of service to a wireless terminal as it moves between the radio coverage area, or "cells", associated with different base station sites. This functionality is called "handover". Handover can also occur due to change of radio resource providing a service without necessarily any change of the base stations involved. In particular, when the radio resources providing a service change from one of the UTRA radio access modes to the other (UTRA-FDD and UTRA-TDD), this is regarded as handover. Particular emphasis has been placed on the description of requirements for service continuity within UTRAN and between UTRAN and GERAN, but requirements specific to other systems are incorporated as required.

It is a key requirement to allow for dual or multimode terminals to hand over traffic from UTRAN to other radio systems such as GERAN and vice versa. This document describes the service requirements for intra- and inter-system handover.

The following subject areas are within the scope of these service requirements:

– User perceived performance that may be influenced by handover;

– Operational requirements relating to handover;

– Security requirements.

The requirements set forth in this document are service requirements, in that they fulfil the following:

– The requirements are independent of the implementation of the UTRAN.

– The extent to which the requirements are met are in principle verifiable using observable that are not internal to the UTRAN.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-122 129	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 129	7.0.0	Published	2007-04-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122129v700
ATIS	ATIS.3GPP.22.129V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.129(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.129(R7-7.0.0).zip
TTC	TS-3GA-22.129(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22129rel7v700.pdf

10.2.46 TS 22.135 Multicall; Service description; Stage 1

The document describes multicall supplementary service.

The general aspects, including definitions and recommended provision, of the description of supplementary services are given in TS 22.004.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-122 135	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 135	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122135v700
ATIS	ATIS.3GPP.22.135V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.135(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.135(R7-7.0.0).zip
TTC	TS-3GA-22.135(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22135rel7v700.pdf

10.2.47 TS 22.140 Multimedia messaging service (MMS); Stage 1

This Technical Specification defines the Stage 1 description of the non real-time multimedia messaging service (MMS). Stage 1 is the set of requirements which shall be supported for the provision of non real-time multimedia messaging service, seen primarily from the subscriber's and service providers' points of view.

This Technical Specification includes information applicable to network operators, service providers, terminal and network manufacturers.

This Technical Specification contains the core requirements for the multimedia messaging service, which is sufficient to provide a complete service.

This TS defines the requirements for MMS to be understood as a framework to enable non real-time transmissions for different types of media including such functionality as:

– multiple media elements per single message;

– individual handling of message elements;

– different delivery methods for each message element;

– negotiating different terminal and network MM capabilities;

– notification and acknowledgement of MM related events (e.g., delivery, deletion, etc.);

– handling of undeliverable MM;

– personalized MMS configuration;

– flexible charging.

The above list is not exhaustive.

Thus, the MMS enables a unified application that integrates the composition, storage, access, and delivery of different kinds of media, e.g., text, voice, image or video in combination with additional mobile requirements.

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ARIB	ARIB STD-T63-22.140V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/22/A22140-700.pdf
CCSA	CCSA-TSD-122 140	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 140	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122140v700
ATIS	ATIS.3GPP.22.140V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.140(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.140(R7-7.0.0).zip

10.2.48 TS 22.141 Presence service; Stage 1

This TS defines the Stage 1 description for the presence service. Stage 1 is the set of requirements which shall be supported to enable the exploitation of the presence service, seen primarily from the users' and home environments' points of view.

This TS includes information applicable to the home environment, device and network manufacturers which are sufficient to provide complete support of the presence service.

Additional functionalities not documented in this TS are considered outside the scope of this TS. Such additional functionality may be on a network-wide basis, nationwide basis or particular to a group of users. Such additional functionality shall not compromise conformance to the requirements of the presence service defined in this specification.

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ARIB	ARIB STD-T63-22.141V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/22/A22141-700.pdf
CCSA	CCSA-TSD-122 141	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 141	7.0.0	Published	2006-01-06	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122141v700
ATIS	ATIS.3GPP.22.141V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.141(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.141(R7-7.0.0).zip

10.2.49 TS 22.146 Multimedia broadcast/multicast service; Stage 1

This Technical Specification defines the Stage 1 description of the broadcast and multicast services for the 3GPP System (UTRAN and GERAN). Stage 1 is the set of requirements which shall be supported for the provision of broadcast and multicast services, seen primarily from the subscriber's and service providers' points of view.

This TS includes information applicable to network operators, content providers, and terminal and network manufacturers.

This TS contains the core requirements for multicast and broadcast services, which are sufficient to provide a complete service.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-22.146V7.2.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/22/A22146-720.pdf
CCSA	CCSA-TSD-122 146	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 146	7.2.0	Published	2007-04-23	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122146v720
ATIS	ATIS.3GPP.22.146V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.146(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.146(R7-7.2.0).zip

10.2.50 TS 22.173 IP Multimedia core network subsystem (IMS) multimedia telephony service and supplementary services; Stage 1

This Technical Specification defines the Stage 1 description of the IMS multimedia telephony service and the minimum set of capabilities required to secure multi-vendor and multi-operator inter-operability for multimedia telephony and related supplementary services.

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CCSA	CCSA-TSD-122 173	7.4.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 173	7.4.0	Published	2007-10-16	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122173v740
ATIS	ATIS.3GPP.22.173V740-2007	7.4.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.173(R7-7.3.0)	7.3.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.173(R7-7.3.0).zip
TTC	TS-3GA-22.173(Rel7)v7.4.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22173rel7v740.pdf

10.2.51 TS 22.174 Push service; Service aspects; Stage 1

This Technical Specification defines the Stage 1 description of the push service and is the set of requirements that shall be supported for the provision of push, seen primarily from the subscriber's, service providers' and delivery network points of view.

This TS includes information applicable to network operators, service providers, terminal and network manufacturers. It is of use to manufacturers and organizations which have devices or machines benefiting by availability of push service.

This TS contains the core requirements for the push service, for operator and external push initiators, which are sufficient to provide a complete service capability and service capability feature.

This TS defines the requirements for the push service to enable delivery of push data, including such functionality as:

- transfer of push data from a push initiator to a push recipient;
- latency and priority classes;
- definition of handling of undeliverable push data.

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ARIB	ARIB STD-T63-22.174V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/22/A22174-700.pdf
CCSA	CCSA-TSD-122 174	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 174	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122174v700
ATIS	ATIS.3GPP.22.174V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.174(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.174(R7-7.0.0).zip

10.2.52 TS 22.226 Global text telephony (GTT); Stage 1

This Technical Specification defines the Stage 1 description of the global text telephone feature, (GTT). Stage 1 is the set of requirements which shall be supported for the provision of the real-time text conversation feature, seen primarily from the subscriber's and service providers' points of view.

This TS includes information applicable to network operators, service providers, terminal and network manufacturers.

This TS contains the core requirements for the global text telephony feature, which are sufficient to provide a complete feature to incorporate in conversational services.

This TS defines the requirements for GTT to be understood as a framework to enable real-time transmission of text, for the purpose of a text-based or text-supported conversation between users. Text may be transported alone or in combination with other media in the session, especially video and voice.

Thus, the GTT enables text conversation to be included in any mobile conversational service.

Interworking with existing text telephony in PSTN, as well as emerging forms of standardized text conversation in all networks, is within the scope of this document. Interoperation with multimedia messaging services is also within scope of this feature.

NOTE – The global text telephony feature may be enhanced due to, e.g., operator's or regulator's requirements; however, such additional functionality shall not compromise conformance to the core requirements documented in this TS.

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CCSA	CCSA-TSD-122 226	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 226	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122226v700
ATIS	ATIS.3GPP.22.226V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.226(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.226(R7-7.0.0).zip
TTC	TS-3GA-22.226(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22226rel7v700.pdf

10.2.53 TS 22.228 Service requirements for the Internet protocol (IP) multimedia core network subsystem; Stage 1

This TS defines the service requirements from users' and operators' perspective for the support of IP multimedia applications.

IP multimedia applications are supported by IP multimedia sessions in the IM CN subsystem. IP multimedia sessions use IP connectivity bearers (e.g., GPRS as a bearer). Examples of IP multimedia applications include speech communication, real-time multimedia applications, shared online whiteboards, etc.

This TS, in general, does not standardize usage of IP multimedia applications, but instead identifies the requirements to enable their support.

In order to align IP multimedia applications wherever possible with non-3GPP IP applications, the general approach is to adopt non-3GPP IP-based solutions.

The existing legacy tele- and supplementary services shall not be re-standardized as IP multimedia applications, and multimedia equivalent applications may be created with toolkits.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-22.228V7.6.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/22/A22228-760.pdf
CCSA	CCSA-TSD-122 228	7.6.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 228	7.6.0	Published	2007-10-16	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122228v760
ATIS	ATIS.3GPP.22.228V760-2007	7.6.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.228(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.228(R7-7.2.0).zip

10.2.54 TS 22.233 Transparent end-to-end packet-switched streaming service; Stage 1

This Technical Specification defines the Stage 1 description of the packet-switched streaming service (PSS). Stage 1 is the set of requirements that shall be supported for the provision of a streaming service, seen primarily from the user's and service providers' points of view but also includes the service capabilities of the PSS itself.

This TS includes information applicable to network operators, service providers, terminal and network manufacturers.

This TS contains the core requirements for the packet-switched streaming service (PSS), which are sufficient to enable a range of services.

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ARIB	ARIB STD-T63-22.233V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/22/A22233-700.pdf
CCSA	CCSA-TSD-122 233	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 233	7.0.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122233v700
ATIS	ATIS.3GPP.22.233V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.233(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.233(R7-7.0.0).zip

10.2.55 TS 22.234 Requirements on 3GPP system to wireless local area network (WLAN) interworking

The present document specifies the functional requirements placed on the 3GPP system for interworking WLAN with the 3GPP system. Guidance is given for WLAN operators intending to provide the interworked WLAN capability.

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CCSA	CCSA-TSD-122 234	7.6.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 234	7.6.0	Published	2007-10-16	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122234v760
ATIS	ATIS.3GPP.22.234V760-2007	7.6.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.234(R7-7.3.0)	7.3.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.234(R7-7.3.0).zip
TTC	TS-3GA-22.234(Rel7)v7.6.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22234rel7v760.pdf

10.2.56 TS 22.242 Digital rights management (DRM); Stage 1

The text in this specification has been removed. DRM specifications are elaborated in the open mobile alliance (OMA) according to an agreement between 3GPP and OMA.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-22.242V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/22/A22242-700.pdf
CCSA	CCSA-TSD-122 242	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 242	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122242v700
ATIS	ATIS.3GPP.22.242V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.242(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.242(R7-7.0.0).zip

10.2.57 TS 22.243 Speech recognition framework for automated voice services; Stage 1

The present document defines the Stage 1 description of the speech recognition framework (SRF) for automated voice services. Stage 1 is the set of requirements for data seen primarily from the user's and service providers' points of view.

This Technical Specification includes information applicable to network operators, service providers, terminal and network manufacturers.

This Technical Specification contains the core requirements for the speech recognition framework for automated voice services.

The scope of this Stage 1 is to identify the requirements for 3G networks to support the deployments of a speech recognition framework-based automated voice services, and therefore to introduce a 3GPP speech recognition framework as part of speech-enabled services. The speech recognition framework for automated voice services is an optional feature in a 3GPP system.

Figure 1 positions the speech recognition framework (SRF) with respect to other speech-enabled services. As illustrated, SRF is designed to support server-side speech recognition over packet switched network (e.g., IMS). As such, SRF also enables configurations of multimodal and multi-device services that include distributing the speech engines.

Note that it is possible to design speech-enabled services that alternate or combine the use of client-side only engines and SRF.

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CCSA	CCSA-TSD-122 243	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 243	7.0.0	Published	2007-07-25	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122243v700
ATIS	ATIS.3GPP.22.243V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.243(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.243(R7-7.0.0).zip
TTC	TS-3GA-22.243(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22243rel7v700.pdf

10.2.58 TS 22.246 Multimedia broadcast/multicast service (MBMS) user services; Stage 1

The present document describes MBMS user services that use the capabilities of MBMS. Application scenarios including charging, QoS aspects and related service requirements derived from them are described. These scenarios and service requirements can be used as guidance for the design of codecs and bearers for both UTRAN and GERAN.

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ARIB	ARIB STD-T63-22.246V7.3.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/22/A22246-730.pdf
CCSA	CCSA-TSD-122 246	7.3.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 246	7.3.0	Published	2007-07-05	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122246v730
ATIS	ATIS.3GPP.22.246V 730-2007	7.3.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.246(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.246(R7-7.0.0).zip

10.2.59 TS 22.250 IP multimedia subsystem (IMS) group management; Stage 1

The present document defines the Stage 1 description of the IMS group management. Stage 1 is the set of requirements which shall be supported for the provision of IMS group management, seen primarily from the subscribers' and service providers' points of view.

The TS includes information applicable to network operator, service provider, terminal and network manufacturer.

Additional functionalities not documented in the TS are considered outside the scope of this TS. Such additional functionality may be on a network-wide basis, nationwide basis or particular to a group of users. Such additional functionality shall not compromise conformance to the requirements of the IMS group management defined in this specification.

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CCSA	CCSA-TSD-122 250	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 250	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122250v700
ATIS	ATIS.3GPP.22.250V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.250(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.250(R7-7.0.0).zip
TTC	TS-3GA-22.250(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22250rel7v700.pdf

10.2.60 TS 22.279 Combined circuit switched (CS) and IP multimedia subsystem (IMS) sessions; Stage 1

Thiis Technical Specification defines service requirements for combining CS and IMS services using a CS speech or CS multimedia call in association with an IMS session. The IMS session may consist of one or more IMS services.

Requirements for the following capabilities are included:

– Radio capability exchange.

– Terminal capability exchange.

– E.164 number exchange.

– Adding IMS session to an ongoing CS call.

– Adding a CS call to an ongoing IMS session.

– Supplementary services as they relate to CSICS.

It is intended that the capabilities defined herein for CSICS shall support interoperability between different operator networks, and roaming.

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CCSA	CCSA-TSD-122 279	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 279	7.1.0	Published	2006-01-26	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0122279v710
ATIS	ATIS.3GPP.22.279V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.279(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.279(R7-7.0.0).zip
TTC	TS-3GA-22.279(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22279rel7v710.pdf

10.2.61 TS 22.340 IP multimedia system (IMS) messaging; Stage 1

The present document specifies the Stage 1 description of the IMS messaging services. Stage 1 is an overall service description and defines service requirements, primarily from the subscriber's and service providers' points of view, and does not deal with the details of the human interface itself.

The present TS includes information applicable to network operators, service providers and terminal, switch and database manufacturers.

The present TS contains the requirements for IMS messaging services, which are sufficient to provide a complete service. The messaging types identified in this document are: immediate messaging, session-based messaging and deferred delivery messaging.

However, the requirements for the "deferred delivery messaging" type of IMS messaging are considered to be the same as for the multimedia messaging service (MMS) as described in 3G TS 22.140. Therefore, the present TS references TS 22.140 for a description of requirements of the "deferred delivery messaging" type of IMS messaging.

It is highly desirable that technical solutions for IMS messaging services should be sufficiently flexible to allow for possible enhancements. Additional functionalities not documented in this 3GPP TS may implement requirements which are considered outside the scope of this 3GPP TS. Such additional functionality shall not compromise conformance to the core requirements of the service.

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CCSA	CCSA-TSD-122 340	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 122 340	7.0.0	Published	2006-01-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0122340v700
ATIS	ATIS.3GPP.22.340V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-22.340(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-22.340(R7-7.0.0).zip
TTC	TS-3GA-22.340(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts22340rel7v700.pdf

10.2.62 TR 22.903 Study on videotelephony teleservice

This document analyses the introduction of additional functionalities for the videotelephony service in addition to what is provided in the 3GPP specifications up to Release 6. The functionalities will include but are not limited to codec negotiation, charging principles, supplementary services support. The approach followed is to evaluate how functionalities which are applicable to existing teleservices can be replicated for videotelephony.

The document will analyse how the new functionalities will impact the backwards compatibility with the existing CS multimedia service, and will analyse whether it is beneficial to create a videotelephony teleservice.

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CCSA	CCSA-TSD-122 903	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 122 903	7.0.0	Published	2006-01-16	http://pda.etsi.org/pda/home.asp?wkr=DTR/TSGS-0122903v700
ATIS	ATIS.3GPP.22.903V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTC	TR-3GA-22.903(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/tr/tr22903rel7v700.pdf

10.2.63 TR 22.934 Feasibility study on 3GPP system to wireless local area network (WLAN) interworking

This document studies the feasibility of interworking between 3GPP systems and wireless local area networks (WLANs). This document identifies and describes:

–   scenarios for 3GPP – WLAN interworking;

–   3GPP-WLAN interworking service requirements;

–   guidelines for standardization of 3GPP-WLAN interworking.

The document includes a number of different scenarios of 3GPP-WLAN interworking ranging from common billing to the provision of services seamlessly between the WLAN and the 3GPP system. In addition, 3GPP-WLAN interworking feasibility study includes the analysis of a number of environments where both the 3GPP system and WLAN may be deployed. Finally, this report outlines some of the different WLAN technologies that may be interworked with 3GPP systems.

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CCSA	CCSA-TSD-122 934	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 122 934	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGS-0122934v700
ATIS	ATIS.3GPP.22.934V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.2.64 TR 22.936 Multi-system terminals

This document studies the behaviour of a multi-system terminal that supports both 3GPP and non-3GPP systems. Particular issues handled include, but are not restricted to:

•   Whether the system selection or PLMN selection should take higher priority in a multi-system terminal.

•   Criteria for system change.

•   Interaction between the user's and the operator's preferences.

•   Support of automatic and manual system selection mode.

•   Different methods of system selection and their impact on 3GPP specifications.

•   Some areas for possible standardization, to ensure 3GPP compliance and protection of 3GPP networks.

The document treats non-3GPP networks in a generic way but it applies mainly to the case of 3GPP2/3GPP compliant terminals.

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ARIB	ARIB TR-T12-22.936V7.1.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/3_T12/ARIB-TR-T12/Rel7/22/A22936-710.pdf
CCSA	CCSA-TSD-122 936	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 122 936	7.1.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=DTR/TSGS-0122936v710
ATIS	ATIS.3GPP.22.936V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.2.65 TR 22.940 IP multimedia subsystem (IMS) messaging

The objective of this Technical Report is to:

a)   describe use cases that illustrate the service requirements for IMS messaging;

b)   derive the broad 3GPP requirements for IMS messaging services;

c)   investigate the possible requirements for interworking with networks outside the 3GPP domain;

d)   develop an analysis of the possible interaction between IMS messaging services and existing 3GPP messaging services (SMS, EMS and MMS) as well as other relevant 3GPP services such as presence IMS group management, etc.;

e)   identify possible routes to standardization by:

   1)   adopting existing and emerging standards, e.g., OMA, IETF;

   2)   modifying and enhancing existing and emerging standards;

   3)   developing of new standards.

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CCSA	CCSA-TSD-122 940	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 122 940	7.0.0	Published	2006-01-24	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGS-0122940v700
ATIS	ATIS.3GPP.22.940V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTC	TR-3GA-22.940(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/tr/tr22940rel7v700.pdf

10.2.66 TR 22.944 Report on service requirements for UE functionality split

This report identifies scenarios and requirements for UEs with functionality split over multiple devices. Scenarios that are required to be supported in the standard are defined in detail. The requirements in this report should enable interoperability between user equipment components from different vendors. This report is not intended to identify all possible or permitted functionality

splits. Certain splits of functionality may be prohibited for security or other reasons. This report does not identify all prohibited scenarios.

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ARIB	ARIB TR-T12-22.944V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/3_T12/ARIB-TR-T12/Rel7/22/A22944-700.pdf
CCSA	CCSA-TSD-122 944	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 122 944	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGS-0122944v700
ATIS	ATIS.3GPP.22.944V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.2.67 TR 22.949 Study on a generalized privacy capability

The present document aims to investigate and summarize the existing service requirements on privacy for 3GPP services. In order to ensure that these services and future 3GPP services will have a consistent set of rules that control the availability and usage of confidential information, it is the intention to identify a common way to handle privacy-related information in the network.

Generic privacy requirements for the mobile industry are also being defined by the Open Mobile Alliance, and it is the intention of this document to present the existing requirements and any alternatives to achieving the required functionality within 3GPP networks.

The scope of this study is to:

–   identify privacy-related information that is used in the 3GPP system;

–   identify the existing 3GPP services that handle privacy-related information;

–   identify the various stakeholders that handle, control or consume personal data, and to define their relationships;

–   document the definitions of the various functions, stakeholders and functions involved in a privacy capability;

–   identify the work being done by other organizations and the additional work to be done by 3GPP.

The types of data subject to privacy rules within the scope of this study include:

–   privacy-related information specific to an individual user;

–   privacy-related information relating to entities such as corporations;

–   network data such as serving cell and broadcast area, e.g., data that relates to the user's location or presence in the network, and which could be used by applications to track the user.

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CCSA	CCSA-TSD-122 949	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 122 949	7.0.0	Published	2007-07-05	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGS-0122949v700
ATIS	ATIS.3GPP.22.949V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.2.68 TR 22.950 Priority service feasibility study

This Technical Report (TR) presents the results of the feasibility study on priority service. The intent of this feasibility study is to assess the ability of 3GPP specifications to meet high-level requirements identified for priority service. This feasibility study consisted of a multi-step process, namely:

1)   Identify high-level requirements for priority service.

2)   Determine existing relevant 3GPP specifications for priority service.

3)   Perform a gap analysis to assess the ability of existing 3GPP specifications to meet the high-level priority service requirements.

Additional functionalities not documented in this TR are considered outside the scope of this TR. Such additional functionality may be on a network-wide basis, nationwide basis or particular to a group of users. Such additional functionality shall not compromise conformance to the requirements of the priority service defined in this specification.

The priority service is intended to be utilized for both voice and data and therefore both elements are considered within the scope of this document. While priority service is meant for both voice and data services, the initial set of requirements address circuit-switched services (voice as well as data). Multimedia and non-circuit-switched aspects of priority service have not been addressed in this feasibility study and are for further study.

The priority service is intended to interwork with external networks to provide an end-to-end service. Therefore, service interactions with external networks are considered within the scope of this document, although the specification of these interactions may be in other standards. If this occurs, a reference to that specification shall be made.

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ARIB	ARIB TR-T12-22.950V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/3_T12/ARIB-TR-T12/Rel7/22/A22950-700.pdf
CCSA	CCSA-TSD- 122 950	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 122 950	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGS-0122950v700
ATIS	ATIS.3GPP.22.950V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.2.69 TR 22.951 Service aspects and requirements for network sharing

In the current dynamic market place, as a result of partnerships, acquisitions, creative agreements among operators, etc., the need for tools that enable various degrees of network sharing is becoming increasingly important.

When GSM and then UMTS were specified, the possibility of sharing part or all of the network by two or more separated commercial entities was not considered, and as a result the standards lack some functionalities that enable the realization of such commercial agreements.

GSM was designed under the principle "one operator, one radio access network". The GSM network has some possibilities of infrastructure sharing, but it does not support true radio access network sharing. The initial design of 3GPP system has followed the same principle.

This technical report is aimed to capture the service and user requirements that must be fulfilled by the 3GPP system in order to enable network sharing in a standardized way. Section 5 describes various network sharing and includes various scenarios, e.g., spanning from common radio access network connected to multiple core networks, or multiple radio access networks sharing one core network. Section 6 contains a summary of the user classification and network identities. In section 7 the user requirements are described, while section 8 deals with the network operator requirements. Section 9 describes the mobility requirements in a shared network. The rest of the document covers security (section 10) and charging (section 11). Some conclusions can be found in section 12 and an annex with examples of practical realization of network sharing is provided.

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ETSI	TR 122 951	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGS-0122951v700
ATIS	ATIS.3GPP.22.951V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTC	TR-3GA-22.951(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/tr/tr22951rel7v700.pdf

10.2.70 TR 22.952 Priority service guide

This document addresses the service aspects (service description), network aspects (call flows), and management aspects (operations, administration, maintenance, and provisioning) of priority service, based on existing 3GPP specifications.

The priority service is intended to be used for both voice and data. However, this document only addresses circuit-switched voice service. Data, multimedia and non-circuit-switched aspects of priority service have not been addressed and are for further study.

The priority service is intended to interwork with external networks to provide an end-to-end service. Therefore, service interactions with external networks are considered within the scope of this document, although the specification of these interactions may be in another standard. If this occurs, a reference to that specification is made.

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ARIB	ARIB TR-T12-22.952V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/3_T12/ARIB-TR-T12/Rel7/22/A22952-700.pdf
CCSA	CCSA-TSD- 122 952	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 122 952	7.0.0	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGS-0122952v700
ATIS	ATIS.3GPP.22.952V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.2.71 TR 22.953 Multimedia priority service feasibility study

This Technical Report (TR) presents the results of the feasibility study on multimedia priority service. The intent of this feasibility study is to assess the ability of 3GPP specifications to meet high-level requirements identified for multimedia priority service. This feasibility study consisted of a multi-step process, namely:

– Identify high-level requirements for multimedia priority service.

– Determine relevant 3GPP specifications for multimedia priority service.

– Perform a gap analysis to assess the ability of existing 3GPP specifications to meet the high-level multimedia priority service requirements.

Additional functionalities not documented in this TR are considered outside the scope of this TR. Such additional functionality may be on a network-wide basis, nationwide basis or particular to a group of users.

The multimedia priority service is intended to be utilized for both voice and data in the packet-switched (PS) domain and the IP multimedia subsystem (IMS).

The multimedia priority service is intended to interwork with external networks to provide an end-to-end service. Therefore, service interactions with external networks are considered within the scope of this document, although the specification of these interactions may be in other standards. If this occurs, a reference to that specification is made.

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CCSA	CCSA-TSD-122 953	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 122 953	7.1.0	Published	2007-04-23	http://pda.etsi.org/pda/home.asp?wkr=DTR/TSGS-0122953v710
ATIS	ATIS.3GPP.22.953V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.2.72 TR 22.967 Transferring of emergency call data

This document examines the issues associated with the transmission of emergency call data from a vehicle to a public service access point (PSAP).

Issues associated with the content of the emergency call data or the triggers of the emergency calls are outside the scope of this document.

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ARIB	ARIB TR-T12-22.967V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/3_T12/ARIB-TR-T12/Rel7/22/A22967-700.pdf
CCSA	CCSA-TSD-122 967	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 122 967	7.0.0	Published	2006-09-21	http://pda.etsi.org/pda/home.asp?wkr=DTR/TSGS-0122967v700
ATIS	ATIS.3GPP.22.967V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.2.73 TR 22.973 IMS multimedia telephony service and supplementary services

This Technical Report defines the IMS multimedia telephony service and associated supplementary services for IMS. It aims to take account and build on the IMS capabilities already provided in 3GPP Release 5 and Release 6.

The objective is to define the minimum set of capabilities required in the IP multimedia subsystem to secure multi-vendor and multi-operator inter-operability for the IMS multimedia telephony service and related supplementary services.

While the user experience for the IMS multimedia telephony service is expected to have some similarity to existing telephony services, the richer capabilities of IMS will be exploited.

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CCSA	CCSA-TSD-122 973	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 122 973	7.0.0	Published	2007-04-23	http://pda.etsi.org/pda/home.asp?wkr=DTR/TSGS-0122973v700
ATIS	ATIS.3GPP.22.973V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTC	TR-3GA-22.973(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/tr/tr22973rel7v700.pdf

10.2.74 TR 22.977 Feasibility study for speech-enabled services

The advancement in the automatic speech recognition (ASR) technology, coupled with the rapid growth in the wireless telephony market has created a compelling need for speech-enabled services. Voice-activated dialling has become a *de facto* standard in many of the mobile phones in the market today. The speech recognition technology has also been applied more recently to voice messaging and personal access services. A voice eXtensible markup language (voice XML) has been designed to bring the full power of web development and content delivery to voice response applications. Voice portals that provide voice access to conventional graphically oriented services over the Internet are now becoming popular. Forecasts show that speech-driven services will play an important role on the 3G market. Users of mobile terminals want the ability to access information while on the move and the small portable mobile devices that will be used to access this information need improved user interfaces using speech input.

A brief overview of the speech-enabled services is presented. The different ways of enabling speech recognition for the speech-enabled services are described. Section 6 discusses multimodal services and options to enable multimodal and multi-device services. The scope of the report, references, definitions and abbreviations are detailed in the first few sections.

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ETSI	TR 122 977	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGS-0122977v700
ATIS	ATIS.3GPP.22.977V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.3   23-Series, Technical realization

10.3.1   TS 23.002 Network architecture

This document offers an overview of the PLMN and its architectures and configuration. The configuration and the functional entities of the PLMN and the interfaces between them are described on a general level in order to cope with possible implementations. These descriptions include interfaces between and within the core networks, the access networks, the user equipment, different service platforms, different domains and subsystems, and functional entities within domains and subsystems.

This document covers different architectural aspects with varying level of detail. In general, other specifications shall be referred to for further details; these specifications enable the reader to acquire the full understanding of a system or service feature.

Note that this document does not cover, or even list, all features of PLMNs.

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CCSA	CCSA-TSD-123 002	7.3.1	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 002	7.3.1	Published	2007-10-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0223002v731
ATIS	ATIS.3GPP.23.002V 731-2007	7.3.1	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.002(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.002(R7-7.2.0).zip
TTC	TS-3GA-23.002(Rel7)v7.3.1	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23002rel7v730.pdf

10.3.2   TS 23.003 Numbering, addressing and identification

The document defines the principal purpose and use of international mobile station equipment identities (IMEI) within the digital cellular telecommunications system and the 3G system.

The document defines:

a)   an identification plan for mobile subscribers in the GSM system;

b)   principles of assigning telephone and ISDN numbers to MSs in the country of registration of the MS;

c)   principles of assigning mobile station (MS) roaming numbers to visiting MSs;

d)   an identification plan for location areas, routing areas, and base stations in the GSM system;

e)   an identification plan for MSCs, SGSNs, GGSNs, and location registers in the GSM system;

f)   principles of assigning international mobile equipment identities;

g)   principles of assigning zones for regional subscription;

h)   an identification plan for groups of subscribers to the voice group call service (VGCS) and to the voice broadcast service (VBS); and identification plan for voice group calls and voice broadcast calls; an identification plan for group call areas;

i)   principles for assigning packet data protocol (PDP) addresses to mobile stations;

j)   an identification plan for point-to-multipoint data transmission groups;

k)   an identification plan for CN domain, RNC and service area in the UTRAN system;

l)   an identification plan for mobile subscribers in the WLAN system.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 003	7.5.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 003	7.5.0	Published	2007-10-11	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423003v750
ATIS	ATIS.3GPP.23.003V 750-2007	7.5.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.003(R7-7.5.0)	7.5.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.003(R7-7.5.0).zip
TTC	TS-3GA-23.003(Rel7)v7.5.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23003rel7v750.pdf

10.3.3 TS 23.007 Restoration procedures

The data stored in location registers are automatically updated in normal operation; the main information stored in a location register defines the location of each mobile station and the subscriber data required to handle traffic for each mobile subscriber. The loss or corruption of these data will seriously degrade the service offered to mobile subscribers; it is therefore necessary to define procedures to limit the effects of failure of a location register, and to restore the location register data automatically. This document defines the necessary procedures.

The basic principle is that restoration should be based on radio contact to avoid faulty data being spread in the system.

Subscriber data for supplementary services must also be correctly restored, although the impact on service of corruption of supplementary service data is less severe.

Procedures for supporting these functions are defined in 3G Technical Specifications 29.002 and 29.060.

The MAP operation "IMSI Attach" is used only in MAP version 1; in MAP version 2 the same function is performed by the MAP operation "Update Location Area". References in this specification to IMSI attach apply only to MAP version 1 network entities.

If the restoration of subscriber data in the VLR is triggered by Location Updating or IMSI Attach, the VLR retrieves subscriber data from the HLR by sending an "Update Location" request, which triggers one or more "Insert Subscriber Data" operations from the HLR. The "Update Location" request may also be used to send the LMSI to the HLR.

If the restoration of subscriber data in the VLR is triggered by a "Provide Roaming Number" request, the behaviour of the VLR depends on whether it is implemented according to MAP version 1 or MAP version 2. For MAP version 2, the VLR retrieves subscriber data from the HLR by sending a "Restore Data" request, which triggers one or more "Insert Subscriber Data" operations from the HLR. The "Restore Data" request is also used to send the LMSI to the HLR. For MAP version 1, the VLR retrieves subscriber data from the HLR by sending a "Send Parameters" request with parameter type "Subscriber Data", which cannot be used to send the LMSI to the HLR.

The VLR number and MSC number in the subscriber data in the HLR are updated by the "Update Location" procedure.

The GGSN (gateway GPRS support node) is the point of PDN interconnection with the GSM PLMN supporting GPRS. The GGSN contains routing information for GPRS users with a PDP context active. The necessary procedures needed to restore GGSN data information after a restart is described in this document.

The SGSN (serving GPRS support node) is the node that is serving the MS. The SGSN stores information regarding, e.g., mobility management, routing and security. The necessary procedures needed to restore this SGSN information after a restart are described in this document.

A Type A LMU (location measurement unit) is a network node, accessed over the GSM air interface that is functionally similar to an MS. All requirements associated with a non-GPRS MS in this specification apply also to a Type A LMU, except where specified otherwise.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 007	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 007	7.0.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423007v700
ATIS	ATIS.3GPP.23.007V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.007(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.007(R7-7.0.0).zip
TTC	TS-3GA-23.007(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23007rel7v700.pdf

10.3.4 TS 23.008 Organization of subscriber data

The document provides details concerning information to be stored in home subscriber servers, visitor location registers, GPRS support nodes and call session control function (CSCF) concerning mobile subscriber.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 008	7.7.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 008	7.7.0	Published	2007-10-11	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423008v770
ATIS	ATIS.3GPP.23.008V770-2007	7.7.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.008(R7-7.6.0)	7.6.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.008(R7-7.6.0).zip
TTC	TS-3GA-23.008(Rel7)v7.7.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23008rel7v770.pdf

10.3.5   TS 23.009 Handover procedures

The document contains a detailed description of the handover procedures to be used in PLMNs. The purpose of the handover procedures, as described in the document, are to ensure that the connection to the mobile station (MS) or user equipment (UE) is maintained as it moves from one cell or radio network to another. The document defines the circuit-switched handover functionality based on the service requirements in TS 22.129.

The document considers the following four cases:

i)   Handover between base stations connected to the same MSC: this is termed an "Intra-MSC handover";

ii)   Handover between radio network subsystems connected to the same 3G_MSC: this is termed an "Intra-3G_MSC handover/relocation". This case also includes inter-system handover between RNS and BSS if the 3G_MSC supports the A interface. In the context of this specification, the term "RNS" refers also to a BSS when serving a mobile station in Iu mode;

iii)   Handover between base stations connected to different MSCs: this is termed an "Inter-MSC handover". This category can be sub-divided into three further procedures:

    a)   the basic inter-MSC handover procedure, where the MS is handed over from a controlling MSC (MSC-A) to another MSC (MSC-B);

    b)   the subsequent inter-MSC handover procedure, where the MS is handed over from MSC-B to a third MSC (MSC-B');

    c)   the subsequent inter-MSC hand back, where the MS is handed back from MSC-B to MSC-A;

iv)   Handover between radio network subsystems connected to different 3G_MSCs: this is termed an "Inter-3G_MSC handover/relocation". In the context of this specification, the term "RNS" also refers to a BSS when serving a mobile station in Iu mode. This category can be divided into three further sub-procedures:

    a)   the inter-3G_MSC handover procedure from UMTS to GSM, where the UE/MS is handed over from a controlling 3G_MSC (3G_MSC-A) to an MSC (MSC-B);

    b)   the inter-3G_MSC handover procedure from GSM to UMTS, where the UE/MS is handed over from a controlling MSC (MSC-A) to a 3G_MSC (3G_MSC-B);

    c)   the inter-3G_MSC relocation procedure, where the UE is relocated from 3G_MSC-A to 3G_MSC-B. This procedure can also be combined with a hard change of radio resources (hard handover with switch in the core network).

The MSC in this category can optionally be a 3G_MSC supporting the A interface. The three sub-procedures do also cover subsequent handover/relocation to a third MSC-B' or 3G_MSC-B' and subsequent handover/relocation back to MSC-A or 3G_MSC-A.

In both cases i) and iii), the same procedures as defined in TS 48.008 and in TS 24.008 shall be used on the A interface and on the radio interface, respectively.

In case ii), the same procedures as defined in TS 25.413 and in TS 24.008 shall be used on the Iu interface. If the 3G_MSC in case ii) also supports the A interface, TS 08.08 and TS 24.008 shall be used on the A interface.

In case iii), the handover procedures shall transport the A-interface messages between MSC-A and MSC-B described in the mobile application part (MAP), TS 29.002.

In case iv), the handover procedures shall transport the A-interface messages between 3G_MSC and MSC described in the mobile application part (MAP), TS 29.002.

In case iv), the relocation procedure shall transport the Iu-interface messages between 3G_MSC-A and 3G_MSC-B described in the mobile application part (MAP), TS 29.002.

The interworking between the TS 29.002 protocol and the TS 48.008 protocol is described in TS 29.010.

Multicall supplementary service is not applicable in GERAN Iu mode, and relocation of multicalls is therefore only possible within UTRAN.

Handovers which take place on the same MSC are termed "Intra-MSC handovers"; this includes both inter-BSS and intra-BSS handovers.

Handovers which take place on the same 3G_MSC are termed "Intra-3G_MSC handovers"; this includes inter-RNS handovers and optionally RNS to BSS and BSS to RNS handovers.

In the context of this specification, the term "InterSystem handover" can also refer to a handover which takes place between a base station serving a mobile station in Iu mode and a base station serving a mobile in A/Gb mode.

"Flexible Iu interface for handover/relocation" Option: Up to release 99, an RNS can be connected only to one 3G_MSC. From release 4 onwards, as a network option, an RNS can have Iu interfaces to more than one MSC. Such an additional Iu interface may be selected by an MSC during an intra-PLMN relocation or intra-PLMN BSS to RNS handover procedure. This allows the MSC to use an Intra-3G_MSC handover procedure according to case ii) instead of an Inter-3G_MSC handover procedure according to case iv). The decision whether to use the Intra-3G_MSC handover procedure is implementation and configuration dependent. In a network implementing this option, a global title based on the global RNC-Id may optionally be used for the addressing of the Iu interface messages.

"Intra-domain connection of RAN nodes to multiple CN nodes" Option: When applied, a BSS or an RNS can be connected to more than one MSC.

The document also covers the requirements for handover in ongoing GSM voice group calls, directed retry and handover without a circuit connection between (U)MSCs. This document does not consider the case of handovers between radio channels on the same BSS (Intra-BSS handover) or the handover of packet radio services. The Inter-RNS handover case that results in a relocation is covered by this document but not other Inter-RNS or Intra-RNS handover cases.

For voice broadcast calls in GSM, the speaker uses normal point-to-point handover procedures, whilst the listeners use idle mode cell reselection procedures for the voice group call listeners.

Voice group calls are only applicable to GSM, and handover of voice group calls is therefore only possible in GSM.

Inter-MSC handover imposes a few limitations on the system. After inter-MSC handover:

– call re-establishment is not supported.

The list of TS 48.008 features supported during and after Inter-MSC handover is given in TS 49.008.

In the Inter-MSC handover case, the interworking between a Phase 1 BSSMAP protocol possibly used by one MSC and the Phase 2 BSSMAP protocol used in the Phase 2 MAP protocol on the E interface is performed by this MSC.

This document also includes SDL diagrams and message flows.

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CCSA	CCSA-TSD-123 009	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 009	7.0.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0123009v700
ATIS	ATIS.3GPP.23.009V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.009(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.009(R7-7.0.0).zip
TTC	TS-3GA-23.009(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23009rel7v700.pdf

10.3.6   TS 23.011 Technical realization of supplementary services – General aspects

The document describes the general aspects on how supplementary services in the 3GPP system are realized from a technical point of view.

Description of technical realization for specific supplementary services can be found in 3GPP TS 23.072, 230.8x and in the 230.9x-series Technical Specifications.

All supplementary services may require signalling on the radio path. Signalling procedures and messages used are defined in the 3GPP TS 24.072 and in the 24.08x and 24.09x-series Technical Specifications.

For some supplementary services, information needs to be transferred between the home location register (HLR), the visitor location register (VLR), the mobile services switching centre (MSC) and the serving GPRS support node (SGSN). Signalling procedures for such information transfer are defined in 3GPP TS 29.002.

Definitions and descriptions of supplementary services are given in 3GPP TS 22.072 and in the 22.08x and 22.09x-series Technical Specifications.

Definitions are given in 3G TS 22.004.

NOTE – The Technical Specifications on the technical realization of supplementary services do not distinguish between subscriber, user and customer, since all three do not fully cover the textual needs. Generally, the term "subscriber" is used, even if this person does not have the subscription.

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CCSA	CCSA-TSD-123 011	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 011	7.0.0	Published	2007-07-13	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423011v700
ATIS	ATIS.3GPP.23.011V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.011(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.011(R7-7.0.0).zip
TTC	TS-3GA-23.011(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23011rel7v700.pdf

10.3.7   TS 23.012 Location management procedures

The document describes the location management procedures for the circuit-switched domain, with respect to the application level functional behaviour. This is to be distinguished from the corresponding protocol handling behaviour, which is specified in 3G TS 29.002. The following location management procedures are included:

–   Location updating;

–   Location cancellation;

–   MS purging;

–   IMSI attach/detach.

The procedures in the mobile station (MS) are described in GSM 03.22. The procedures between MSC, VLR and HLR utilize the Mobile Application Part (MAP) and details concerning the protocol handling are contained in 3G TS 29.002.

The document excludes location management procedures for the packet-switched domain, which are covered in 3G TS 23.060.

The descriptions herein depict a logical separation between the MSC and VLR. This logical separation, as well as the messages transferred between the two logical entities are the basis of a model used to define the externally visible behaviour of the MSC/VLR, which a may be a single physical entity. They do not impose any requirement except the definition of the externally visible behaviour.

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CCSA	CCSA-TSD-123 012	7.3.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 012	7.3.0	Published	2007-07-13	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423012v730
ATIS	ATIS.3GPP.23.012V730-2007	7.3.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.012(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.012(R7-7.1.0).zip
TTC	TS-3GA-23.012(Rel7)v7.3.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23012rel7v730.pdf

10.3.8   TS 23.014 Support of dual tone multi frequency (DTMF) signalling

The document describes how dual tone multi frequency (DTMF) signals are supported in the 3GPP system.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 014	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 014	7.0.0	Published	2007-07-13	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0123014v700
ATIS	ATIS.3GPP.23.014V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.014(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.014(R7-7.0.0).zip
TTC	TS-3GA-23.014(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23014rel7v700.pdf

10.3.9   TS 23.015 Technical realization of operator determined barring (ODB)

The network feature operator determined barring (ODB) allows a network operator or service provider to regulate access by subscribers to services (both circuit and packet oriented), by the barring of certain categories of incoming or outgoing calls/packet oriented services or of roaming. Operator determined barring applies to all bearer services and teleservices except the emergency call teleservice; the teleservice short message point-to-point is therefore subject to operator determined barring in the same way as circuit-switched calls.

The application of specific categories of operator determined barring to a subscription is controlled by the network operator or service provider, using administrative interaction at the HLR; this interface is not standardized.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 015	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 015	7.0.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423015v700
ATIS	ATIS.3GPP.23.015V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.015(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.015(R7-7.0.0).zip
TTC	TS-3GA-23.015(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23015rel7v700.pdf

10.3.10 TS 23.016 Subscriber data management; Stage 2

This specification gives the Stage 2 description of the subscriber data management handling between:

– the home location register (HLR) and the visitor location register (VLR);

– the home location register (HLR) and the serving GPRS support node (SGSN).

A number of procedures require updating of subscriber information:

– Location updating;

– Restoration;

– Modification of data by the operator;

– Modification of data by the subscriber via the mobile station (MS).

Updating of subscriber information from HLR to SGSN is required in the following situations:

– GPRS location updating;

– Modification of data by the operator.

Only the rules for the updating of subscriber data from the HLR to the VLR and from the HLR to the SGSN are described in this specification. Public land mobile network (PLMN) specific and unstructured supplementary service data (USSD) subscriber data are out of the scope of this specification. The GPRS context update from the SGSN to the GGSN is out of the scope of this specification.

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CCSA	CCSA-TSD-123 016	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 016	7.0.0	Published	2007-07-13	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423016v700
ATIS	ATIS.3GPP.23.016V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.016(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.016(R7-7.0.0).zip
TTC	TS-3GA-23.016(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23016rel7v700.pdf

10.3.11 TS 23.018 Basic call handling – Technical realization

This Technical Specification (TS) specifies the technical realization of the handling of calls originated by a UMTS or GSM mobile subscriber and calls directed to a UMTS or GSM mobile subscriber, up to the point where the call is established. Normal release of the call after establishment is also specified.

In this specification, the term "MS" is used to denote a UMTS or GSM MS, as appropriate.

The handling of DTMF signalling and off-air call set-up (OACSU) is not described in this specification.

The details of the effects of UMTS or GSM supplementary services on the handling of a call are described in the relevant 23.07x, 23.08x and 23.09x series of specifications.

The specification of the handling of a request from the HLR for subscriber information is not part of basic call handling, but is required for both CAMEL (TS 23.078) and optimal routeing (TS 23.079). The use of the provide subscriber information message flow is shown in TS 23.078 and TS 23.079.

The logical separation of the MSC and VLR, and the messages transferred between them are the basis of a model used to define the externally visible behaviour of the MSC/VLR, which is a single physical entity. They do not impose any requirement except the definition of the externally visible behaviour.

If there is any conflict between this specification and the corresponding Stage 3 specifications (TS 24.008, TS 25.413, GSM 48.008 and TS 29.002), the Stage 3 specifications shall prevail.

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CCSA	CCSA-TSD-123 018	7.6.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 018	7.6.0	Published	2007-10-08	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423018v760
ATIS	ATIS.3GPP.23.018V760-2007	7.6.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.018(R7-7.5.0)	7.5.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.018(R7-7.5.0).zip
TTC	TS-3GA-23.018(Rel7)v7.6.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23018rel7v760.pdf

10.3.12 TS 23.031 3G security; Fraud information gathering system (FIGS); Technical realization; Stage 2

This Technical Specification specifies the Stage 2 description of the fraud information gathering system (FIGS) feature which provides the means for the HPLMN to monitor the activities of its subscribers in a VPLMN.

Three levels of FIGS service are defined, levels 1 to 3.

Level 1 will use the facilities provided by transferred account procedure (TAP).

Levels 2 and 3 will use facilities provided by customized applications for mobile network enhanced logic (CAMEL), in particular, the information flows between the GSM service switching function (gsmSSF) and GSM service control function (gsmSCF). Phase 1 and Phase 2 CAMEL facilities will be used.

Connection-orientated services only are covered.

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CCSA	CCSA-TSD-123 031	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 031	7.0.0	Published	2007-10-11	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0323031v700
ATIS	ATIS.3GPP.23.031V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.031(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.031(R7-7.0.0).zip
TTC	TS-3GA-23.031(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23031rel7v700.pdf

10.3.13 TS 23.032 Universal geographical area description (GAD)

The present document defines an intermediate universal geographical area description which subscriber applications, GSM or UMTS services, can use and the network can convert into an equivalent radio coverage map.

For GSM or UMTS services which involve the use of an "area", it can be assumed that in the majority of cases the service requester will be forbidden access to data on the radio coverage map of a particular PLMN and that the service requester will not have direct access to network entities (e.g., BSC/BTS or RNC/Node B).

The interpretation by the PLMN operator of the geographical area in terms of cells actually used, cells that are partly within the given area and all other technical and quality of service aspects are out of the scope of the present document.

This specification also provides a description of velocity that may be associated with a universal geographical area description when both are applied to a common entity at a common time.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 032	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 032	7.0.0	Published	2007-06-22	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0223032v700
ATIS	ATIS.3GPP.23.032V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.032(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.032(R7-7.0.0).zip
TTC	TS-3GA-23.032(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23032rel7v700.pdf

10.3.14 TS 23.034 High speed circuit switched data (HSCSD); Stage 2

The document contains the Stage 2 service description for a high speed circuit switched data (HSCSD) on GSM/GERAN in A/Gb mode and Iu mode. HSCSD utilizes the multislot mechanism, i.e., using multiple traffic channels (/bearers) for the communication.

Additionally, the present document specifies some HSCSD related requirements for multi-system mobile stations operating in UTRAN Iu mode. In UTRAN Iu mode, one bearer can provide all needed data rates, and the multislot mechanism is therefore not needed. However, for inter-system handover to GERAN, certain information has to be provided by the mobile station during the service negotiation. The UTRAN Iu mode aspects concerning HSCSD are described exclusively in clause 4.2 of the Technical Specification.

In analogy with [ITU-T I.130] (refer to Annex A) and with reference to [ITU-T Q.65], the second stage of the HSCSD is defined as follows.

Stage 2 identifies the functional capabilities and information flows needed to support the service as described in high speed circuit switched data (HSCSD) – Stage 1, TS 22.034. Furthermore, it identifies various possible physical locations for the functional capabilities. The output of Stage 2, which is signalling system independent, is used as an input to Stage 3, the design of signalling system and switching Recommendations.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 034	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 034	7.0.0	Published	2007-07-13	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0123034v700
ATIS	ATIS.3GPP.23.034V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.034(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.034(R7-7.0.0).zip
TTC	TS-3GA-23.034(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23034rel7v700.pdf

10.3.15 TS 23.035 Immediate service termination (IST); Stage 2

This document specifies the Stage 2 description of the immediate service termination (IST) service which provides the means for the HPLMN to terminate all the activities of an HPLMN subscriber in a VPLMN.

Two implementations of IST are described: an implementation based on CAMEL, and an implementation based on a new MAP message.

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ARIB	ARIB STD-T63-23.035V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/23/A23035-700.pdf
CCSA	CCSA-TSD-123 035	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 035	7.0.0	Published	2007-06-22	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0323035v700
ATIS	ATIS.3GPP.23.035V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.035(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.035(R7-7.0.0).zip

10.3.16 TS 23.038 Alphabets and language-specific information

This Technical Specification defines the alphabets, languages and message handling requirements for SMS, CBS and USSD and may additionally be used for man-machine interface (MMI) (TS 22.030).

The specification for the data circuit-terminating equipment/data terminal equipment (DCE/DTE) interface (TS 27.005) will also use the codes specified herein for the transfer of SMS data to an external terminal.

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ARIB	ARIB STD-T63-23.038V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/23/A23038-700.pdf
CCSA	CCSA-TSD-123 038	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 038	7.0.0	Published	2007-04-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0123038v700
ATIS	ATIS.3GPP.23.038V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.038(R7-7.0.0)	7.0.0	Approved	2007-12-24	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.038(R7-7.0.0).zip

10.3.17 TS 23.040 Technical realization of the short message service (SMS)

The document describes the short message service (SMS) for GSM/UMTS networks. It defines:

– the services and service elements;

– the network architecture;

– the service centre functionality;

– the MSC functionality (with regard to the SMS);

– the SGSN functionality (with regard to the SMS);

– the routeing requirements;

– the protocols and protocol layering,

for the teleservice short message service, as specified in the GSM TS 02.03 and 3G TS 22.105.

The use of radio resources for the transfer of short messages between the MS and the MSC or the SGSN is described in 3G TS 24.011 "Short Message Service Support on Mobile Radio Interface", and is dealt with in that specification.

The network aspects of short message service provision are outside the scope of the document (i.e., the provision of network connectivity between the PLMN subsystems). There is no technical restriction within the document for the transfer of short messages between different PLMNs. Any such restriction is likely to be subject to commercial arrangements, and PLMN operators must make their own provision for interworking or for preventing interworking with other PLMNs as they see fit.

The required and assumed network service offered to the higher layers is defined in this document.

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ARIB	ARIB STD-T63-23.040V7.0.1	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/23/A23040-701.pdf
CCSA	CCSA-TSD-123 040	7.0.1	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 040	7.0.1	Published	2007-04-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0123040v701
ATIS	ATIS.3GPP.23.040V701-2007	7.0.1	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.040(R7-7.0.1)	7.0.1	Approved	2007-12-24	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.040(R7-7.0.1).zip

10.3.18 TS 23.041 Technical realization of cell broadcast service (CBS)

The document describes the cell broadcast short message service (CBS) for GSM and UMTS.

For GSM, it defines the primitives over the cell broadcast centre – base station system (CBC-BSS) interface and the message formats over the base station system – mobile station (BSS-MS) interface for teleservice 23 as specified in 3G TS 22.003.

For UMTS it defines the interface requirements for the cell broadcast centre – UMTS radio network system (RNS) interface and the radio interface requirements for UMTS radio access networks to support CBS as specified in TS 22.003.

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ARIB	ARIB STD-T63-23.041V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/23/A23041-700.pdf
CCSA	CCSA-TSD-123 041	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 041	7.0.0	Published	2007-04-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0123041v700
ATIS	ATIS.3GPP.23.041V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.041(R7-7.0.0)	7.0.0	Approved	2007-12-24	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.041(R7-7.0.0).zip

10.3.19 TS 23.042 Compression algorithm for text messaging services

The document introduces the concepts and mechanisms involved in the compression and decompression of a stream of data.

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ARIB	ARIB STD-T63-23.042V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/23/A23042-700.pdf
CCSA	CCSA-TSD-123 042	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 042	7.0.0	Published	2007-07-13	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0123042v700
ATIS	ATIS.3GPP.23.042V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.042(R7-7.0.0)	7.0.0	Approved	2007-12-24	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.042(R7-7.0.0).zip

10.3.20 TS 23.053 Tandem free operation (TFO); Service description; Stage 2

The document defines the Stage 2 service description for tandem free operation (TFO) in and between GSM and UMTS. Tandem free operation applies only to speech calls.

NOTE – The TFO principles are built so that they could be used as well by other systems other than GSM and UMTS.

In analogy with [ITU-T I.130] and with reference to [ITU-T Q.65], the second stage of the following three-level structure is derived from a stage 1 service description.

– Stage 1 is an overall service description, from the service subscriber's and user's standpoints, that views the network as a single entity which provides services to the user.

– Stage 2 identifies the functional capabilities and information flows needed to support the service described in Stage 1. Furthermore, it identifies various possible physical locations for the functional capabilities. The output of Stage 2, which is signalling system independent, is used as an input to Stage 3, the design of signalling system and switching Recommendations.

– Stage 3 defines the signalling system protocols and switching functions needed to implement the service described in Stage 2.

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ARIB	ARIB STD-T63-23.053V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/23/A23053-700.pdf
CCSA	CCSA-TSD-123 053	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 053	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0423053v700
ATIS	ATIS.3GPP.23.053V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.053(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.053(R7-7.0.0).zip

10.3.21 TS 23.057 Mobile execution environment (MExE); Functional description; Stage 2

The document defines the Stage 2 and Stage 3 description of the mobile execution environment (MExE). Stage 2 identifies the functional capabilities and information flows needed to support the service described in Stage 1.

The document includes information applicable to network operators, service providers and terminal, switch and database manufacturers.

The document contains the core functions for a mobile execution environment (MExE) that are sufficient to provide a complete service.

MExE uses a number of technologies to realize the requirements of the Stage 1 description (TS 22.057). The document describes how the service requirements are realized with the selected technologies. The TS is divided into sections each covering the aspects relating to particular MExE technologies; it is intended that this specification will evolve along with the MExE technologies. A generic section of the specification covers areas of MExE common to all technologies.

Implementation of this specification outside the UE (user equipment) is outside the scope of this specification.

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ARIB	ARIB STD-T63-23.057V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/23/A23057-700.pdf
CCSA	CCSA-TSD-123 057	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 057	7.0.0	Published	2007-06-22	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0223057v700
ATIS	ATIS.3GPP.23.057V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.057(R7-7.0.0)	7.0.0	Approved	2007-12-24	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.057(R7-7.0.0).zip

10.3.22 TS 23.060 General packet radio service (GPRS) Service description; Stage 2

The document defines the Stage 2 service description for the general packet radio service (GPRS) which is a packet bearer service and a main part of the packet domain. [ITU-T I.130] describes a three-stage method for characterization of telecommunication services, and [ITU-T Q.65] defines Stage 2 of the method.

The document does not cover the radio access network functionality. TS 23.064 contains an overall description of the GSM GPRS access network. 3G TS 25.301 contains an overall description of the UMTS terrestrial radio access network. 3G TS 43.051 contains an overall description of GSM/EDGE radio access network.

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CCSA	CCSA-TSD-123 060	7.5.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 060	7.5.0	Published	2007-10-08	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0223060v750
ATIS	ATIS.3GPP.23.060V 750-2007	7.5.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.060(R7-7.4.0)	7.4.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.060(R7-7.4.0).zip
TTC	TS-3GA-23.060(Rel7)v7.5.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23060rel7v750.pdf

10.3.23 TS 23.066 Support of mobile number portability (MNP); Technical realization; Stage 2

The document describes several alternatives for the realization of mobile number portability.

The document includes information applicable to network operators, service providers, switch and database manufacturers and national regulators.

It is left to operator and implementation decisions which option, or combination of options, is used, taking into account the regulatory and architectural constraints that may prevail. The possible implications of these options on internal node functions and on signalling performance are not covered in the document.

Normative Annex A of the document describes the technical realization of the handling of calls to ported UMTS or GSM mobile subscribers using IN technology.

Normative Annex C of the document describes the technical realization of the handling of calls to ported UMTS or GSM mobile subscribers using signalling relay technology.

Normative Annexes A and C describe alternative solutions. The network operator may choose the solution to be used in his network.

Normative Annex B of the document describes the technical realization of the handling of non-call related SCCP signalling for ported UMTS or GSM mobile subscribers using signalling relay technology.

The document does not specify the porting process.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 066	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 066	7.0.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423066v700
ATIS	ATIS.3GPP.23.066V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.066(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.066(R7-7.0.0).zip
TTC	TS-3GA-23.066(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23066rel7v700.pdf

10.3.24 TS 23.067 Enhanced multi-level precedence and pre-emption service (eMLPP); Stage 2

The document specifies the Stage 2 description of the enhanced multi-level precedence and pre-emption service (eMLPP) which provides different call priorities in combination with fast call set-up and pre-emption for different applications according to 3G TS 22.067.

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CCSA	CCSA-TSD-123 067	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 067	7.1.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423067v710
ATIS	ATIS.3GPP.23.067V 710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.067(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.067(R7-7.1.0).zip
TTC	TS-3GA-23.067(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23067rel7v710.pdf

10.3.25 TS 23.072 Call deflection (CD) supplementary service; Stage 2

This Technical Specification gives the Stage 2 description of the call deflection supplementary service.

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ETSI	TS 123 072	7.0.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423072v700
ATIS	ATIS.3GPP.23.072V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.072(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.072(R7-7.0.0).zip
TTC	TS-3GA-23.072(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23072rel7v700.pdf

10.3.26 TS 23.078 Customized applications for mobile network enhanced logic (CAMEL) Phase 4; Stage 2

The document specifies the Stage 2 description for the fourth phase (see TS 22.078) of the customized applications for mobile network enhanced logic (CAMEL) feature which provides the mechanisms to support services of operators which are not covered by standardized services even when roaming outside the HPLMN.

The CAMEL feature is a network feature and not a supplementary service. It is a tool to help the network operator to provide the subscribers with the operator specific services even when roaming outside the HPLMN.

In this document, the GSM service control function (gsmSCF) is treated as being part of the HPLMN. The regulatory environment in some countries may require the possibility that the gsmSCF and the HPLMN are controlled by different operators, and the gsmSCF and the HPLMN are therefore distinct entities.

The fourth phase of the CAMEL feature supports, in addition to the third phase of the CAMEL:
– interactions with optimal routing;
– call party handling;
– DTMF mid call procedure for mobile originated and mobile terminating calls;
– inclusion of flexible tone injection;
– provision of location information of called subscriber;
– provide location information during ongoing call;
– CAMEL control over MT SMS;
– notification of GPRS mobility management to CSE;
– inclusion of ODB data in any time modification;
– enhancement of any time interrogation and provide subscriber information for PS domain;
– mobile number portability database interrogation;
– criteria for the provision of location information during ongoing call;
– enhanced dialled services;
– enhancement to establish temporary connection.

CAMEL applicability to IP-based multimedia services is introduced in the fourth phase of the CAMEL. It is specified in TS 23.278.

CAMEL is not applicable to emergency set-up (TS 12), i.e., if an emergency call is requested, then the gsmSSF shall not be invoked.

The mechanism described in this document addresses especially the need for information exchange between the VPLMN or IPLMN and the HPLMN for support of operator-specific services. Any user procedures for the control of operator-specific services are outside the scope of this document. Subscribers who have subscribed to operator specific services and therefore need the functional support of the CAMEL feature shall be marked in the HPLMN and VPLMN. In case a subscriber is marked to need CAMEL support, the appropriate procedures which provide the necessary information to the VPLMN or the HPLMN are invoked. It is possible for the HPLMN to instruct the VPLMN or IPLMN to interact with a gsmSCF which is controlled by the HPLMN.

The specification of operator specific services is outside the scope of this document.

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CCSA	CCSA-TSD-123 078	7.9.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 078	7.9.0	Published	2007-10-08	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423078v790
ATIS	ATIS.3GPP.23.078V790-2007	7.9.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.078(R7-7.8.0)	7.8.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.078(R7-7.8.0).zip
TTC	TS-3GA-23.078(Rel7)v7.9.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23078rel7v790.pdf

10.3.27 TS 23.079 Support of optimal routing (SOR); Technical realization; Stage 2

The document specifies the technical realization of the first phase of the network feature support of optimal routing (SOR). The first phase of SOR provides:

– as a network operator option, a method to route a call from one mobile subscriber directly to another mobile subscriber who is in the same country as the calling mobile subscriber or in the called mobile subscriber's home country, without needing to connect the call via the HPLMN of the called subscriber, even though the called mobile subscriber has roamed outside his HPLMN;

– a method to forward calls when a called mobile subscriber who has roamed outside his home country is busy, or is not reachable, or does not reply, to a forwarded-to destination in the HPLMN country of the called subscriber or the VPLMN country of the called subscriber, without needing to connect the forwarded call via the VPLMN of the called subscriber;

– a method to combine the optimal routing described in the first bullet point above with the optimal routing described in the second bullet point above.

Optimal routing of a call is permitted only if all entities involved in handling the call support optimal routing.

Other cases of optimal routing (e.g., calls where the calling and called subscribers are in different countries, forwarding to a mobile subscriber or multiple forwarding) will be considered for inclusion in later phases.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 079	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 079	7.0.0	Published	2007-07-19	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423079v700
ATIS	ATIS.3GPP.23.079V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.079(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.079(R7-7.0.0).zip
TTC	TS-3GA-23.079(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23079rel7v700.pdf

10.3.28 TS 23.081 Line identification supplementary services; Stage 2

This document gives the Stage 2 description of the call identification supplementary services.

The group line identification supplementary services are divided into the following four supplementary services:

– Calling line identification presentation (CLIP);
– Calling line identification restriction (CLIR);
– Connected line identification presentation (COLP);
– Connected line identification restriction (COLR).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 081	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 081	7.0.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423081v700
ATIS	ATIS.3GPP.23.081V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.081(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.081(R7-7.0.0).zip
TTC	TS-3GA-23.081(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23081rel7v700.pdf

10.3.29 TS 23.082 Call forwarding (CF) supplementary services; Stage 2

The document gives the Stage 2 description of the call forwarding supplementary services.

The group of supplementary services call offering supplementary services is divided into 4 different supplementary services:

– Call forwarding unconditional (CFU);

– Call forwarding on mobile subscriber busy (CFB);

– Call forwarding on no reply (CFNRy);

– Call forwarding on mobile subscriber not reachable (CFNRc).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 082	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 082	7.1.0	Published	2007-10-08	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423082v710
ATIS	ATIS.3GPP.23.082V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.082(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.082(R7-7.0.0).zip
TTC	TS-3GA-23.082(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23082rel7v710.pdf

10.3.30 TS 23.083 Call waiting (CW) and call hold (HOLD) supplementary service; Stage 2

This document gives the Stage 2 description of the call completion supplementary services.

The group of call completion supplementary services is divided into the following two supplementary services:

– Call waiting (CW);

– Call hold (HOLD).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 083	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 083	7.0.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423083v700
ATIS	ATIS.3GPP.23.083V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.083(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.083(R7-7.0.0).zip
TTC	TS-3GA-23.083(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23083rel7v700.pdf

10.3.31 TS 23.084 Multi-party (MPTY) supplementary service; Stage 2

The document gives the Stage 2 description of the multi-party supplementary services.

Only one multi-party supplementary service has been defined: this is the multi-party (MPTY) service.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 084	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 084	7.0.0	Published	2007-07-19	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423084v700
ATIS	ATIS.3GPP.23.084V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.084(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.084(R7-7.0.0).zip
TTC	TS-3GA-23.084(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23084rel7v700.pdf

10.3.32 TS 23.085 Closed user group (CUG) supplementary service; Stage 2

The document gives the Stage 2 description of the closed user group supplementary service.

The community of interest supplementary service defined is:

– Closed user group (CUG)

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 085	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 085	7.0.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423085v700
ATIS	ATIS.3GPP.23.085V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.085(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.085(R7-7.0.0).zip
TTC	TS-3GA-23.085(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23085rel7v700.pdf

10.3.33 TS 23.086 Advice of charge (AoC) supplementary service; Stage 2

The document gives the Stage 2 description of the advice of charge (AoC) supplementary services.

The charging supplementary services currently defined are:

– Advice of charge (Information) (AoCI);
– Advice of charge (Charging) (AoCC).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 086	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 086	7.0.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423086v700
ATIS	ATIS.3GPP.23.086V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.086(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.086(R7-7.0.0).zip
TTC	TS-3GA-23.086(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23086rel7v700.pdf

10.3.34 TS 23.087 User-to-user signalling (UUS) supplementary service; Stage 2

The document gives the Stage 2 description of the user-to-user signalling supplementary services.

The user-to-user supplementary service is divided into 3 different services:

– Service 1 (UUS1);

– Service 2 (UUS2);

– Service 3 (UUS3).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 087	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 087	7.0.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423087v700
ATIS	ATIS.3GPP.23.087V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.087(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.087(R7-7.0.0).zip
TTC	TS-3GA-23.087(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23087rel7v700.pdf

10.3.35 TS 23.088 Call barring (CB) supplementary services; Stage 2

The document gives the Stage 2 description of the call barring services.

The possibility for a mobile subscriber to have certain categories of calls barred originated from or terminated at his access.

Barring of outgoing calls:

– Barring of all outgoing calls (BAOC) (Barring program 1);

– Barring of outgoing international calls (BOIC) (Barring program 2);

– Barring of outgoing international calls EXCEPT those directed to the home PLMN country (BOIC-exHC) (Barring program 3).

Barring of incoming calls:

– Barring of all incoming calls (BAIC) (Barring program 1);

– Barring of incoming calls when roaming outside the home PLMN country

(BIC-Roam) (Barring program 2).

NOTE – The call barring program "incoming calls when roaming outside the home PLMN country" is only relevant if, as a general rule, the called mobile subscriber pays the charges for the forwarded part of the call from his home PLMN country to any other country.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 088	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 088	7.0.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423088v700
ATIS	ATIS.3GPP.23.088V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.088(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.088(R7-7.0.0).zip
TTC	TS-3GA-23.088(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23088rel7v700.pdf

10.3.36 TS 23.090 Unstructured supplementary service data (USSD); Stage 2

The document gives the Stage 2 description of unstructured supplementary service data (USSD).

The unstructured supplementary service data (USSD) mechanism allows the mobile station (MS) user and a PLMN operator defined application to communicate in a way which is transparent to the MS and to intermediate network entities. The mechanism allows development of PLMN specific supplementary services. Figure 10.3.36-1 shows how handling of USSD is carried out, independently of the applications.
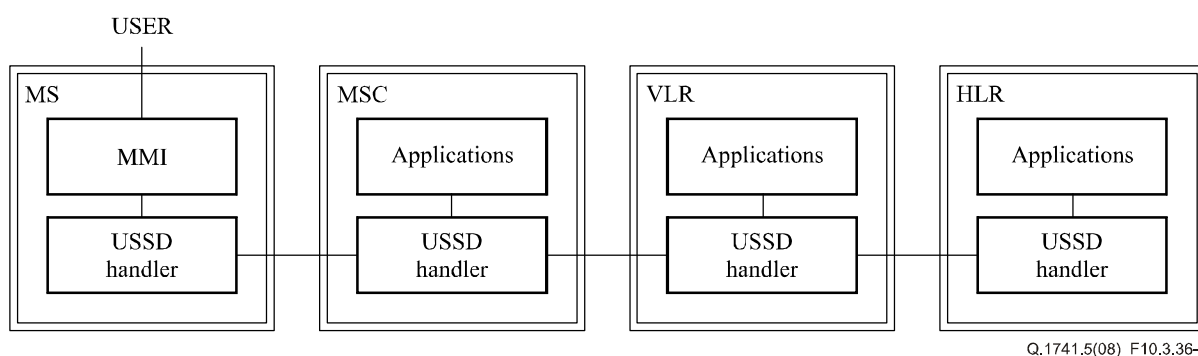
Figure 10.3.36-1 – Handling of USSD

The document defines the requirements for handling USSD at the MS and network entities. It does not include specification of particular applications, nor does it specify how a particular application is selected. Where more than one application exists at a network entity, routing of messages to the correct application is carried out by the USSD handler. The MMI for USSD is specified in

TS 22.030 and TS 22.090. The alphabet indicator and the data-coding scheme are defined in TS 23.038.

USSD may be initiated by the MS user, or by the network in the following ways:

– Network initiated USSD;

– Mobile initiated USSD.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 090	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 090	7.0.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423090v700
ATIS	ATIS.3GPP.23.090V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.090(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.090(R7-7.0.0).zip
TTC	TS-3GA-23.090(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23090rel7v700.pdf

10.3.37 TS 23.091 Explicit call transfer (ECT) supplementary service; Stage 2

The document gives the Stage 2 description of the call transfer supplementary services.

Only one call transfer supplementary service has been defined, this is the explicit call transfer (ECT) supplementary service, and is described in this document.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 091	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 091	7.0.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423091v700
ATIS	ATIS.3GPP.23.091V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.091(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.091(R7-7.0.0).zip
TTC	TS-3GA-23.091(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23091rel7v700.pdf

10.3.38 TS 23.093 Technical realization of completion of calls to busy subscriber (CCBS); Stage 2

This Technical Specification gives the Stage 2 description of the completion of calls to busy subscriber (CCBS) supplementary service.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 093	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 093	7.1.0	Published	2007-10-08	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423093v710
ATIS	ATIS.3GPP.23.093V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.093(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.093(R7-7.0.0).zip
TTC	TS-3GA-23.093(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23093rel7v710.pdf

10.3.39 TS 23.094 Follow Me; Stage 2

The document specifies the Stage 2 description for the Follow Me feature.

The Follow Me feature enables a mobile subscriber A to manipulate the Follow Me data of a remote party B in such a way that subsequent calls directed to remote party B will be forwarded to subscriber A.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 094	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 094	7.0.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423094v700
ATIS	ATIS.3GPP.23.094V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.094(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.094(R7-7.0.0).zip
TTC	TS-3GA-23.094(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23094rel7v700.pdf

10.3.40 TS 23.096 Name identification supplementary service; Stage 2

The document gives the Stage 2 description of the name identification supplementary services.

The group of name identification supplementary services contains the following supplementary service:

      CNAP – Calling name presentation.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 096	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 096	7.0.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423096v700
ATIS	ATIS.3GPP.23.096V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.096(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.096(R7-7.0.0).zip
TTC	TS-3GA-23.096(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23096rel7v700.pdf

10.3.41 TS 23.097 Multiple subscriber profile (MSP) Phase 2; Stage 2

The document specifies the Stage 2 description of the multiple subscriber profile (MSP) supplementary service Phase 2. MSP Phase 2 is implemented using CAMEL Phase 3.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 097	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 097	7.0.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423097v700
ATIS	ATIS.3GPP.23.097V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.097(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.097(R7-7.0.0).zip
TTC	TS-3GA-23.097(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23097rel7v700.pdf

10.3.42 TS 23.101 General UMTS architecture

This document defines the basic physical and functional separation of UMTS. The contents of this specification is limited to those features that are common to all UMTS networks independent of their origin. It identifies and names the reference points and functional groupings appearing at this level.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 101	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 101	7.0.0	Published	2007-06-22	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0223101v700
ATIS	ATIS.3GPP.23.101V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.101(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.101(R7-7.0.0).zip
TTC	TS-3GA-23.101(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23101rel7v700.pdf

10.3.43 TS 23.107 Quality of service (QoS) concept and architecture

The document provides the framework for quality of service within UMTS. The main purpose is to specify the list of attributes applicable to UMTS bearer service and radio access bearer service, as well as describe the quality of service architecture to be used in UMTS networks.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-23.107V7.1.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/23/A23107-710.pdf
CCSA	CCSA-TSD-123 107	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 107	7.1.0	Published	2007-10-08	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0223107v710
ATIS	ATIS.3GPP.23.107V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.107(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.107(R7-7.0.0).zip

10.3.44 TS 23.108 Mobile radio interface layer 3 specification, core network protocols; Stage 2

This document specifies the procedures used at the radio interface (Reference Point Um, see TS 24.002) for call control (CC), mobility management (MM), and session management (SM).

When the notations for "further study" or "FS" or "FFS" are present in this document, they mean that the indicated text is not a normative portion of this standard.

These procedures are defined in terms of messages exchanged over the control channels of the radio interface. The control channels are described in TS 44.003.

The structured functions and procedures of this protocol and the relationship with other layers and entities are described in general terms in TS 24.007.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 108	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 108	7.0.0	Published	2007-07-05	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0123108v700
ATIS	ATIS.3GPP.23.108V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.108(R7-7.0.0)	7.0.0	Approved	2007-12-24	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.108(R7-7.0.0).zip
TTC	TS-3GA-23.108(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23108rel7v700.pdf

10.3.45 TS 23.110 Universal mobile telecommunications system (UMTS) access stratum; services and functions

The present document specifies the services provided by the access stratum to the rest of the system. The adopted architecture is given by 3GPP TS 23.101.

The present document describes the main functions visible at the boundary between the access stratum and the rest of the system; it describes in general terms the information flows, both control and user data, over this boundary and relevant for the access stratum.

The present document is the basis of the detailed specifications of the protocols which rule the information flows, both control and user data, between the access stratum and the parts of UMTS outside the access stratum, and of the detailed specifications of the UTRAN. These detailed specifications are to be found in other Technical Specifications.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 110	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 110	7.0.0	Published	2007-06-22	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0223110v700
ATIS	ATIS.3GPP.23.110V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.110(R7-7.0.0)	7.0.0	Approved	2007-12-24	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.110(R7-7.0.0).zip
TTC	TS-3GA-23.110(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23110rel7v700.pdf

10.3.46 TS 23.116 Super-charger technical realization; Stage 2

The document specifies the Stage 2 description of the super-charger that provides a mechanism to reduce the signalling traffic associated with mobility.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 116	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 116	7.0.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423116v700
ATIS	ATIS.3GPP.23.116V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.116(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.116(R7-7.0.0).zip
TTC	TS-3GA-23.116(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23116rel7v700.pdf

10.3.47 TS 23.119 Gateway location register (GLR); Stage2

The document gives the Stage 2 description of the gateway location register (GLR) within the UMTS core network as a means of reducing the amount of MAP signalling traffic associated with location management carried over inter-PLMN links for roaming users.

The document will be restricted of the case where the GLR supports one VPLMN only.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 119	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 119	7.0.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423119v700
ATIS	ATIS.3GPP.23.119V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.119(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.119(R7-7.0.0).zip
TTC	TS-3GA-23.119(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23119rel7v700.pdf

10.3.48 TS 23.122 Non-access-stratum (NAS) functions related to mobile station (MS) in idle mode

This Technical Specification gives an overview of the tasks undertaken by the core network protocols of a mobile station (MS) when in idle mode, that is, switched on but not having a dedicated channel allocated. It also describes the corresponding network functions. The idle mode functions are also performed by a GPRS MS as long as no dedicated channel is allocated to the MS. The conditions when the idle mode functions are performed by an MS in the UTRA RRC connected mode states are specified in 3G TS 25.331.

This Technical Specification outlines how the requirements of the 22-series Technical Specifications (especially 3G TS 22.011) on idle mode operation shall be implemented. Further details are given in 3G TS 24.008.

This Technical Specification gives a general description of the idle mode process. The main requirements and technical solutions of those requirements are included. The processes used in idle mode are described.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 122	7.10.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 122	7.10.0	Published	2007-10-08	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0123122v7a0
ATIS	ATIS.3GPP.23.122V7100-2007	7.10.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.122(R7-7.9.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.122(R7-7.9.0).zip
TTC	TS-3GA-23.122(Rel7)v7.10.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23122rel7v7100.pdf

10.3.49 TS 23.125 Overall high-level functionality and architecture impacts of flow-based charging; Stage 2

The present document specifies the overall high-level functionality and architecture impacts of flow-based charging.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 125	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 125	7.0.0	Published	2007-06-25	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0223125v700
ATIS	ATIS.3GPP.23.125V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.125(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.125(R7-7.0.0).zip
TTC	TS-3GA-23.125(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23125rel7v700.pdf

10.3.50 TS 23.135 Multicall supplementary service; Stage 2

The document gives the Stage 2 description of the multicall supplementary service.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 135	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 135	7.0.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423135v700
ATIS	ATIS.3GPP.23.135V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.135(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.135(R7-7.0.0).zip
TTC	TS-3GA-23.135(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23135rel7v700.pdf

10.3.51 TS 23.141 Presence service; architecture and functional description

The present document describes the Stage 2 description (architectural solution and functionalities) for the presence service, which includes the elements necessary to realize the Stage 1 requirements in 3GPP TS 22.141.

The present document includes information applicable to network operators, service providers and manufacturers.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 141	7.3.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 141	7.3.0	Published	2007-10-08	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0223141v730
ATIS	ATIS.3GPP.23.141V730-2007	7.3.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.141(R7-7.3.0)	7.3.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.141(R7-7.3.0).zip
TTC	TS-3GA-23.141(Rel7)v7.3.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23141rel7v730.pdf

10.3.52 TS 23.146 Technical realization of facsimile Group 3 service – Non-transparent

The document describes the procedures allowing the technical realization of the real-time end-to-end facsimile group 3 service within the UMTS PLMN using non-transparent network support according to the definition of the teleservices 61 and 62 specified in TS 22.003. Within the document, particular attention is given to teleservice "Alternate speech/facsimile group 3" (Teleservice 61). However, the definitions apply also to teleservice "Automatic facsimile group 3" (Teleservice 62) with the exception of all actions concerned with the speech phase. Consequently, in the following descriptions, the term "Teleservice" denotes both teleservice 61 and teleservice 62 as appropriate.

NOTE – [ITU-T V.25 *bis*] is outdated. References to V.25 *bis* procedures need to be replaced by corresponding procedures based on Rec. ITU-T V.250 and on TS 27.007.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 146	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 146	7.0.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0323146v700
ATIS	ATIS.3GPP.23.146V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.146(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.146(R7-7.0.0).zip
TTC	TS-3GA-23.146(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23146rel7v700.pdf

10.3.53 TS 23.153 Out-of-band transcoder control; Stage 2

This Technical Specification specifies the Stage 2 description of the out-of-band transcoder control for speech services. It describes the principles and procedures to support transcoder free operation, tandem free operation and the interworking between TrFO and TFO. Transcoder at the edge is also part of this specification.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 153	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 153	7.2.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423153v720
ATIS	ATIS.3GPP.23.153V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.153(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.153(R7-7.2.0).zip
TTC	TS-3GA-23.153(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23153rel7v720.pdf

10.3.54 TS 23.167 IP multimedia subsystem (IMS) emergency sessions

This document defines the stage-2 service description for emergency services in the IP multimedia core network subsystem (IMS), including the elements necessary to support IP multimedia (IM) emergency services. [ITU-T I.130] describes a three-stage method for the characterization of telecommunication services, and [ITU-T Q.65] defines stage 2 of the method.

This document covers also the access network aspects that are crucial for the provisioning of IMS emergency services. Other 3GPP specifications that are related to the IMS emergency services are TS 23.228 on IMS in general, including fixed broadband access aspects, TS 23.060 and TS 23.234 describing GPRS and 3GPP/WLAN interworking respectively and TS 23.271 that covers location services. TS 25.301 contains an overall description of the UMTS terrestrial radio access network.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 167	7.6.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 167	7.6.0	Published	2007-10-08	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0223167v760
ATIS	ATIS.3GPP.23.167V760-2007	7.6.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.167(R7-7.4.0)	7.4.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.167(R7-7.4.0).zip
TTC	TS-3GA-23.167(Rel7)v7.6.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23167rel7v760.pdf

10.3.55 TS 23.172 Technical realization of circuit switched (CS) multimedia service; UDI/RDI fallback and service modification; Stage 2

This specification describes the service change and UDI fallback (SCUDIF) feature. This service is available to UDI/RDI multimedia calls and allows users to achieve successful call establishment when end-to-end circuit-switched (CS) multimedia is not possible (fallback to speech) or when signalling of the feature is not possible in the network (fallback to preferred service or speech). Furthermore, it allows the users to swap between a multimedia service and basic speech during an established call.

NOTE – In this document, the term "multimedia" refers to UDI/RDI multimedia unless specifically stated.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 172	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 172	7.0.0	Published	2007-07-13	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0323172v700
ATIS	ATIS.3GPP.23.172V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.172(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.172(R7-7.0.0).zip
TTC	TS-3GA-23.172(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23172rel7v700.pdf

10.3.56 TS 23.198 Open service access (OSA); Stage 2

This document specifies the stage 2 of the open service access (OSA).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 198	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 198	7.2.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0523198v720
ATIS	ATIS.3GPP.23.198V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.198(R7-7.3.0)	7.3.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.198(R7-7.3.0).zip
TTC	TS-3GA-23.198(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23198rel7v720.pdf

10.3.57 TS 23.202 Circuit switched data bearer services

The present document provides an overview of the architecture and issues related to the provision of circuit switched bearer services in a 3G mobile network (UMTS) operating in UTRAN or GERAN Iu mode. Handover to GERAN A/Gb mode is also considered.

NOTE – The Gb interface does not play any role in the scope of the present document although the term "A/Gb mode" is used.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 202	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 202	7.0.0	Published	2007-07-13	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0323202v700
ATIS	ATIS.3GPP.23.202V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.202(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.202(R7-7.0.0).zip
TTC	TS-3GA-23.202(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23202rel7v700.pdf

10.3.58 TS 23.203 Policy and charging control architecture

The present document specifies the overall stage 2 level functionality for policy and charging control that encompasses the following high level functions for IP-CANs (e.g., GPRS, I-WLAN, fixed broadband, etc.):

– Flow based charging, including charging control and online credit control;

– Policy control (e.g., gating control, QoS control, etc.).

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-23.203V7.4.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/23/A23203-740.pdf
CCSA	CCSA-TSD-123 203	7.4.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 203	7.4.0	Published	2007-10-08	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0223203v740
ATIS	ATIS.3GPP.23.203V 740-2007	7.4.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.203(R7-7.3.0)	7,3,0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.203(R7-7.3.0).zip

10.3.59 TS 23.205 Bearer-independent circuit-switched core network; Stage 2

The document defines the Stage 2 description for the bearer independent CS core network. The Stage 2 shall cover the information flow between the GMSC server, MSC server and media gateways. Note that nothing in this document shall preclude an implementation of a combined MSC Server and MGW. This document shall show the CS core network termination of the Iu interface in order to cover the information flow stimulus to the core network and describe the interaction with the supplementary and value-added services and capabilities.

For the purposes of this specification, the protocol used over the Nc interface is an enhanced call control protocol supporting call bearer separation such as BICC (which is specified in 3G TS 29.205). The protocol used over the Mc interface is [ITU-T H.248.1]. Existing specifications and Recommendations shall not be repeated as such, the relevant specification shall be referred to.

This Technical Specification is applicable only for ATM or IP transport in the CS core network.
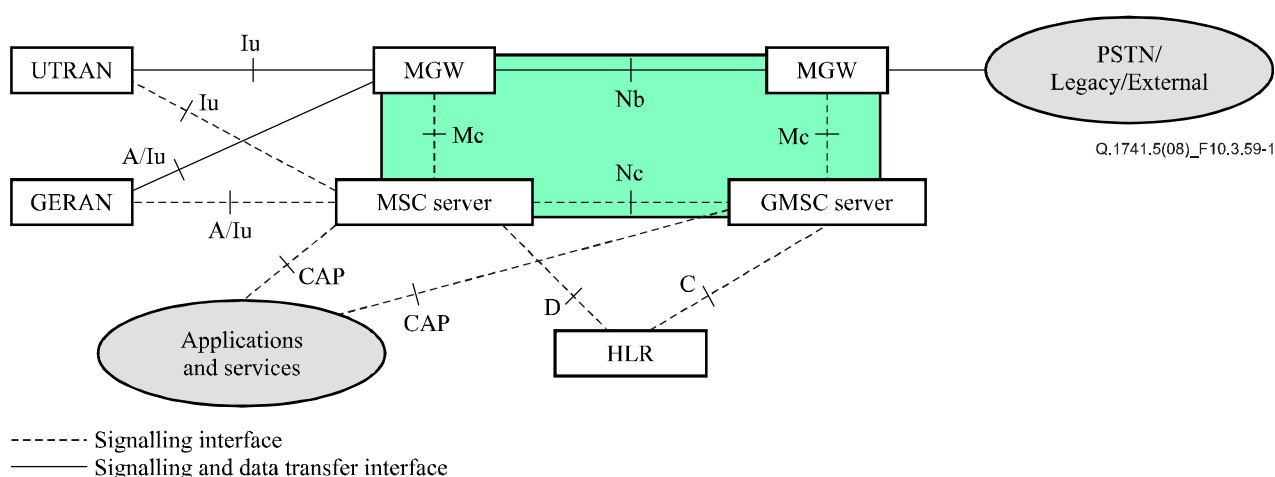
Figure 10.3.59-1 – CS core network logical architecture

The CAP interfaces and the interfaces towards the HLR are outside the scope of this Technical Specification.

Details of transcoder-free operation are outside the scope of this Technical Specification. Please see TS 23.153 for more information.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 205	7.6.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 205	7.6.0	Published	2007-10-11	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423205v760
ATIS	ATIS.3GPP.23.205V 760-2007	7.6.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.205(R7-7.5.0)	7.5.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.205(R7-7.5.0).zip
TTC	TS-3GA-23.205(Rel7)v7.6.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23205rel7v760.pdf

10.3.60 TS 23.206 Voice call continuity (VCC) between circuit switched (CS) and IP multimedia subsystem (IMS); Stage 2

The present document specifies the functional architecture and information flows of the voice call continuity feature which provides the capability to transfer the path of an existing voice call between a 3GPP CS system (GSM/UMTS) and IMS, and vice versa.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-23.206V7.4.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/23/A23206-740.pdf
CCSA	CCSA-TSD-123 206	7.4.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 206	7.4.0	Published	2007-10-08	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0223206v740
ATIS	ATIS.3GPP.23.206V 740-2007	7.4.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.206(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.206(R7-7.2.0).zip

10.3.61 TS 23.207 End-to-end quality of service (QoS) concept and architecture

This document provides the framework for end-to-end quality of service involving GPRS and complements TS 23.107 which describes the framework for quality of service within UMTS. The end-to-end QoS architecture is provided in Figure 10.3.61-1. The document describes the interaction between the TE/MT local bearer service, the GPRS bearer service, and the external bearer service, and how these together provide quality of service for the end-to-end service. The document also describes IP level mechanisms necessary in providing end-to-end quality of service involving GPRS networks, including possible interaction between the IP level and the GPRS level, as well as the application level and the IP level.

In contrast to the TS 23.107, this specification is only applicable to GPRS packet-switched access services, and includes aspects of interworking to the IM subsystem as well as PSTN and other networks. The document does not cover the circuit-switched access services.
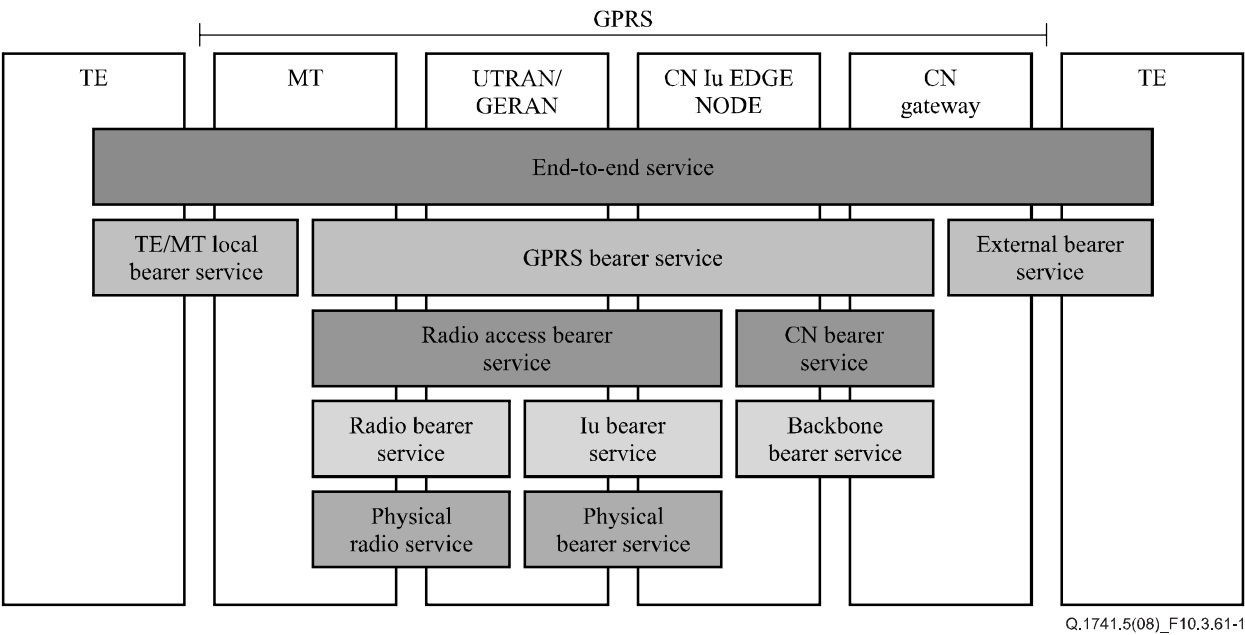
Figure 10.3.61-1 – End-to-end QoS architecture

	Document No.	**Version**	**Status**	**Issued date**	**Location**
ARIB	ARIB STD-T63-23.207V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/23/A23207-700.pdf
CCSA	CCSA-TSD-123 207	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 207	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0223207v700
ATIS	ATIS.3GPP.23.207V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.207(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.207(R7-7.0.0).zip

10.3.62 TS 23.218 IP multimedia (IM) session handling; IM call model; Stage 2

This document specifies the IP multimedia (IM) call model for handling of an IP multimedia session origination and termination for an IP multimedia subscriber.

This document includes interactions between an application server and IP multimedia sessions.

The IP multimedia (IM) subsystem Stage 2 is specified in TS 23.228, and the signalling flows for the IP multimedia call control based on SIP and SDP are specified in TS 24.228.

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CCSA	CCSA-TSD-123 218	7.7.1	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 218	7.7.1	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0123218v771
ATIS	ATIS.3GPP.23.218V 771-2007	7.7.1	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.218(R7-7.6.0)	7.6.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.218(R7-7.6.0).zip
TTC	TS-3GA-23.218(Rel7)v7.7.1	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23218rel7v771.pdf

10.3.63 TS 23.221 Architectural requirements

This document covers details the architectural requirements for the GSM in Iu mode and UMTS systems. In particular, it details the high-level requirements for the circuit-switched (CS) domain and the Stage 2 procedures that span more than one domain/subsystem within UMTS and GSM. The reference model to which these procedures apply can be found within 3G TS 23.002. In addition, A mode-to-Iu mode handover for CS services is addressed. Detailed architectural requirements within the subsystems are contained within the remainder of the 23 series of specifications; e.g., the requirements for the packet-switched (PS) domain are contained within 3G TS 23.060 and the requirements for the bearer independent CS core network are contained in 3G TS 23.205.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 221	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 221	7.1.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0223221v710
ATIS	ATIS.3GPP.23.221V 710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.221(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.221(R7-7.2.0).zip
TTC	TS-3GA-23.221(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23221rel7v710.pdf

10.3.64 TS 23.226 Global text telephony (GTT); Stage 2

This Technical Specification defines the Stage 2 description of the real-time text conversation feature called global text telephony (GTT). GTT Stage 2 identifies the functional capabilities needed to support the service described in GTT Stage 1.

This document contains the core functions for a real-time text conversation feature GTT, to be used in combination with other media in conversational services.

GTT offers real-time conversation in text, to be used alone or in combination with other conversational media, and interworking with current and emerging text conversation features in the fixed networks and other mobile networks.

GTT uses a number of functional entities to realize the requirements of the Stage 1 description (TS 22.226). This document describes how the service requirements are realized with these functional entities. As far as possible, existing protocols shall be used for the realization of the global text telephony feature. This may include, e.g., SIP, 3G.324, or circuit-switched voice service as protocol environments, and CTM, AL1 and RTP/text as transmission protocols. It also means usage of existing text presentation format Rec. ITU-T T.140, common to all GTT text conversation environments.

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CCSA	CCSA-TSD-123 226	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 226	7.0.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0223226v700
ATIS	ATIS.3GPP.23.226V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.226(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.226(R7-7.0.0).zip
TTC	TS-3GA-23.226(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23226rel7v700.pdf

10.3.65 TS 23.228 IP multimedia subsystem (IMS); Stage 2

This document defines the Stage 2 service description for the IP multimedia core network subsystem (IMS), which includes the elements necessary to support IP multimedia (IM) services in UMTS. [ITU-T I.130] describes a three-stage method for characterization of telecommunication services, and [ITU-T Q.65] defines Stage 2 of the method.

This document does not cover the access network functionality except as they relate to provision of IM services. The TS 23.060 describes GPRS. GSM 03.64 contains an overall description of the GSM GPRS radio interface. TS 25.301 contains an overall description of the UMTS terrestrial radio access network.

This document identifies the mechanisms to enable support for IP multimedia applications. In order to align IP multimedia applications wherever possible with non-3GPP IP applications, the general approach is to adopt non-3GPP-specific IP-based solutions.

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ARIB	ARIB STD-T63-23.228V7.9.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/23/A23228-790.pdf
CCSA	CCSA-TSD-123 228	7.9.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 228	7.9.0	Published	2007-10-12	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0223228v790
ATIS	ATIS.3GPP.23.228V790-2007	7.9.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.228(R7-7.7.0)	7.7.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.228(R7-7.7.0).zip

10.3.66 TS 23.234 3GPP system to wireless local area network (WLAN) interworking; system description

This document specifies system description for interworking between 3GPP systems and wireless local area networks (WLANs). The intent of 3GPP-WLAN interworking is to extend 3GPP services and functionality to the WLAN access environment. The 3GPP-WLAN interworking system provides bearer services allowing a 3GPP subscriber to use a WLAN to access 3GPP PS-based services.

This specification defines a 3GPP system architecture and procedures to do the following:

– Provide access, authentication and authorization (AAA) services to the 3GPP-WLAN interworking system based on subscription.

– Provide access to the locally connected IP network (e.g., the Internet) if allowed by subscription.

– Provide WLAN UEs with IP bearer capability to the operator's network and PS services, if allowed by subscription.

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CCSA	CCSA-TSD-123 234	7.5.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 234	7.5.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0223234v750
ATIS	ATIS.3GPP.23.234V750-2007	7.5.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.234(R7-7.6.0)	7.6.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.234(R7-7.6.0).zip
TTC	TS-3GA-23.234(Rel7)v7.5.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23234rel7v750.pdf

10.3.67 TS 23.236 Intra-domain connection of radio access network (RAN) nodes to multiple core network (CN) nodes

This document covers the details for the intra-domain connection of RAN nodes to multiple CN nodes for GSM and UMTS systems. In particular, it details the impacts to GSM and UMTS systems and the Stage 2 procedures for the support of connecting a RNC or BSC to multiple MSC servers or SGSNs. The overall solution is described, and the detailed impacts on the existing specifications are identified.

The reference model to which these procedures apply can be found within TS 23.002. Detailed architectural requirements within the subsystems are contained within the remainder of the 23 series of specifications, e.g., the requirements for the packet-switched (PS) domain are contained within TS 23.060, and the requirements for the bearer independent CS core network are contained in TS 23.205.

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ARIB	ARIB STD-T63-23.236V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/23/A23236-700.pdf
CCSA	CCSA-TSD-123 236	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 236	7.0.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0223236v700
ATIS	ATIS.3GPP.23.236V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.236(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.236(R7-7.0.0).zip

10.3.68 TS 23.240 3GPP generic user profile (GUP); architecture (Stage 2)

The objective of specifying the 3GPP generic user profile is to provide a conceptual description to enable harmonized usage of the user-related information located in different entities. Technically, the 3GPP generic user profile provides an architecture, data description and interface with mechanisms to handle the data.

The present document defines the Stage 2 architecture description to the 3GPP generic user profile (GUP), which includes the elements necessary to realize the Stage 1 requirements in 3G TS 22.240.

The present document includes the GUP reference architecture with descriptions of functional entities, and their interfaces and procedures, as well as the high-level information model for the GUP data.

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CCSA	CCSA-TSD-123 240	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 240	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0223240v700
ATIS	ATIS.3GPP.23.240V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.240(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.240(R7-7.0.0).zip
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10.3.69 TS 23.246 Multimedia broadcast/multicast service (MBMS); architecture and functional description

The present document describes the Stage 2 description (architectural solution and functionalities) for the MBMS bearer service, which includes, together with MBMS user services defined in 3G TS 26.346, all the elements necessary to realize the Stage 1 requirements in 3G TS 22.146 and 3G TS 22.246.

The present document also includes considerations on the manner in which user services should make use of the MBMS bearer service described herein.

The present document includes information applicable to network operators, service providers and manufacturers.

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CCSA	CCSA-TSD-123 246	7.4.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 246	7.4.0	Published	2007-10-11	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0223246v740
ATIS	ATIS.3GPP.23.246V740-2007	7.4.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.246(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.246(R7-7.2.0).zip
TTC	TS-3GA-23.246(Rel7)v7.4.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23246rel7v740.pdf

10.3.70 TS 23.251 Network sharing; architecture and functional description

Network sharing is a way for operators to share the heavy deployment costs for mobile networks, especially in the roll-out phase. In the current mobile telephony marketplace, functionality that enables various forms of network sharing is becoming more and more important.

Scenarios and user requirements are described in 3G TR 22.951, while the current document presents the Stage 2 details and descriptions of how these requirements are supported in a 3GPP network.

The present document covers the details of network sharing. It shows how several core network operators can share one radio access network and details the impacts on the network architecture. All UEs shall comply with existing requirements, among them PLMN selection and system information reception. The present document defines additional requirements for network-sharing supporting UEs.

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CCSA	CCSA-TSD-123 251	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 251	7.0.0	Published	2007-06-25	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0223251v700
ATIS	ATIS.3GPP.23.251V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.251(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.251(R7-7.0.0).zip
TTC	TS-3GA-23.251(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23251rel7v700.pdf

10.3.71 TS 23.271 Functional stage 2 description of LCS

The document specifies Stage 2 of the location services (LCS) feature in UMTS and GSM, which provides the mechanisms to support mobile location services for operators, subscribers and third party service providers.

Location services may be considered as a network-provided enabling technology consisting of standardized service capabilities, which enable the provision of location applications. The application(s) may be service-provider specific. The description of the numerous and varied possible location applications which are enabled by this technology are outside the scope of this document. However, clarifying examples of how the functionality being described may be used to provide specific location services may be included.

This Stage 2 service description covers the LCS system functional model for the whole system, the LCS system architecture, state descriptions, message flows, etc.

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CCSA	CCSA-TSD-123 271	7.9.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 271	7.9.0	Published	2007-10-11	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0223271v790
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TTA	TTAT.3G-23.271(R7-7.8.0)	7.8.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.271(R7-7.8.0).zip
TTC	TS-3GA-23.271(Rel7)v7.9.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23271rel7v790.pdf

10.3.72 TS 23.278 Customized applications for mobile network enhanced logic (CAMEL) Phase 4 – Stage 2; IM CN interworking

This document specifies the Stage 2 description for the customized applications for mobile network enhanced logic (CAMEL) feature which provides the mechanisms to support services for the IP multimedia core network (IM CN) subsystem.

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CCSA	CCSA-TSD-123 278	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 278	7.1.0	Published	2006-05-31	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423278v710
ATIS	ATIS.3GPP.23.278V 710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.278(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.278(R7-7.1.0).zip
TTC	TS-3GA-23.278(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23278rel7v710.pdf

10.3.73 TS 23.279 Combining circuit switched (CS) and IP multimedia subsystem (IMS) services; Stage 2

The document provides architectural details to combine CS services and IMS services for using them in parallel between the same two users in a peer-to-peer context. The document provides a detailed description of how capabilities and identities are exchanged to enable the combination of CS and IMS services between the same two UEs.

The present document includes the following capabilities that enable the combination of CS and IMS services:

– Radio capability exchange.

– SIP based UE terminal capability exchange.

– MSISDN number exchange in SIP.

- Establishing an IMS session in parallel to an ongoing CS call between the same two UEs.
- Establishing a CS call in parallel to an ongoing IMS session between the same two users UEs.
- Network support for establishing multimedia sessions between a UE that uses IMS origination and a UE that uses CSI termination

The individual CS call or IMS service that are combined are described in their respective specifications.

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CCSA	CCSA-TSD-123 279	7.7.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
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ATIS	ATIS.3GPP.23.279V 770-2007	7.7.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.279(R7-7.6.0)	7.6.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.279(R7-7.6.0).zip
TTC	TS-3GA-23.279(Rel7)v7.7.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts23279rel7v770.pdf

10.3.74 TS 23.333 Multimedia resource function controller (MRFC) – Multimedia resource function processor (MRFP) Mp interface: Procedures descriptions

This specification describes the functional requirements and information flows that generate procedures between the multimedia resource function controller (MRFC) and the multimedia resource function processor (MRFP), the Mp interface.

This specification is limited to information flows relevant to the Mp interface; in order to define these procedures and make the functional requirements clear some triggers from an external interface may be described; these may be specified within the Mr interface, for example, or within an AS in which the MRFC function resides. However, for the overall stage 2 procedures of IMS, see 3GPP TS 23.228.

The protocol on the Mp interface is defined to comply with ITU-T H.248.1 gateway control protocol; see [ITU-T H.248.1]. The goal of this specification is to provide the input to defining a formal Profile within the H.248 protocol toolbox specifically for the Mp application.

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CCSA	CCSA-TSD-123 333	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 123 333	7.2.0	Published	2007-10-11	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0423333v720
ATIS	ATIS.3GPP.23.333V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-23.333(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-23.333(R7-7.1.0).zip
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10.3.75 TR 23.903 Redial solution for voice-video switching

Many 3GPP operators regard circuit switched video services as a key part of UMTS. However, there is a strong desire to have an effective and user-friendly method of switching between voice and video services when the user desires and/or when radio conditions change and video mode is no longer available.

Following a study of alternative mechanisms, this Technical Report describes the idle mode redial mechanism which 3GPP-based systems can use to enhance switching between voice and video services.

The present document describes the idle mode redial mechanism which 3GPP-based systems can use to enhance switching between circuit-switched voice and video services.

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ATIS	ATIS.3GPP.23.903V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTC	TR-3GA-23.903(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/tr/tr23903rel7v700.pdf

10.3.76 TR 23.919 Direct tunnel deployment guideline

The present document contains deployment guidelines for the use of direct tunnelling of user plane data between the RNC and the GGSN (earlier known as the one tunnel approach).

This report highlights the impacts of the 3GPP Release 7 direct tunnel solution to the current UMTS system in order to guide equipment development and network deployment.

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CCSA	CCSA-TSD-123 919	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 123 919	7.0.0	Published	2007-07-02	http://pda.etsi.org/pda/home.asp?wkr=DTR/TSGS-0223919v700
ATIS	ATIS.3GPP.23.919V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTC	TR-3GA-23.919(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/tr/tr23919rel7v700.pdf

10.3.77 TR 23.976 Push architecture

The purpose of this technical report is to analyse the service requirements for push services as defined in 3GPP TS 22.174 "Push service; Stage 1".

This technical report describes methods for supporting push services by 3GPP delivery networks. The mechanisms described apply to existing delivery networks for the 3GPP packet-switched (PS) domain, circuit-switched (CS) domain, IP multimedia core network subsystem (IMS), multimedia broadcast/multicast service (MBMS), and wireless local area network (WLAN). Any necessary changes identified during this work will be introduced by means of change requests to the appropriate specifications.

The definition of push functionality that applies to push application servers is outside the scope of this work. The definition of push functionality that is best implemented in push application servers such as a push proxy and push initiator will be undertaken by other standards bodies and industry forums.

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CCSA	CCSA-TSD-123 976	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
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ATIS	ATIS.3GPP.23.976V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTC	TR-3GA-23.976(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/tr/tr23976rel7v700.pdf

10.3.78 TR 23.977 Bandwidth and resource savings and speech enhancements for circuit-switched (CS) networks (BARS)

The objective of this technical report is to identify the full set of requirements for bandwidth and resource savings and improved speech quality, with specific consideration to networks supporting A/Gb mode and the bearer independent circuit-switched core network (BICN). The different architectural solutions to meet these requirements will be assessed.

Consideration shall be made to existing architectures and solutions to provide harmony between 2G nodes, UMTS nodes and external networks (PSTN/ISDN). Backward compatibility to existing solutions and ease of network introduction/upgrade shall be given high importance.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB TR-T12-23.977V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/3_T12/ARIB-TR-T12/Rel7/23/A23977-700.pdf
CCSA	CCSA-TSD-123 977	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 123 977	7.0.0	Published	2007-06-25	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGS-0223977v700
ATIS	ATIS.3GPP.23.977V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.3.79 TR 23.979 3GPP enablers for open mobile alliance (OMA) push-to-talk over cellular (PoC) services; Stage 2

The present document studies the architectural requirements in order to enable services like PoC over 3GPP systems. The report looks into aspects of using 3GPP PS domain and radio access technologies (GERAN, UTRAN) for bearer services and IMS for reachability and connectivity for applications like PoC.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 979	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 123 979	7.0.0	Published	2007-06-25	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGS-0223979v700
ATIS	ATIS.3GPP.23.979V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTC	TR-3GA-23.979(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/tr/tr23979rel7v700.pdf

10.3.80 TR 23.981 Interworking aspects and migration scenarios for IPv4-based IMS implementations

3GPP specifications design the IMS to use exclusively IPv6; however, early IMS implementations and deployments may use IPv4, as specified in clause 5.1 of 3G TS 23.221. Therefore, it is understood that there will exist IPv4-based IMS implementations, namely initial IMS implementations and IMS implementations based on 3GPP2 specifications. This is the motivation to study interworking and migration scenarios related to IPv4-based IMS implementations.

The present document studies interworking and migration scenarios related to IPv4-based IMS implementations. The study provides guidelines for operators and vendors on interworking aspects of IPv4-based IMS implementations, and provides guidelines on migrating to 3GPP IMS using IPv6.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-123 981	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 123 981	7.0.0	Published	2007-06-25	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGS-0223981v700
ATIS	ATIS.3GPP.23.981V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTC	TR-3GA-23.981(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/tr/tr23981rel7v700.pdf

10.4 24-series, Signalling protocols (User equipment – core network)

10.4.1 TS 24.002 GSM-UMTS public land mobile network (PLMN) access reference configuration

The document describes the reference configuration for access to a PLMN.

A user accesses a PLMN via a number of interfaces, including the MS-BS (in A/Gb mode and GERAN Iu mode) and UE-UTRAN (in UTRAN Iu mode) interface. The purpose of this Technical Specification is to indicate the possible access arrangements that may be used in conjunction with the MS-BS (in A/Gb mode and GERAN Iu mode) and UE-UTRAN (in UTRAN Iu mode) interface.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 002	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 002	7.0.0	Published	2007-07-05	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0124002v700
ATIS	ATIS.3GPP.24.002V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.002(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.002(R7-7.0.0).zip
TTC	TS-3GA-24.002(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24002rel7v700.pdf

10.4.2 TS 24.007 Mobile radio interface signalling layer 3 – General aspects

The document defines the principal architecture of layer 3 and its sublayers on the GSM Um interface, i.e., the interface between mobile station (MS) and network; for the CM sublayer, the description is restricted to paradigmatic examples, call control, supplementary services, and short message services for non-GPRS services. It also defines the basic message format and error handling applied by the layer 3 protocols.

For non-GPRS services, the communication between sublayers and adjacent layers and the services provided by the sublayers are distributed by use of abstract service primitives. But only externally observable behaviour resulting from the description is normatively prescribed by this document.

For GPRS services, in addition, the local information transfer and stimuli sent between sublayers is informatively included within Annex C of the document.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 007	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 007	7.0.0	Published	2006-01-27	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0124007v700
ATIS	ATIS.3GPP.24.007V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.007(R7-7.0.0)	7.0.0	Approved	2006-04-19	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.007(R7-7.0.0).zip
TTC	TS-3GA-24.007(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24007rel7v700.pdf

10.4.3 TS 24.008 Mobile radio interface layer 3 specification; Core network protocols; Stage 3

The document specifies the procedures used at the radio interface core network protocols within the 3rd generation mobile telecommunications system and the digital cellular telecommunications system.

It specifies the procedures used at the radio interface (reference point Um or Uu, see TS 24.002 or TS 23.002) for Call Control (CC), mobility management (MM), and session management (SM).

These procedures are defined in terms of messages exchanged over the control channels of the radio interface. The control channels are described in TS 44.003 and TS 25.301.

The structured functions and procedures of this protocol and the relationship with other layers and entities are described in general terms in TS 24.007.

The procedures currently described in this TS are for the call control of circuit-switched connections, session management for GPRS services, mobility management and radio resource management for circuit-switched and GPRS services.

TS 24.010 contains functional procedures for support of supplementary services.

TS 24.011 contains functional procedures for support of point-to-point short message services.

TS 24.012 contains functional description of short message – cell broadcast.

TS 44.060 contains procedures for radio link control and medium access control (RLC/MAC) of packet data physical channels.

TS 24.071 contains functional descriptions and procedures for support of location services.

NOTE – "layer 3" includes the functions and protocols described in this Technical Specification. The terms "data link layer" and "layer 2" are used interchangeably to refer to the layer immediately below layer 3.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 008	7.9.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 008	7.9.0	Published	2007-10-16	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0124008v790
ATIS	ATIS.3GPP.24.008V790-2007	7.9.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.008(R7-7.7.0)	7.7.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.008(R7-7.7.0).zip
TTC	TS-3GA-24.008(Rel7)v7.9.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24008rel7v790.pdf

10.4.4 TS 24.010 Mobile radio interface layer 3 – Supplementary services specification – General aspects

The document gives the general aspects of the specification of supplementary services at the layer 3 radio interface.

TS 24.08x and 24.09x-series specify the procedures used at the radio interface (reference point Um as defined in TS 24.002) for normal operation, registration, erasure, activation, deactivation, invocation and interrogation of supplementary services. Provision and withdrawal of supplementary services is an administrative matter between the mobile subscriber and the service provider and cause no signalling on the radio interface.

TS 44.008 and TS 24.080 specify the formats and coding for the supplementary services.

Definitions and descriptions of supplementary services are given in TS 22.004 and TS 22.08x and 22.09x-series.

Technical realization of supplementary services is described in TS 23.011 and GSM 23.08x and 23.09x-series.

The procedures for call control, mobility management and radio resource management at the layer 3 radio interface are defined in TS 24.007 and TS 44.008.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 010	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 010	7.0.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0424010v700
ATIS	ATIS.3GPP.24.010V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.010(R7-7.0.0)	7.0.0	Approved	2007-12-24	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.010(R7-7.0.0).zip
TTC	TS-3GA-24.010(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24010rel7v700.pdf

10.4.5 TS 24.011 Point-to-point (PP) short message service (SMS) support on mobile radio interface

The document specifies the procedures used across the mobile radio interface by the signalling layer 3 function short message control (SMC) and short message relay function (SM-RL) for both circuit switched in A/Gb mode and GPRS.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 011	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 011	7.0.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0124011v700
ATIS	ATIS.3GPP.24.011V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.011(R7-7.0.0)	7.0.0	Approved	2007-12-24	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.030(R7-7.2.0).zip
TTC	TS-3GA-24.011(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24011rel7v700.pdf

10.4.6 TS 24.022 Radio link protocol (RLP) for circuit-switched bearer and teleservices

The document specifies the radio link protocol (RLP) for circuit-switched data transmission within the GSM and UMTS PLMN. RLP covers the Layer 2 functionality of the ISO OSI reference model [ISO/IEC 7498-1]. It is based on ideas contained in [ISO/IEC 3309], [ISO/IEC 4335] and [ISO/IEC 7809] (HDLC of ISO) as well as [ITU-T X.25] and [ITU-T Q.92x] (LAP-B and LAP-D of ITU, respectively). RLP has been tailored to the special needs of digital radio transmission. RLP provides to its users the OSI data link service [ISO/IEC 8886].

RLP is intended for use with non-transparent data-transfer. Protocol conversion may be provided for a variety of protocol configurations. Those foreseen immediately are:

– Character-mode protocols using start-stop transmission (IA5);

– X.25 LAP-B.

For reasons of better presentation, material about protocol conversion has been placed within those Specifications concerned with the relevant Terminal Adapters, i.e., TS 27.002 for the asynchronous case and TS 27.003 for the synchronous case. Care must be taken that that material also applies to interworking functions; see TS 29.007.

The present document is valid for a PLMN in A/Gb mode as well as in Iu mode. If text applies only for one of these systems, it is explicitly mentioned by using the terms "A/Gb mode" and "Iu mode". Please note that the Gb interface does not play any role in the scope of the present document although the term "A/Gb mode" is used.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 022	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 022	7.0.0	Published	2007-07-13	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0324022v700
ATIS	ATIS.3GPP.24.022V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.022(R7-7.0.0)	7.0.0	Approved	2007-12-24	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.022(R7-7.0.0).zip
TTC	TS-3GA-24.022(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24022rel7v700.pdf

10.4.7 TS 24.030 Location services LCS; Supplementary service operations; Stage 3

The document gives the Stage 3 description of the location service (LCS) operations for mobile station. These operations shall apply to both CS and PS domain.

The group of location services operations is divided into two different classes:

– Network-initiated location services operations;

– Mobile-initiated location services operations.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 030	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 030	7.2.0	Published	2007-07-05	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0424030v720
ATIS	ATIS.3GPP.24.030V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.030(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.030(R7-7.2.0).zip
TTC	TS-3GA-24.030(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24030rel7v720.pdf

10.4.8 TS 24.067 Enhanced multi-level precedence and pre-emption service (eMLPP); Stage 3

The document specifies the procedures used at the radio interface (reference point Um for GSM and reference point Uu for UMTS as defined in TS 24.002) for normal operation, invocation, registration and interrogation of the enhanced multi-level precedence and pre-emption Service (eMLPP) supplementary service. Provision and withdrawal of supplementary services is an administrative matter between the mobile subscriber and the service provider and cause no signalling on the radio interface.

In TS 24.010, the general aspects of the specification of supplementary services at the layer 3 radio interface are given.

TS 24.080 specifies the formats and coding for the supplementary services.

Definitions and descriptions of supplementary services are given in TS 22.004 and TS 22.08x and in the 22.09x-series. TS 22.067 is related specially to eMLPP.

Technical realization of supplementary services is described in TS 23.011 and TS 23.08x and in the 23.09x-series.

TS 23.067 is related specially to eMLPP.

The procedures for call control, mobility management at the layer 3 radio interface are defined in TS 24.007 and TS 24.008.

The procedures for radio resource management at layer 3 radio interface are defined in TS 44.018 and TS 25.331.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 067	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 067	7.0.0	Published	2007-07-13	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0424067v700
ATIS	ATIS.3GPP.24.067V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.067(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.067(R7-7.0.0).zip
TTC	TS-3GA-24.067(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24067rel7v700.pdf

10.4.9 TS 24.072 Call deflection (CD) supplementary service; Stage 3

This global system for mobile communications Technical Specification specifies the procedures used at the radio interface (reference point Um as defined in TS 44.002) for normal operation of call deflection (CD) supplementary service. Provision and withdrawal of supplementary services is an administrative matter between the mobile subscriber and the service provider and cause no signalling on the radio interface.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 072	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 072	7.0.0	Published	2007-07-13	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0424072v700
ATIS	ATIS.3GPP.24.072V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.072(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.072(R7-7.0.0).zip
TTC	TS-3GA-24.072(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24072rel7v700.pdf

10.4.10 TS 24.080 Mobile radio interface Layer 3 supplementary service specification – Formats and coding

The document contains the coding of information necessary for the support of supplementary service operation on the mobile radio interface layer 3.

This document gives the functional definitions and contents of messages for call-independent supplementary service operations. Messages necessary for the support of call-related supplementary service operations are defined in TS 24.008.

This document gives the general format and coding for messages used for call-independent supplementary service and the format and coding of information elements used for both call-related and call-independent supplementary service operations.

This document gives the specification of the call-related and call-independent supplementary service operations.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 080	7.4.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 080	7.4.0	Published	2007-10-11	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0424080v740
ATIS	ATIS.3GPP.24.080V740-2007	7.4.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.080(R7-7.3.0)	7.3.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.080(R7-7.3.0).zip
TTC	TS-3GA-24.080(Rel7)v7.4.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24080rel7v740.pdf

10.4.11 TS 24.081 Line identification supplementary services; Stage 3

The document specifies the procedures used at the radio interface for normal operation, registration, erasure, activation, deactivation, invocation and interrogation of line identification supplementary services. Provision and withdrawal of supplementary services is an administrative matter between the mobile subscriber and the service provider and cause no signalling on the radio interface.

In 3G TS 24.010, the general aspects of the specification of supplementary services at the layer 3 radio interface are given.

3G TS 24.080 specifies the formats and coding for the supplementary services.

Definitions and descriptions of supplementary services are given in 3G TS 22.004 and 3G TS 22.08x and in the 3G TS 22.09x-series. 3G TS 22.081 is related specially to line identification supplementary services.

Technical realization of supplementary services is described in 3G TS 23.011 and in the 3G TS 23.08x and in the 3G TS 23.09x-series. 3G TS 23.081 is related specially to line identification supplementary services.

The procedures for call control, mobility management and radio resource management at the layer 3 radio interface are defined in 3G TS 24.007 and 3G TS 24.008.

The following supplementary services belong to the line identification supplementary services and are described in this document:

–   Calling line identification presentation   (CLIP);

–   Calling line identification restriction   (CLIR);

–   Connected line identification presentation   (COLP);

–   Connected line identification restriction   (COLR).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 081	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 081	7.0.0	Published	2007-07-13	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0424081v700
ATIS	ATIS.3GPP.24.081V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.081(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.081(R7-7.0.0).zip
TTC	TS-3GA-24.081(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24081rel7v700.pdf

10.4.12 TS 24.082 Call forwarding (CF) supplementary service; Stage 3

This document specifies the procedures used at the radio interface (reference point Um as defined in TS 24.002) for normal operation, registration, erasure, activation, deactivation, interrogation and network invocation of call offering supplementary services. Provision and withdrawal of supplementary services is an administrative matter between the mobile subscriber and the service provider and cause no signalling on the radio interface.

In TS 24.010, the general aspects of the specification of supplementary services at the layer 3 radio interface are given.

TS 24.080 specifies the formats and coding for the supplementary services.

Definitions and descriptions of supplementary services are given in TS 22.004 and TS 22.08x and in the TS 22.09x-series. TS 22.082 is related specially to call offering supplementary services.

Technical realization of supplementary services is described in TS 23.011 and TS 23.08x and in the TS 23.09x-series. TS 23.082 is related specially to call offering supplementary services.

The procedures for call control, mobility management and radio resource management at the layer 3 radio interface are defined in TS 24.007 and TS 24.008.

The following supplementary services belong to the call offering supplementary services and are described in this document:

–   Call forwarding unconditional   (CFU);

–   Call forwarding on mobile subscriber busy   (CFB);

–   Call forwarding on no reply   (CFNRy);

–   Call forwarding on mobile subscriber not reachable (CFNRc).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 082	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 082	7.1.0	Published	2007-10-11	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0424082v710
ATIS	ATIS.3GPP.24.082V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.082(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.082(R7-7.0.0).zip
TTC	TS-3GA-24.082(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24082rel7v710.pdf

10.4.13 TS 24.083 Call waiting (CW) and call hold (HOLD) supplementary service; Stage 3

The document specifies the procedures used at the radio interface (reference point Um as defined in TS 24.002) for normal operation, registration, erasure, activation, deactivation, invocation and interrogation of call completion supplementary services. Provision and withdrawal of supplementary services is an administrative matter between the mobile subscriber and the service provider and cause no signalling on the radio interface.

In TS 24.010, the general aspects of the specification of supplementary services at the layer 3 radio interface are given.

TS 24.080 specifies the formats and coding for the supplementary services.

Definitions and descriptions of supplementary services are given in TS 22.004 and TS 22.08x and in the TS 22.09x-series. TS 22.083 is related specially to call completion supplementary services.

Technical realization of supplementary services is described in TS 23.011 and TS 23.08x and in the TS 23.09x-series.

TS 23.083 is related specially to call completion supplementary services.

The procedures for call control, mobility management and radio resource management at the layer 3 radio interface are defined in TS 24.007 and TS 24.008.

The following supplementary services belong to the call completion supplementary services and are described in this document:

– Call waiting (CW);
– Call hold (HOLD).

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CCSA	CCSA-TSD-124 083	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 083	7.0.0	Published	2007-07-13	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0424083v700
ATIS	ATIS.3GPP.24.083V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.083(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.083(R7-7.0.0).zip
TTC	TS-3GA-24.083(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24083rel7v700.pdf

10.4.14 TS 24.084 Multi-party (MPTY) supplementary service; Stage 3

The document specifies the procedures used at the radio interface (reference point Um as defined in TS 24.002) for normal operation and invocation of multi-party supplementary services.

In TS 24.010, the general aspects of the specification of supplementary services at the layer 3 radio interface are given.

TS 24.080 specifies the formats and coding for the supplementary services.

Definitions and descriptions of supplementary services are given in TS 22.004 and the TS 22.08x and in the TS 22.09x-series.

TS 22.084 is related specially to multi-party supplementary services.

Technical realization of supplementary services is described in TS 23.011 and the TS 23.08x and in the TS 23.09x-series.

TS 23.084 is related specially to multi-party supplementary services.

The procedures for call control, mobility management and radio resource management at the layer 3 radio interface are defined in TS 24.007 and TS 24.008.

The following supplementary service belongs to the multi-party supplementary services and is described in this document:

– Multi-party service (MPTY).

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CCSA	CCSA-TSD-124 084	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 084	7.0.0	Published	2007-07-13	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0424084v700
ATIS	ATIS.3GPP.24.084V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.084(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.084(R7-7.0.0).zip
TTC	TS-3GA-24.084(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24084rel7v700.pdf

10.4.15 TS 24.085 Closed user group (CUG) supplementary service; Stage 3

This Technical Specification (TS) for mobile communications specifies the procedures used at the radio interface (reference point Um as defined in TS 24.002) for normal operation, registration, erasure, activation, deactivation, invocation and interrogation of community of interest supplementary services. The provision and withdrawal of supplementary services is an administrative matter between the mobile subscriber and the service provider and causes no signalling on the radio interface.

In TS 24.010, the general aspects of the specification of supplementary services at the layer 3 radio interface are given.

TS 24.080 specifies the formats coding for the supplementary services.

Definitions and descriptions of supplementary services are given in TS 22.004 and TS 22.08x and TS 22.09x-series. TS 22.085 is related to the community of interest supplementary services.

Technical realization of supplementary services is described in technical specifications TS 23.011 and TS 23.08x and 23.09x-series. TS 23.085 is related to the community of interest supplementary services.

The procedures for call control, mobility management and radio resource management at the layer 3 radio interface are defined in TS 24.007 and TS 24.008.

Signalling interworking for supplementary services between GSM 09.02 and TS 24.008 and between GSM 09.02 and TS 24.080 is defined in GSM 09.11.

The following supplementary services belong to the community of interest supplementary services and are described in this Technical Specification:

– Closed user group (CUG).

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CCSA	CCSA-TSD-124 085	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 085	7.0.0	Published	2007-07-13	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0424085v700
ATIS	ATIS.3GPP.24.085V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.085(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.085(R7-7.0.0).zip
TTC	TS-3GA-24.085(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24085rel7v700.pdf

10.4.16 TS 24.086 Advice of charge (AoC) supplementary service; Stage 3

The document specifies the procedures used at the radio interface (reference point Um as defined in TS 24.002) for normal operation, registration, erasure, activation, deactivation, invocation and interrogation of charging supplementary services. The provision and withdrawal of supplementary services is an administrative matter between the mobile subscriber and the service provider and causes no signalling on the radio interface.

In TS 24.010, the general aspects of the specification of supplementary services at the layer 3 radio interface are given.

TS 24.080 specifies the formats and coding for the supplementary services.

Definitions and descriptions of supplementary services are given in TS 22.004 and TS 22.08x and TS 22.09x-series. TS 22.024 and 02.86 are related to the charging supplementary services.

Technical realization of supplementary services is described in TS 23.011 and TS 23.08x and TS 23.09x-series. TS 23.086 is related to the charging supplementary services.

The procedures for call control, mobility management and radio resource management at the layer 3 radio interface are defined in TS 24.007 and TS 24.008.

The following supplementary services belong to the charging supplementary services and are described in this document:

– Advice of charge (Information) (AoCI);
– Advice of charge (Charging) (AoCC).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 086	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 086	7.0.0	Published	2007-07-13	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0424086v700
ATIS	ATIS.3GPP.24.086V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.086(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.086(R7-7.0.0).zip
TTC	TS-3GA-24.086(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24086rel7v700.pdf

10.4.17 TS 24.087 User-to-user signalling (UUS) supplementary service; Stage 3

This Technical Specification gives the Stage 3 description of the user-to-user signalling supplementary services.

The user-to-user supplementary service is divided into 3 different services:

– Service 1 (UUS1);

– Service 2 (UUS2);

– Service 3 (UUS3).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 087	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 087	7.0.0	Published	2007-07-13	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0424087v700
ATIS	ATIS.3GPP.24.087V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.087(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.087(R7-7.0.0).zip
TTC	TS-3GA-24.087(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24087rel7v700.pdf

10.4.18 TS 24.088 Call barring (CB) supplementary service; Stage 3

This Technical Specification (TS) specifies the procedures used at the radio interface (reference point Um as defined in TS 24.002) for normal operation, registration, erasure, activation, deactivation, invocation and interrogation of call barring supplementary services. Provision and withdrawal of supplementary services is an administrative matter between the mobile subscriber and the service provider and cause no signalling on the radio interface.

In TS 24.010, the general aspects of the specification of supplementary services at the layer 3 radio interface are given.

TS 24.080 specifies the formats and coding for the supplementary services.

Definitions and descriptions of supplementary services are given in TS 22.004, TS 22.08x and TS 22.09x-series.

Technical realization of supplementary services is described in TS 23.011, TS 23.08x and TS 23.09x-series.

The procedures for call control, mobility management and radio resource management at the layer 3 radio interface are defined in TS 24.007 and TS 24.008.

The following supplementary services belong to the call restriction supplementary services and are described in this specification:

–   Barring of outgoing calls:

•   Barring of all outgoing calls   (BAOC)   (Barring program 1);

•   Barring of outgoing international calls   (BOIC)   (Barring program 2);

•   Barring of outgoing international calls EXCEPT those directed to the home PLMN country   (BOIC-exHC) (Barring program 3).

–   Barring of incoming calls:

•   Barring of all incoming calls   (BAIC)   (Barring program 1);

•   Barring of incoming calls when roaming outside the home PLMN country

                                                (BIC-Roam)   (Barring program 2).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 088	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 088	7.0.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0424088v700
ATIS	ATIS.3GPP.24.088V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.088(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.088(R7-7.0.0).zip
TTC	TS-3GA-24.088(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24088rel7v700.pdf

10.4.19 TS 24.090 Unstructured supplementary service data (USSD); Stage 3

The document gives the Stage 3 description of the unstructured supplementary service data (USSD) operations.

The group of unstructured supplementary service data operations is divided into two different classes:

–   Network-initiated unstructured supplementary service data operations;

–   Mobile-initiated unstructured supplementary service data operations.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 090	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 090	7.0.0	Published	2007-07-13	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0424090v700
ATIS	ATIS.3GPP.24.090V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.090(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.090(R7-7.0.0).zip
TTC	TS-3GA-24.090(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24090rel7v700.pdf

10.4.20 TS 24.091 Explicit call transfer (ECT) supplementary service; Stage 3

The document gives the Stage 3 description of the call transfer supplementary services.

The document specifies the procedures used at the radio interface (reference point Um as defined in TS 24.002) for normal operation, registration, erasure, activation, deactivation, invocation and interrogation of call transfer supplementary services. Provision and withdrawal of supplementary services is an administrative matter between the mobile subscriber and the service provider and cause no signalling on the radio interface.

In TS 24.010, the general aspects of the specification of supplementary services at the layer 3 radio interface are given.

TS 24.080 specifies the formats and coding for the supplementary services.

Definitions and descriptions of supplementary services are given in TS 22.004, TS 22.08x and TS 22.09x-series. TS 22.091 is related specifically to call transfer supplementary services.

The technical realization of supplementary services is described in TS 23.011, TS 23.08x and TS 23.09x-series. TS 23.091 is related specifically to call transfer supplementary services.

The procedures for call control, mobility management and radio resource management at the layer 3 radio interface are defined in TS 24.007 and TS 24.008.

The following supplementary services belong to the call transfer supplementary services and are described in this document:

– Explicit call transfer (ECT).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 091	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 091	7.0.0	Published	2007-07-13	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0424091v700
ATIS	ATIS.3GPP.24.091V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.091(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.091(R7-7.0.0).zip
TTC	TS-3GA-24.091(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24091rel7v700.pdf

10.4.21 TS 24.093 Completion of calls to busy subscriber (CCBS); Stage 3

The document gives the Stage 3 description of the completion of calls to busy subscriber (CCBS) supplementary service. The document specifies the procedures used at the radio interface (reference point Um as defined in TS 24.002) for normal operation, activation, deactivation, invocation and interrogation of the completion of calls to busy subscriber supplementary services. Provision and withdrawal of supplementary services is an administrative matter between the mobile subscriber and the service provider and cause no signalling on the radio interface.

In TS 24.010, the general aspects of the specification of supplementary services at the layer 3 radio interface are given.

TS 24.080 specifies the formats and coding for the supplementary services.

Definitions and descriptions of supplementary services are given in TS 22.004, TS 22.08x and TS 22.09x-series. Technical specification TS 22.093 is related specifically to the completion of calls to busy subscriber supplementary service.

The technical realization of supplementary services is described in technical specifications TS 23.011, TS 23.08x and 23.09x-series. TS 23.093 is related specifically to Completion of Calls to busy subscriber supplementary service.

The procedures for call control, mobility management and radio resource management at the layer 3 radio interface are defined in TS 24.007 and TS 24.008.

The following supplementary services belong to the call completion supplementary services and are described in this document:

– Completion of calls to busy subscriber (CCBS).

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CCSA	CCSA-TSD-124 093	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 093	7.0.0	Published	2007-07-13	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0424093v700
ATIS	ATIS.3GPP.24.093V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.093(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.093(R7-7.0.0).zip
TTC	TS-3GA-24.093(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24093rel7v700.pdf

10.4.22 TS 24.096 Name identification supplementary service; Stage 3

This Technical Specification (TS) specifies the procedures used at the radio interface for normal operation, registration, erasure, activation, deactivation, invocation and interrogation of name identification supplementary services. Provision and withdrawal of supplementary services is an administrative matter between the mobile subscriber and the service provider and cause no signalling on the radio interface.

In TS 24.010, the general aspects of the specification of supplementary services at the layer 3 radio interface are given. TS 24.080 specifies the formats and coding for the supplementary services.

Definitions and descriptions of supplementary services are given in TS 22.004 and TS 22.08x and 22.09x-series. TS 22.096 is related specially to name identification supplementary services.

Technical realization of supplementary services is described in TS 23.011 and TS 23.08x and 23.09x-series. Technical specification TS 23.096 is related specially to name identification supplementary services.

The procedures for call control, mobility management and radio resource management at the layer 3 radio interface are defined in TS 24.007 and TS 24.008.

The following supplementary services belong to the name identification supplementary services and are described in this Technical Specification:

– Calling name presentation (CNAP).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 096	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 096	7.0.0	Published	2007-07-13	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0424096v700
ATIS	ATIS.3GPP.24.096V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.096(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.096(R7-7.0.0).zip
TTC	TS-3GA-24.096(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24096rel7v700.pdf

10.4.23 TS 24.109 Bootstrapping interface (Ub) and network application function interface (Ua); Protocol details

The present document defines Stage 3 for the HTTP Digest AKA [IETF RFC 3310: "*Hypertext Transfer Protocol (HTTP) Digest Authentication Using Authentication and Key Agreement (AKA)*".] based implementation of Ub interface (UE-BSF) and the HTTP Digest [IETF RFC 2617: "*HTTP Authentication: Basic and Digest Access Authentication*"] and the PSK TLS [IETF RFC 4279: "*Pre-Shared Key Ciphersuites for Transport Layer Security (TLS)*"] based implementation of bootstrapped security association usage over Ua interface (UE-NAF) in generic authentication architecture (GAA) as specified in 3G TS 33.220. The purpose of the Ub interface is to create a security association between UE and BSF for further usage in GAA applications. The purpose of the Ua interface is to use the so created bootstrapped security association between UE and NAF for secure communication.

The present document also defines Stage 3 for the authentication proxy usage as specified in 3G TS 33.222.

The present document also defines Stage 3 for the subscriber certificate enrolment, as specified in 3G TS 33.221, which is one realization of the Ua interface. The subscriber certificate enrolment uses the HTTP Digest-based implementation of bootstrapped security association usage to enrol a subscriber certificate and the delivery of a CA certificate.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 109	7.5.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 109	7.5.0	Published	2007-01-12	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0124109v750
ATIS	ATIS.3GPP.24.109V750-2007	7.5.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.109(R7-7.6.0)		Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.109(R7-7.6.0).zip
TTC	TS-3GA-24.109(Rel7)v7.5.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24109rel7v750.pdf

10.4.24 TS 24.135 Multicall supplementary service; Stage 3

The document gives the Stage 3 description of the multicall (MC) supplementary service. The document specifies the procedures used by the radio interface for normal operation, registration and interrogation of the multicall supplementary service. Provision, withdrawal, erasure, activation and deactivation of supplementary services is an administrative matter between the mobile subscriber and the service provider and causes no signalling on the radio interface.

3G TS 24.010 describes the general aspects of the specification of supplementary services at the layer 3 radio interface.

3G TS 24.080 specifies the formats and coding for the supplementary services.

Definitions and descriptions of supplementary services are given in 3G TS 22.004, 3G TS 22.072, 3G TS 22.08x, 3G TS 22.09x-series and 3G TS 22.135. 3G TS 22.135 is related specifically to the Multicall supplementary service.

The technical realization of supplementary services are described in 3G TS 23.011, 3G TS 23.072, 3G TS 23.08x, 23.09x-series and 3G TS 23.135. 3G TS 23.135 is related specifically to the Multicall supplementary service.

The procedures for call control and mobility management at the layer 3 radio interface are defined in 3G TS 24.007 and 3G TS 24.008.

The following supplementary services are described in this document:

–   Multicall   (MC).

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CCSA	CCSA-TSD-124 135	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 135	7.0.0	Published	2007-07-13	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0424135v700
ATIS	ATIS.3GPP.24.135V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.135(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.135(R7-7.0.0).zip
TTC	TS-3GA-24.135(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24135rel7v700.pdf

10.4.25 TS 24.141 Presence service using the IP multimedia (IM) core network (CN) subsystem; Stage 3

The present document provides the protocol details for the presence service within the IP multimedia (IM) core network (CN) subsystem based on the session initiation protocol (SIP) and SIP events as defined in 3G TS 24.229.

Where possible, the present document specifies the requirements for this protocol by reference to specifications produced by the IETF within the scope of SIP and SIP events, either directly, or as modified by 3G TS 24.229.

Requirements for manipulation of presence data are defined by use of a protocol at the Ut reference point based on XML configuration access protocol (XCAP) [IETF RFC 4825: "*The Extensible Markup Language (XML) Configuration Access Protocol (XCAP)*"].

The present document is applicable to application servers (ASs) and user equipment (UE) providing presence functionality.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 141	7.4.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 141	7.4.0	Published	2007-10-15	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0124141v740
ATIS	ATIS.3GPP.24.141V 740-2007	7.4.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.141(R7-7.4.0)	7.4.0	Approved	2007-12-24	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.141(R7-7.4.0).zip
TTC	TS-3GA-24.141(Rel7)v7.4.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24141rel7v740.pdf

10.4.26 TS 24.147 Conferencing using the IP multimedia (IM) core network (CN) subsystem; Stage 3

The present document provides the protocol details for conferencing within the IP multimedia core network subsystem (IMS) based on the session initiation protocol (SIP), SIP events, the session description protocol (SDP), the conference policy control protocol (CPCP) and the binary floor control protocol (BFCP).

The present document does not cover the signalling between a MRFC and a MRFP.

Where possible, the present document specifies the requirements for this protocol by reference to specifications produced by the IETF within the scope of SIP, SIP events, SDP, CPCP and BFCP, either directly, or as modified by 3G TS 24.229. Where this is not possible, extensions to SIP are defined within the present document. The document has therefore been structured in order to allow both forms of specification.

The present document is applicable to application servers (ASs), multimedia resource function controllers (MRFCs), multimedia resource function processors (MRFP), media gateway control functions (MGCFs) and to user equipment (UE) providing conferencing capabilities.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 147	7.6.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 147	7.6.0	Published	2007-10-12	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0124147v760
ATIS	ATIS.3GPP.24.147V 760-2007	7.6.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.147(R7-7.5.0)	7.5.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.147(R7-7.5.0).zip
TTC	TS-3GA-24.147(Rel7)v7.6.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24147rel7v760.pdf

10.4.27 TS 24.167 3GPP IMS management object (MO); Stage 3

This document defines a mobile device 3GPP IMS management object. The management object is compatible with open mobile alliance (OMA) device management protocol specifications, version 1.2 and upwards, and is defined using the OMA DM device description framework.

The 3GPP IMS management object consists of relevant parameters that can be managed for the IM CN subsystem. This includes the basic framework defined in 3GPP TS 23.228 and 3GPP TS 24.229, and early IMS as defined in 3GPP TS 23.221.

The IMS management object defines a repository of data into the ME including parameters that are provisioned from the ISIM application (i.e., 3GPP TS 31.103) or, after derivation, from the USIM application (i.e., 3GPP TS 31.102).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 167	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 167	7.2.0	Published	2007-10-11	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0124167v720
ATIS	ATIS.3GPP.24.167V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.167(R7-7.3.0)	7.3.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.167(R7-7.3.0).zip
TTC	TS-3GA-24.167(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24167rel7v720.pdf

10.4.28 TS 24.173 IMS multimedia telephony communication service and supplementary services; Stage 3

The present document provides the protocol details for multimedia telephony communication service and associated supplementary services in the IP multimedia (IM) core network (CN) subsystem based on the requirements from 3GPP TS 22.173.

Multimedia telephony and supplementary services allow users to establish communications between them and enrich that by enabling supplementary services.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 173	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 173	7.2.0	Published	2007-10-15	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0124173v720
ATIS	ATIS.3GPP.24.173V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.173(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.173(R7-7.0.0).zip
TTC	TS-3GA-24.173(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24173rel7v720.pdf

10.4.29 TS 24.206 Voice call continuity between the circuit-switched (CS) domain and the IP multimedia core network (CN) (IMS) subsystem; Stage 3

Voice call continuity allows users to move between the CS domain and the IP connectivity access network (e.g., WLAN interworking) with home IM CN subsystem functionality.

The present document provides the protocol details for voice call continuity between the IP multimedia (IM) core network (CN) subsystem based on the session initiation protocol (SIP) and the session description protocol (SDP) and the protocols of the 3GPP circuit-switched (CS) domain (CAP, MAP, ISUP, BICC and the NAS call control protocol for the CS access).

This document makes no VCC specific enhancements to SIP, SIP events or SDP, beyond those specified in 3GPP TS 24.229.

The present document is applicable to user equipments (UEs), application servers (ASs) and media gateway control functions (MGCFs) providing voice call continuity capabilities.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 206	7.3.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 206	7.3.0	Published	2007-10-15	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0124206v730
ATIS	ATIS.3GPP.24.206V730-2007	7.3.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.206(R7-7.4.0)	7.4.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.206(R7-7.4.0).zip
TTC	TS-3GA-24.206(Rel7)v7.3.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24206rel7v730.pdf

10.4.30 TS 24.216 Communication continuity management object (MO)

This document defines the communication continuity management object. The management object is compatible with OMA device management protocol specifications, version 1.2 and upwards, and is defined using the OMA DM device description framework.

The communication continuity management object consists of relevant parameters that can be managed for communication continuity capabilities.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 216	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 216	7.2.0	Published	2007-10-08	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0124216v720
ATIS	ATIS.3GPP.24.216V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.216(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.216(R7-7.1.0).zip
TTC	TS-3GA-24.216(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24216rel7v720.pdf

10.4.31 TS 24.229 IP multimedia call control protocol based on SIP and SDP; Stage 3

This document defines a call control protocol for use in the IP multimedia (IM) core network (CN) subsystem based on the session initiation protocol (SIP), and the associated session description protocol (SDP).

This document is applicable to:

–   the interface between the user equipment (UE) and the call session control function (CSCF);

–   the interface between the CSCF and any other CSCF;

–   the interface between the CSCF and an application server (AS);

–   the interface between the CSCF and the media gateway control function (MGCF);

–   the interface between the S-CSCF and the media resource function controller (MRFC);

–   the interface between the CSCF and the breakout gateway control function (BGCF);

–   the interface between the BGCF and the MGCF;

–   the interface between the BGCF and any other BGCF; and

–   the interface between the CSCF and an external multimedia IP network.

Where possible, this document specifies the requirements for this protocol by reference to specifications produced by the IETF within the scope of SIP and SDP. Where this is not possible, extensions to SIP and SDP are defined within this document. The document has therefore been structured in order to allow both forms of specification.

As the IM CN subsystem is designed to interwork with different IP-connectivity access networks (IP-CANs), the IP-CAN independent aspects of the IM CN subsystem are described in the main body and Annex A of this specification. Aspects for connecting a UE to the IM CN subsystem through specific types of IP-CANs are documented separately in the annexes or in separate documents.

NOTE – This document covers only the usage of SIP and SDP to communicate with the enitities of the IM CN subsystem. It is possible, and not precluded, to use the capabilities of GPRS to allow a terminal containing a SIP UA to communicate with SIP servers or SIP UAs outside the IM CN subsystem, and therefore utilize the services provided by those SIP servers. The usage of SIP and SDP for communicating with SIP servers or SIP UAs outside the IM CN subsystem is outside the scope of this document.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 229	7.9.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 229	7.9.0	Published	2007-10-15	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0124229v790
ATIS	ATIS.3GPP.24.229V 790-2007	7.9.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.229(R7-7.8.0)	7.8.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.229(R7-7.8.0).zip
TTC	TS-3GA-24.229(Rel7)v7.9.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24229rel7v790.pdf

10.4.32 TS 24.234 3GPP system to wireless local area network (WLAN) interworking; User equipment (UE) to network protocols; Stage 3

The present document specifies the network selection, including authentication and access authorization procedures used for the interworking of the 3GPP system and WLANs. In addition to these, the present document also specifies the tunnel management procedures used for establishing an end-to-end tunnel from the WLAN UE to the 3GPP network via the Wu reference point.

The present document is applicable to the WLAN user equipment (UE) and the network. In this technical specification, the network includes the WLAN and 3GPP network.

Tunnel management signalling is carried between WLAN-UE and WLAN by WLAN access technology-specific protocols; however, this signalling is transparent to the WLAN.

Details of the security framework for the end-to-end tunnel establishment are covered in 3G TS 33.234. The transport of the tunnel management signalling between WLAN and 3GPP network and within the 3GPP network (i.e., PDG, 3GPP AAA server and WAG) are covered in 3G TS 29.234.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 234	7.5.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 234	7.5.0	Published	2007-03-23	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0124234v750
ATIS	ATIS.3GPP.24.234V 750-2007	7.5.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.234(R7-7.5.0)	7.5.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.234(R7-7.5.0).zip
TTC	TS-3GA-24.234(Rel7)v7.5.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24234rel7v750.pdf

10.4.33 TS 24.247 Messaging service using the IP multimedia (IM) core network (CN) subsystem; Stage 3

This document provides the protocol details for the messaging service within the IP multimedia CN subsystem (IMS) based on the session initiation protocol (SIP), the session description protocol (SDP), the message session relay protocol (MSRP) and the conference policy control protocol (CPCP). The document covers immediate messaging, session-based messaging and session-based messaging conferences, as described in 3G TS 22.340.

Where possible, the present document specifies the requirements for this protocol by reference to specifications produced by the IETF within the scope of SIP, SDP, MSRP and other protocols, either directly, or as modified by 3G TS 24.229.

The present document is applicable to application servers (ASs), media resource function controllers (MRFCs), media resource function processors (MRFPs) and to user equipment (UE) providing messaging capabilities.

This document does not cover the signalling between a MRFC and a MRFP.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 247	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 247	7.2.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0124247v720
ATIS	ATIS.3GPP.24.247V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.247(R7-7.2.0)	7.2.0	Approved	2007-12-24	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.247(R7-7.2.0).zip
TTC	TS-3GA-24.247(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24247rel7v720.pdf

10.4.34 TS 24.279 Combining circuit switched (CS) and IP multimedia subsystem (IMS) services; Stage 3

This document provides the technical realization for the combination of circuit switched calls and IM sessions when using them simultaneously between the same two users.

The present document describes the use of CS and IM services in combination, using the existing procedures that have been defined for CS and IMS. It includes the necessary function as adding an IM session to an ongoing CS call, adding a CS call to an ongoing IM session, supplementary services as they relate to CSICS and supporting capability exchange.

The present document is applicable to UE and application servers providing for the combination of circuit switched calls and IM sessions.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 279	7.6.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 279	7.6.0	Published	2007-10-15	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0124279v760
ATIS	ATIS.3GPP.24.279V 760-2007	7.6.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.279(R7-7.4.0)	7.4.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.279(R7-7.4.0).zip
TTC	TS-3GA-24.279(Rel7)v7.6.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24279rel7v760.pdf

10.4.35 TS 24.305 Selective disabling of 3GPP user equipment capabilities (SDoUE) management object (MO)

This present document specifies a mobile device selective disabling of 3GPP UE capabilities (SDoUE) management object (MO) and the rules and corresponding behaviour of the UE with regard to the selective disabling of 3GPP UE capabilities, for example, when services or functions are disabled/enabled.

The SDoUE MO is compatible with the OMA device management (DM) protocol specifications, version 1.2 and upwards, and is defined using the OMA DM device description framework (DDF).

The SDoUE MO consists of the relevant parameters that can be managed for selective disabling of 3GPP UE capabilities.

The SDoUE MO defines a repository of data into the ME.

The service requirements for selective disabling of 3GPP UE capabilities are defined in 3GPP TS 22.011.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 305	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 305	7.2.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0124305v720
ATIS	ATIS.3GPP.24.305V 720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.305(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.305(R7-7.2.0).zip
TTC	TS-3GA-24.305(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24305rel7v720.pdf

10.4.36 TS 24.341 Support of SMS over IP networks; Stage 3

This document provides the protocol details for SMS over IP within the IP multimedia (IM) core network (CN) subsystem based on the session initiation protocol (SIP) and SIP events as defined in 3GPP TS 24.229.

Where possible the present document specifies the requirements for this protocol by reference to specifications produced by the IETF within the scope of SIP and SIP events, either directly, or as modified by 3GPP TS 24.229.

The present document is applicable to application servers (ASs) and user equipment (UE) providing SMS over IP functionality.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 341	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 124 341	7.1.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0124341v710
ATIS	ATIS.3GPP.24.341V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-24.341(R7-7.1.0)	7.1.0	Approved	2007-12-24	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-24.341(R7-7.1.0).zip
TTC	TS-3GA-24.341(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts24341rel7v710.pdf

10.4.37 TR 24.930 Signalling flows for the session set-up in the IP multimedia core network subsystem (IMS) based on session initiation protocol (SIP) and session description protocol (SDP); Stage 3

The present document gives examples of the session set-up in the IM CN subsystem based on SIP and SDP.

These signalling flows provide detailed signalling flows, which expand on the overview information flows provided in 3GPP TS 23.228. The flows focus on a basic session set-up, i.e., no flows will be provided for topology hiding, for sessions with IBCF involved or for sessions having certain features.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-124 930	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 124 930	7.2.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=DTR/TSGC-0124930v720
ATIS	ATIS.3GPP.24.930V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTC	TR-3GA-24.930(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/tr/tr24930rel7v720.pdf

10.5 26-series, Codecs (speech, video, etc.)

10.5.1 TS 26.071 AMR speech codec; General description

The document is an introduction to the speech processing parts of the narrow-band telephony speech service employing the adaptive multi-rate (AMR) speech coder. A general overview of the speech processing functions is given, with reference to the documents where each function is specified in detail.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.071V7.0.1	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26071-700.pdf
CCSA	CCSA-TSD-126 071	7.0.1	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 071	7.0.1	Published	2007-07-25	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426071v701
ATIS	ATIS.3GPP.26.071V701-2007	7.0.1	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.071(R7-7.0.1)	7.0.1	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.071(R7-7.0.1).zip

10.5.2 TS 26.073 ANSI-C code for the adaptive multi-rate (AMR) speech codec

The document contains an electronic copy of the ANSI-C code for the adaptive multi-rate codec. The ANSI-C code is necessary for a bit-exact implementation of the adaptive multi-rate speech transcoder (TS 26.090), voice activity detection (TS 26.094), comfort noise (TS 26.092), source controlled rate operation (TS 26.093) and example solutions for substituting and muting of lost frames (TS 26.091).

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.073V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26073-700.pdf
CCSA	CCSA-TSD-126 073	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 073	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426073v700
ATIS	ATIS.3GPP.26.073V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.073(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.073(R7-7.0.0).zip

10.5.3 TS 26.074 Mandatory speech codec speech processing functions; Adaptive multi-rate (AMR) speech codec test sequences

The present document specifies the digital test sequences for the adaptive multi-rate (AMR) speech codec. These sequences test for a bit-exact implementation of the adaptive multi-rate speech transcoder (3G TS 26.090), voice activity detection (3G TS 26.094), comfort noise (3G TS 26.092), and source controlled rate operation (3G TS 26.093).

	Document No.	Version	Status	Issued date	Location
TTA	TTAT.3G-26.074(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.074(R7-7.0.0).zip

10.5.4 TS 26.077 Minimum performance requirements for noise suppresser; Application to the AMR speech encoder

The document specifies recommended minimum performance requirements for noise suppression algorithms intended for application in conjunction with the AMR speech encoder. This specification is for guidance purposes. Noise suppression is intended to enhance the speech signal corrupted by acoustic noise at the input to the AMR speech encoder.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.077V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26077-700.pdf
CCSA	CCSA-TSD-126 077	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TTAT.3G-26.077(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.077(R7-7.0.0).zip
ATIS	ATIS.3GPP.26.077V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.077(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.077(R7-7.0.0).zip

10.5.5 TS 26.090 AMR speech codec; Transcoding functions

The document describes the detailed mapping from input blocks of 160 speech samples in 13-bit uniform PCM format to encoded blocks of 95, 103, 118, 134, 148, 159, 204, and 244 bits and from encoded blocks of 95, 103, 118, 134, 148, 159, 204, and 244 bits to output blocks of 160 reconstructed speech samples. The sampling rate is 8000 samples/s leading to a bit rate for the encoded bit stream of 4.75, 5.15, 5.90, 6.70, 7.40, 7.95, 10.2 or 12.2 kbit/s. The coding scheme for the multi-rate coding modes is the so-called algebraic code-excited linear prediction coder, hereafter referred to as ACELP. The multi-rate ACELP coder is referred to as MR-ACELP.

In the case of discrepancy between the requirements described in the document and the fixed point computational description (ANSI-C code) of these requirements contained in 3G TS 26.073, the description in 3G TS 26.073 will prevail. The ANSI-C code is not described in this document; see 3G TS 26.073 for a description of the ANSI-C code.

The transcoding procedure specified in the document is mandatory for systems using the AMR speech codec.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.090V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26090-700.pdf
CCSA	CCSA-TSD-126 090	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 090	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426090v700
ATIS	ATIS.3GPP.26.090V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.090(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.090(R7-7.0.0).zip

10.5.6   TS 26.091 AMR speech codec; Error concealment of lost frames

The document defines an error concealment procedure, also termed "frame substitution and muting" procedure, which shall be used by the AMR speech codec receiving end when one or more lost speech or lost silence descriptor (SID) frames are received.

The requirements of this document are mandatory for implementation in all networks and user equipments (UE)s capable of supporting the AMR speech codec. It is not mandatory to follow the bit-exact implementation outlined in this document and the corresponding C source code.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.091V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26091-700.pdf
CCSA	CCSA-TSD-126 091	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 091	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426091v700
ATIS	ATIS.3GPP.26.091V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.091(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.091(R7-7.0.0).zip

10.5.7   TS 26.092 AMR speech codec; Comfort noise aspects

The document gives the detailed requirements for the correct operation of the background acoustic noise evaluation, noise parameter encoding/decoding and comfort noise generation for the AMR speech codec during source controlled rate (SCR) operation.

The requirements described in this document are mandatory for implementation in all UEs capable of supporting the AMR speech codec.

The receiver requirements are mandatory for implementation in all networks capable of supporting the AMR speech codec, the transmitter requirements only for those where downlink SCR will be used.

In case of discrepancy between the requirements described in this document and the fixed point computational description of these requirements contained in 3G TS 26.073, the description in 3G TS 26.073 will prevail.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.092V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26092-700.pdf
CCSA	CCSA-TSD-126 092	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 092	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426092v700
ATIS	ATIS.3GPP.26.092V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.092(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.092(R7-7.0.0).zip

10.5.8   TS 26.093 AMR speech codec; Source controlled rate operation

This document describes the source controlled rate (SCR) operation of the adaptive multi-rate speech codec in codec types UMTS_AMR and GSM_AMR for the UMTS system. The implementation of this SCR operation is mandatory in all UMTS equipment.

This structure of distributing the various functions between system entities is not mandatory for implementation, as long as the operation on the speech decoder output remains the same.

Annex A describes the discontinuous transmission (DTX) operation of the adaptive multi-rate speech codec in codec types FR_AMR, HR_AMR and OHR_AMR for GERAN. This annex is the former GSM 06.93 (release 98).

Annexes B to E describe the SCR operation of the adaptive multi-rate speech codec in codec types GSM_EFR, TDMA_EFR, TDMA_US1 and PDC_EFR for the UMTS system.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.093V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26093-700.pdf
CCSA	CCSA-TSD-126 093	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 093	7.0.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426093v700
ATIS	ATIS.3GPP.26.093V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.093(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.093(R7-7.0.0).zip

10.5.9   TS 26.094 AMR speech codec; Voice activity detector

The document specifies two alternatives for the voice activity detector (VAD) to be used in the discontinuous transmission (DTX) as described in 3G TS 26.093. Implementers of mobile station and infrastructure equipment conforming to the AMR specifications can choose which of the two VAD options to implement. There are no interoperability factors associated with this choice.

The requirements are mandatory on any VAD to be used either in user equipment (UE) or base station systems (BSS)s that utilize the AMR speech codec.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.094V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26094-700.pdf
CCSA	CCSA-TSD-126 094	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 094	7.0.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426094v700
ATIS	ATIS.3GPP.26.094V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.094(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.094(R7-7.0.0).zip

10.5.10 TS 26.101 Mandatory speech codec speech processing functions; Adaptive multi-rate (AMR) speech codec frame structure

The document describes a generic frame format for the adaptive multi-rate (AMR) speech codec. This format shall be used as a common reference point when interfacing speech frames between different elements of the 3G system and between different systems. Appropriate mappings to and from this generic frame format will be used within and between each system element.

Annex A describes a second frame format, which shall be used when octet alignment of AMR frames is required.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.101V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26101-700.pdf
CCSA	CCSA-TSD-126 101	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 101	7.0.0	Published	2007-07-02	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426101v700
ATIS	ATIS.3GPP.26.101V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.101(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.101(R7-7.0.0).zip

10.5.11 TS 26.102 AMR speech codec; Interface to Iu, Uu and Nb

The document specifies the mapping of the AMR generic frame format (TS 26.101) to the Iu Interface (TS 25.415), the Uu interface and the Nb interface (TS 29.415). It further specifies the mapping of enhanced full rate (GSM_EFR) coded speech and of PCM 64 kbit/s [ITU-T G.711] coded speech to the Nb Interface.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.102V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26102-710.pdf
CCSA	CCSA-TSD-126 102	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 102	7.1.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426102v710
ATIS	ATIS.3GPP.26.102V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.102(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.102(R7-7.1.0).zip

10.5.12 TS 26.103 Speech codec list for GSM and UMTS

The Technical Specification outlines the codec lists in 3G including both systems, GSM and UMTS, to be used by the out of band transcoder control (OoBTC) protocol to set up a call or modify a call in transcoder free operation (TrFO) and in "transcoder at the edge" scenarios.

The TS further specifies the coding of the supported codec list information elements for the UMTS radio access technology.

The supported codec list IE includes Codec_Types from the TDMA and PDC systems, to support TFO or TrFO between UMTS and TDMA, or UMTS and PDC.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.103V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26103-700.pdf
CCSA	CCSA-TSD-126 103	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 103	7.0.0	Published	2007-07-02	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426103v700
ATIS	ATIS.3GPP.26.103V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.103(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.103(R7-7.0.0).zip

10.5.13 TS 26.104 ANSI-C code for the floating-point adaptive multi-rate (AMR) speech codec

This Technical Standard (TS) contains an electronic copy of the ANSI-C code for a floating-point implementation of the adaptive multi-rate codec. This floating-point codec specification is mainly targeted to be used in multimedia applications such as the 3G-324M terminal specified in TS 26.110, or in packet-based (e.g., H.323) applications. The bit-exact fixed-point ANSI-C code in TS 26.073 remains the preferred implementation for all applications, but the floating-point codec may be used instead of the fixed-point codec when the implementation platform is better suited for a floating-point implementation. It has been verified that the fixed-point and floating-point codecs interoperate with each other without any artifacts.

The floating-point ANSI-C code in this specification is the only standard conforming non-bit-exact implementation of the adaptive multi-rate speech transcoder (TS 26.090), voice activity detection (TS 26.094), comfort noise generation (TS 26.092), and source controlled rate operation (TS 26.093). The floating-point code also contains example solutions for substituting and muting of lost frames (TS 26.091).

The fixed-point specification in 26.073 shall remain the only allowed implementation for the 3G mandatory speech services and the use of the floating-point codec is strictly limited to other services.

The floating-point encoder in this specification is a non-bit-exact implementation of the fixed-point encoder producing quality indistinguishable from that of the fixed-point encoder. The decoder in this specification is functionally a bit-exact implementation of the fixed-point decoder, but the code has been optimized for speed and the standard fixed-point libraries are not used as such.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.104V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26104-700.pdf
CCSA	CCSA-TSD-126 104	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 104	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426104v700
ATIS	ATIS.3GPP.26.104V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.104(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.104(R7-7.0.0).zip

10.5.14 TS 26.110 Codec for circuit-switched multimedia telephony service; General description

This specification introduces the set of specifications that apply to 3G-324M multimedia terminals.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.110V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26110-700.pdf
CCSA	CCSA-TSD-126 110	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 110	7.0.0	Published	2007-07-02	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426110v700
ATIS	ATIS.3GPP.26.110V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.110(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.110(R7-7.0.0).zip

10.5.15 TS 26.111 Codec for circuit-switched multimedia telephony service; Modifications to H.324

[ITU-T H.324] with Annex C describes a generic multimedia codec for use in error-prone, wireless networks. The scope of the document is the changes, deletions, and additions to those texts necessary to fully specify a multimedia codec for use in 3G networks. Note that this implicitly excludes the network interface and call set-up procedures. Also excluded are any general introductions to the system components.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.111V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26111-700.pdf
CCSA	CCSA-TSD-126 111	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 111	7.0.0	Published	2007-07-02	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426111v700
ATIS	ATIS.3GPP.26.111V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.111(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.111(R7-7.0.0).zip

10.5.16 TS 26.114 IP multimedia subsystem (IMS); Multimedia telephony; Media handling and interaction

The present document specifies a client for the multimedia telephony service for IMS (MTSI) supporting conversational speech (including DTMF), video and text transported over RTP with the scope to deliver a user experience equivalent to or better than that of circuit switched (CS) conversational services using the same amount of network resources. It defines media handling (e.g., signalling, transport, jitter buffer management, packet-loss handling, adaptation), as well as interactivity (e.g., adding or dropping media during a call). The focus is to ensure a reliable and interoperable service with a predictable media quality, while allowing for flexibility in the service offerings.

The scope includes maintaining backward compatibility in order to ensure seamless interworking with existing services available in the CS domain, such as CS speech and video telephony, as well as with terminals of earlier 3GPP releases. In addition, inter-working with traditional PSTN and emerging TISPAN network is covered.

The specification is written in a forward-compatible way in order to allow additions of media components and functionality in releases after Release 7.

NOTE 1 – MTSI clients can support more than conversational speech, video and text, which is the scope of the present document. See 3GPP TS 22.173 for the definition of the multimedia telephony service for IMS.

NOTE 2 – 3GPP TS 26.235 and 3GPP TS 26.236 do not include the specification of an MTSI client, although they include conversational multimedia applications. Only those parts of 3GPP TS 26.235 and 3GPP TS 26.236 that are specifically referenced by the present document apply to multimedia telephony service for IMS.

NOTE 3 – The present document was started as a conclusion from the study in 3GPP TR 26.914 on optimization opportunities in multimedia telephony for IMS (3GPP TR 22.973).

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.114V7.2.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26114-720.pdf
CCSA	CCSA-TSD-126 114	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 114	7.2.0	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426114v720
ATIS	ATIS.3GPP.26.114V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.114(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.114(R7-7.1.0).zip

10.5.17 TS 26.115 Echo control for speech and multimedia services

The document specifies minimum performance requirements for the gateway echo control of 3G speech and multimedia services. The document is applicable to any narrow-band speech telephony or multimedia service.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.115V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26115-700.pdf
CCSA	CCSA-TSD-126 115	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 115	7.0.0	Published	2007-07-02	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426115v700
ATIS	ATIS.3GPP.26.115V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.115(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.115(R7-7.0.0).zip

10.5.18 TS 26.131 Terminal acoustic characteristics for telephony; Requirements

The document is applicable to any terminal capable of supporting narrow-band or wideband telephony, either as a stand-alone service or as the telephony component of a multimedia service. The document specifies minimum performance requirements for the acoustic characteristics of 3G terminals when used to provide narrow-band or wideband telephony.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.131V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26131-700.pdf
CCSA	CCSA-TSD-126 131	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 131	7.0.0	Published	2007-07-02	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426131v700
ATIS	ATIS.3GPP.26.131V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.131(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.131(R7-7.0.0).zip

10.5.19 TS 26.132 Speech and video telephony terminal acoustic test specification

The present document specifies test methods to allow the minimum performance requirements for the acoustic characteristics of 3G terminals when used to provide narrow-band or wideband telephony to be assessed.

The performance requirements are specified in 3G TS 26.131; the test methods and considerations are specified in the main body of the text.

The present document is applicable to any terminal capable of supporting narrow-band or wideband telephony, either as a stand-alone service or as the telephony component of a multimedia service. The present document specifies test methods to allow the minimum performance requirements for the acoustic characteristics of 3G terminals when used to provide narrow-band or wideband telephony to be assessed.

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TTA	TTAT.3G-26.132(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.132(R7-7.0.0).zip

10.5.20 TS 26.140 Multimedia messaging service (MMS); Media formats and codes

This document specifies the media types, formats and codecs for the MMS within the 3GPP system. The scope of this document extends to codecs for speech, audio, video, still images, bitmap graphics, and other media in general, as well as scene description, multimedia integration and synchronization schemes.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.140V7.1.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26140-710.pdf
CCSA	CCSA-TSD-126 140	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 140	7.1.0	Published	2007-07-13	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426140v710
ATIS	ATIS.3GPP.26.140V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.140(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.140(R7-7.1.0).zip

10.5.21 TS 26.141 IP multimedia system (IMS) messaging and presence; Media formats and codecs

The 3GPP Technical Specifications 3G TS 22.340 and 3G TS 22.141 define the requirements for the 3GPP IP multimedia subsystem (IMS)-based messaging and presence services. This Technical Specification takes the requirements into account when defining the minimal baseline and optional media codecs and message container format to be used by IMS messaging and associated presence service, when supported.

IMS messaging services incorporate one or more of the following messaging types: immediate messaging, deferred delivery messaging, and session-based messaging. With immediate messaging the sender expects immediate message delivery in what is perceived as real time compared with deferred messaging, where the sender expects the network to deliver the message as soon as the recipient becomes available. With session-based messaging, a communications association is established between two or more users before communication can take place. In the simplest form, session-based messaging may be a direct communication between two users. This specification defines the media types and container formats for both the immediate message type and the session-based message type.

The specification provides the ability to have an interoperable baseline set of media types for messaging and presence services, that will simultaneously maximize the technology reuse of the already existing 3GPP services with media types, defined in 3G TS 26.140 and 3G TS 26.234. Simultaneously, the specification will provide the ability to indicate the IMS system about the complete set of UE media and storage capabilities relevant for the IMS messaging and presence services.

The present document specifies the basic media formats and codecs to be used in the IMS messaging and presence services. It defines the mandatory "baseline" set of media types for the services. Additionally, it also targets to allow possible message content type enhancements, either 3GPP-standardized or other generally used media types, in a flexible way.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.141V7.1.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26141-710.pdf
CCSA	CCSA-TSD-126 141	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 141	7.1.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426141v710
ATIS	ATIS.3GPP.26.141V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.141(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.141(R7-7.1.0).zip

10.5.22 TS 26.142 Dynamic and interactive multimedia scenes

DIMS defines a dynamic rich-media system, including a media type, its packaging, delivery, and interaction with the local terminal, user, and other local and remote sub-systems. Enhanced end-user experiences are provided by the coordinated management and synchronization of media and events, combined with end-user interaction.

The DIMS media type can be used as a generic media type, allowing creating dynamic interactive rich-media services and can also benefit, or be used in association with other media types (e.g., audio codecs, video codecs, XHTML browser, etc.).

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.142V7.1.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26142-710.pdf
CCSA	CCSA-TSD-126 142	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 142	7.1.0	Published	2007-10-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426142v710
ATIS	ATIS.3GPP.26.142V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.142(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.142(R7-7.0.0).zip

10.5.23 TS 26.171 Adaptive multi-rate – wideband (AMR-WB) speech codec; General description

This document is an introduction to the speech processing parts of the wideband telephony speech service employing the adaptive multi-rate wideband (AMR-WB) speech coder. A general overview of the speech processing functions is given, with reference to the documents where each function is specified in detail.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.171V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26171-700.pdf
CCSA	CCSA-TSD-126 171	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 171	7.0.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426171v700
ATIS	ATIS.3GPP.26.171V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.171(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.171(R7-7.0.0).zip

10.5.24 TS 26.173 ANSI-C code for the adaptive multi-rate – wideband (AMR-WB) speech codec

This document contains an electronic copy of the ANSI-C code for the adaptive multi-rate wideband codec. The ANSI-C code is necessary for a bit-exact implementation of the adaptive multi-rate wideband speech transcoder (3G TS 26.190), voice activity detection (3G TS 26.194), comfort noise (3G TS 26.192), source controlled rate operation (3G TS 26.193) and example solutions for substituting and muting of lost frames (3G TS 26.191).

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.173V7.1.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26173-710.pdf
CCSA	CCSA-TSD-126 173	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 173	7.1.0	Published	2007-10-15	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426173v710
ATIS	ATIS.3GPP.26.173V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.173(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.173(R7-7.1.0).zip

10.5.25 TS 26.174 Speech codec speech processing functions; Adaptive multi-rate – wideband (AMR-WB) speech codec test sequences

The present document specifies the digital test sequences for the adaptive multi-rate wideband (AMR-WB) speech codec. These sequences test for a bit-exact implementation of the adaptive multi-rate wideband (AMR-WB) speech transcoder (3G TS 26.190), voice activity detection (3G TS 26.194), comfort noise (3G TS 26.192), and source controlled rate operation (3G TS 26.193).

	Document No.	Version	Status	Issued date	Location
TTA	TTAT.3G-26.174(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.174(R7-7.0.0).zip

10.5.26 TS 26.177 Speech enabled services (SES); DSR extended advanced front-end test sequences

The present document specifies the digital test sequences for the DSR extended advanced front-end speech codec. These sequences can be used to test for a bit-exact implementation of the DSR advanced front-end codec and quantization (3G TS 26.243).

	Document No.	Version	Status	Issued date	Location
TTA	TTAT.3G-26.177(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.177(R7-7.0.0).zip

10.5.27 TS 26.190 Speech codec speech processing functions; Adaptive multi-rate – wideband (AMR-WB) speech codec; Transcoding functions

This Telecommunication Standard (TS) describes the detailed mapping from input blocks of 320 speech samples in 16-bit uniform PCM format to encoded blocks of 132, 177, 253, 285, 317, 365, 397, 461 and 477 bits and from encoded blocks of 132, 177, 253, 285, 317, 365, 397, 461 and 477 bits to output blocks of 320 reconstructed speech samples. The sampling rate is 16 000 samples/s leading to a bit rate for the encoded bit stream of 6.60, 8.85, 12.65, 14.25, 15.85, 18.25, 19.85, 23.05 or 23.85 kbit/s. The coding scheme for the multi-rate coding modes is the so-called algebraic code-excited linear prediction coder, hereafter referred to as ACELP. The multi-rate wideband ACELP coder is referred to as MRWB-ACELP.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.190V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26190-700.pdf
CCSA	CCSA-TSD-126 190	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 190	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426190v700
ATIS	ATIS.3GPP.26.190V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.190(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.190(R7-7.0.0).zip

10.5.28 TS 26.191 Adaptive multi-rate – wideband (AMR-WB) speech codec; Error concealment of erroneous or lost frames

This specification defines an error concealment procedure, also termed frame substitution and muting procedure, which shall be used by the AMR-WB speech codec receiving end when one or more erroneous/lost speech or lost silence descriptor (SID) frames are received.

The requirements of this document are mandatory for implementation in all networks and user equipments (UE)s capable of supporting the AMR-WB speech codec. It is not mandatory to follow the bit-exact implementation outlined in this document and the corresponding C source code.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.191V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26191-700.pdf
CCSA	CCSA-TSD-126 191	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 191	7.0.0	Published	2007-07-02	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426191v700
ATIS	ATIS.3GPP.26.191V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.191(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.191(R7-7.0.0).zip

10.5.29 TS 26.192 Speech codec speech processing functions; Adaptive multi-rate – wideband (AMR-WB) speech codec; Comfort noise aspects

This document gives the detailed requirements for the correct operation of the background acoustic noise evaluation, noise parameter encoding/decoding and comfort noise generation for the AMR wideband (AMR-WB) speech codec during source controlled rate (SCR) operation.

The requirements described in this document are mandatory for implementation in all UEs capable of supporting the AMR-WB speech codec.

The receiver requirements are mandatory for implementation in all networks capable of supporting the AMR-WB speech codec, the transmitter requirements only for those where downlink SCR will be used.

In case of discrepancy between the requirements described in this document and the fixed point computational description of these requirements contained in 3G TS 26.173, the description in 3G TS 26.173 will prevail.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.192V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26192-700.pdf
CCSA	CCSA-TSD-126 192	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 192	7.0.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426192v700
ATIS	ATIS.3GPP.26.192V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.192(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.192(R7-7.0.0).zip

10.5.30 TS 26.193 Adaptive multi-rate – wideband (AMR-WB) speech codec; Source controlled rate operation

This document describes the source controlled rate (SCR) operation of the adaptive multi-rate wideband speech codec. The implementation of this SCR operation is mandatory in all UMTS equipment implementing the adaptive multi-rate wideband speech codec.

The description is structured according to the block diagram in Figure 10.5.30-1. This structure of distributing the various functions between system entities is not mandatory for implementation, as long as the operation on the speech decoder output remains the same.

Annex A describes the discontinuous transmission (DTX) operation of the adaptive multi-rate wideband speech codec in codec type FR_AMR-WB for the GSM system.

An overall description of the speech processing parts can be found in 3G TS 26.171. An overview of one link SCR operation is shown in Figure 10.5.30-1.

Figure 10.5.30-1 – Block diagram of one link SCR operation

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.193V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26193-700.pdf
CCSA	CCSA-TSD-126 193	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 193	7.0.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426193v700
ATIS	ATIS.3GPP.26.193V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.193(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.193(R7-7.0.0).zip

10.5.31 TS 26.194 Adaptive multi-rate – wideband (AMR-WB) speech codec; Voice activity detector (VAD)

This document specifies the voice activity detector (VAD) to be used in the discontinuous transmission (DTX) as described in 3GPP TS 26.193.

The requirements are mandatory on any VAD to be used either in user equipment (UE) or base station systems (BSS)s that utilize the AMR wideband speech codec.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.194V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26194-700.pdf
CCSA	CCSA-TSD-126 194	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 194	7.0.0	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426194v700
ATIS	ATIS.3GPP.26.194V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.194(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.194(R7-7.0.0).zip

10.5.32 TS 26.201 Adaptive multi-rate – wideband (AMR-WB) speech codec; Frame structure

This document describes a generic frame format for the adaptive multi-rate wideband (AMR-WB) speech codec. This format shall be used as a common reference point when interfacing speech frames between different elements of the 3G system and between different systems. Appropriate mappings to and from this generic frame format will be used within and between each system element.

Annex A of this Technical Specification describes a second frame format which shall be used when octet alignment of AMR-WB frames is required.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.201V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26201-700.pdf
CCSA	CCSA-TSD-126 201	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 201	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426201v700
ATIS	ATIS.3GPP.26.201V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.201(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.201(R7-7.0.0).zip

10.5.33 TS 26.202 Adaptive multi-rate – wideband (AMR-WB) speech codec; Interface to Iu, Uu, and Nb

This document specifies the mapping of the AMR wideband generic frame format (3G TS 26.201) to the Iu interface (3G TS 25.415), the Uu interface and the Nb interface (3G TS 29.415). It further specifies the mapping of PCM 64 kbit/s [ITU-T G.711] coded speech to the Nb interface.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.202V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26202-700.pdf
CCSA	CCSA-TSD-126 202	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 202	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426202v700
ATIS	ATIS.3GPP.26.202V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.202(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.202(R7-7.0.0).zip

10.5.34 TS 26.204 Adaptive multi-rate – wideband (AMR-WB) speech codec; ANSI-C code

This document contains an electronic copy of the ANSI-C code for the floating-point adaptive multi-rate wideband codec. This floating-point codec specification is mainly targeted to be used in multimedia applications or in packet-based applications. The bit-exact fixed-point ANSI-C code in 3G TS 26.173 remains the preferred implementation for all applications, but the floating-point codec may be used instead of the fixed-point codec when the implementation platform is better suited for a floating-point implementation. It has been verified that the fixed-point and floating-point codecs interoperate with each other without any artifacts.

The floating-point ANSI-C code in this document is the only standard conforming non-bit-exact implementation of the adaptive multi-rate wideband speech transcoder (3G TS 26.190), voice activity detection (3G TS 26.194), comfort noise generation (3G TS 26.192), and source controlled rate operation (3G TS 26.193). The floating-point code also contains example solutions for substituting and muting of lost frames (3G TS 26.191).

The fixed-point specification in 3G TS 26.173 shall remain the only allowed implementation for the 3G AMR-WB speech service and the use of the floating-point codec is strictly limited to other services.

The floating-point encoder in this document is a non-bit-exact implementation of the fixed-point encoder producing quality indistinguishable from that of the fixed-point encoder. The decoder in this document is functionally a bit-exact implementation of the fixed-point decoder, but the code has been optimized for speed and the standard fixed-point libraries are not used as such.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.204V7.1.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26204-710.pdf
CCSA	CCSA-TSD-126 204	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 204	7.1.0	Published	2007-10-15	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426204v710
ATIS	ATIS.3GPP.26.204V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.204(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.204(R7-7.1.0).zip

10.5.35 TS 26.226 Cellular text telephone modem; General description

This Technical Specification (TS) concerns the cellular text telephone modem (CTM). CTM allows reliable transmission of a text telephone conversation alternating with a speech conversation through the existing speech communication paths in cellular mobile phone systems. This reliability is achieved by an improved modulation technique, including error protection, interleaving and synchronization. Together with Recs ITU-T V.18 and T.140, CTM may serve for worldwide applications in text telephony.

A general overview and explanations of possible implementation architectures is provided. CTM is intended for use in end terminals (on the mobile or fixed side) and within the network for the adaptation between CTM and existing traditional text telephone standards.

The CTM transmitter is fully specified and a bit exact C-code reference is provided. An implementation of an example CTM receiver is also described.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.226V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26226-700.pdf
CCSA	CCSA-TSD-126 226	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 226	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426226v700
ATIS	ATIS.3GPP.26.226V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.226(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.226(R7-7.0.0).zip

10.5.36 TS 26.230 Cellular text telephone modem; transmitter bit exact C-code

This Technical Standard (TS) contains an electronic copy of the ANSI-C code for the cellular text telephone modem (CTM) for reliable transmission of text telephone text via the speech channel of cellular networks. While CTM is generally usable with text in UCS coding, the example application linked to CTM in this document is limited to use the signals and character set of the Baudot type.

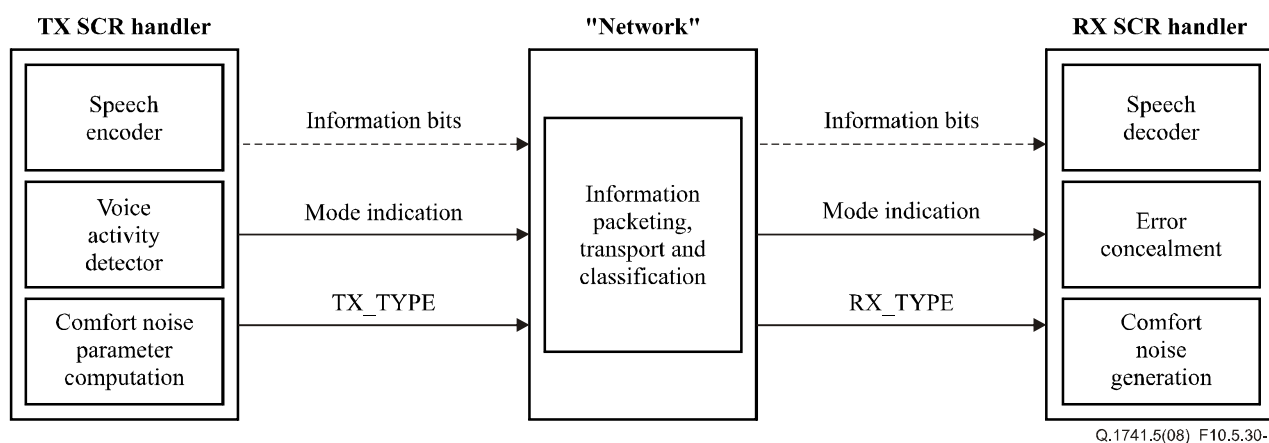|	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.230V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26230-700.pdf
CCSA	CCSA-TSD-126 230	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 230	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426230v700
ATIS	ATIS.3GPP.26.230V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.230(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.230(R7-7.0.0).zip

10.5.37 TS 26.231 Cellular text telephone modem; minimum performance requirements

This Technical Standard (TS) describes the minimum performance requirements for the cellular text telephone modem (CTM) for reliable transmission of text telephone text via the speech channel of cellular or PSTN networks. The transmitting parts of the cellular text telephone modem are specified in 3G TS 26.226.

CTM is a general technology, independent of text telephone types. The tests are made only for one specific type of text telephone, the Baudot type. The tests are applicable only to a combination of a Baudot codec and CTM and tests the combined performance. A bit-exact implementation of the CTM transmitter as well as an example implementation of the remaining functions of such a combination are provided in 3G TS 26.230.

The test scripts and test vectors required to perform this testing are included in a supplement, which is located in the zip archive ctm_testing.zip. The path and file names given in this specification refer to the file structures associated with this supplement. A second supplement (zip archive ctm_score.zip) provides the scoring program that is described in clause 6 of 3G TS 26.231.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.231V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26231-700.pdf
CCSA	CCSA-TSD-126 231	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 231	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426231v700
ATIS	ATIS.3GPP.26.231V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.231(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.231(R7-7.0.0).zip

10.5.38 TS 26.233 Transparent end-to-end packet-switched streaming service (PSS); General description

The document contains a general description of a transparent packet-switched streaming service in 3G networks. In particular, it defines the usage scenarios, overall high-level end-to-end service concept, and lists terminal-related functional components. It also lists any identified service interworking requirements. PSS protocols and codecs are defined in 3G TS 26.234.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.233V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26233-700.pdf
CCSA	CCSA-TSD-126 233	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 233	7.0.0	Published	2007-07-02	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426233v700
ATIS	ATIS.3GPP.26.233V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.233(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.233(R7-7.0.0).zip

10.5.39 TS 26.234 Transparent end-to-end packet-switched streaming service (PSS); Protocols and codecs

The document specifies the protocols and codecs for the PSS within the 3G system. Protocols for control signalling, capability exchange, scene description, media transport and media encapsulations are specified. Codecs for speech, natural and synthetic audio, video, still images, bitmap graphics, vector graphics, timed text, and text are specified.

The document is applicable to IP-based packet-switched networks.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.234V7.4.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26234-740.pdf
CCSA	CCSA-TSD-126 234	7.4.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 234	7.4.0	Published	2007-10-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426234v740
ATIS	ATIS.3GPP.26.234V740-2007	7.4.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.234(R7-7.3.0)	7.3.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.234(R7-7.3.0).zip

10.5.40 TS 26.235 Packet-switched conversational multimedia applications; Default codecs

This document introduces the set of default codecs for packet-switched conversational multimedia applications within the 3G IP multimedia subsystem. Visual and sound communication are specifically addressed. The intended applications are assumed to require low-delay, real-time functionality.

This document is applicable, but not limited, to PS video telephony.

The applicability of this specification to GERAN is FFS.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.235V7.2.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26235-720.pdf
CCSA	CCSA-TSD-126 235	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 235	7.2.0	Published	2007-10-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426235v720
ATIS	ATIS.3GPP.26.235V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.235(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.235(R7-7.2.0).zip

10.5.41 TS 26.236 Packet-switched conversational multimedia applications; Transport protocols

This document introduces the required protocols for packet-switched conversational multimedia applications within 3GPP IP multimedia subsystem. Visual and sound communications are specifically addressed. The intended applications are assumed to require low-delay, real-time functionality.

This document describes the required protocol-related elements for 3G PS multimedia terminal:

* required SDP signalling regarding the media type bit rate, packet size, packet transport frequency;
* usage of RTP payload for media types;
* bandwidth adaptation;
* QoS negotiation.

This document is applicable, but not limited, to packet-switched video telephony.

The applicability of this document to GERAN is FFS.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.236V7.2.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26236-720.pdf
CCSA	CCSA-TSD-126 236	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 236	7.2.0	Published	2007-10-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426236v720
ATIS	ATIS.3GPP.26.236V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.236(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.236(R7-7.1.0).zip

10.5.42 TS 26.243 ANSI-C code for the fixed-point distributed speech recognition extended advanced front-end

The present document contains an electronic copy of the ANSI-C code for DSR extended advanced front-end. The ANSI-C code is necessary for a bit-exact implementation of DSR extended advanced front-end.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.243V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26243-700.pdf
CCSA	CCSA-TSD-126 243	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 243	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426243v700
ATIS	ATIS.3GPP.26.243V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.243(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.243(R7-7.0.0).zip

10.5.43 TS 26.244 Transparent end-to-end packet-switched streaming service (PSS); 3GPP file format (3GP)

This document defines the 3GPP file format (3GP) as an instance of the ISO base media file format. The definition addresses 3GPP specific features such as codec registration and conformance within the MMS and PSS services.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.244V7.2.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26244-720.pdf
CCSA	CCSA-TSD-126 244	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 244	7.2.0	Published	2007-07-02	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426244v720
ATIS	ATIS.3GPP.26.244V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.244(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.244(R7-7.2.0).zip

10.5.44 TS 26.245 Transparent end-to-end packet-switched streaming service (PSS); Timed text format

The 3GPP transparent end-to-end packet-switched streaming service (PSS) specification consists of six 3GPP TSs: 3G TS 22.233, 3G TS 26.233, 3G TS 26.234, 3G TS 26.244, 3G TS 26.245 and 3G TS 26.246.

The 3G TS 22.233 contains the service requirements for the PSS. The 3G TS 26.233 provides an overview of the PSS. The 3G TS 26.234 provides the details of protocol and codecs used by the PSS. The 3G TS 26.244 defines the 3GPP file format (3GP) used by the PPS and MMS services. The 3G TS 26.246 defines the 3GPP SMIL language profile. The present document defines the timed text format used by the PSS.

The 3G TS 26.244, 3G TS 26.245 and 3G TS 26.246 start with Release 6. Earlier releases of the 3GPP file format, the timed text format and the 3GPP SMIL language profile can be found in 3G TS 26.234.

Timed text is text that is rendered at the terminal, in synchronization with other timed media such as video or audio. Timed text is used for such applications as closed captioning, titling, and other visual annotation of timed media.

This document defines the timed text format relative to the 3GPP file format. This specification defines the format of timed text in downloaded files.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.245V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26245-700.pdf
CCSA	CCSA-TSD-126 245	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 245	7.0.0	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426245v700
ATIS	ATIS.3GPP.26.245V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.245(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.245(R7-7.0.0).zip

10.5.45 TS 26.246 Transparent end-to-end packet-switched streaming service (PSS); 3GPP SMIL language profile

The present document includes the specification of the 3GPP SMIL language profile. The 3GPP SMIL language profile is also referred to as "3GPP PSS SMIL Language Profile" (3G TS 26.234) and also just "3GPP SMIL".

The 3GPP SMIL language profile is based on SMIL 2.0 basic and SMIL scalability framework. It is a clean subset of SMIL 2.0 full profile, and a clear superset of SMIL 2.0 basic.

The 3GPP SMIL language profile is used by the PSS and MMS services.

The 3GPP SMIL language profile is in no way restricted to be used with only these services, but can also be used for other services.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.246V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26246-700.pdf
CCSA	CCSA-TSD-126 246	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 246	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426246v700
ATIS	ATIS.3GPP.26.246V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.246(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.246(R7-7.0.0).zip

10.5.46 TS 26.273 ANSI-C code for the fixed-point extended AMR – wideband (AMR-WB+) codec

This document contains an electronic copy of the ANSI-C code for the fixed-point extended adaptive multi-rate wideband codec. Alternatively, floating-point ANSI-C code is specified in TS 26.304. The floating-point codec/encoder/decoder specified in the present document or the floating-point codec/encoder/decoder specified in TS 26.304 may be used depending on if the implementation platform is better suited for a floating-point or a fixed-point implementation. It has been verified that the fixed-point and floating-point codecs interoperate with each other without any artifacts.

The fixed-point ANSI-C code in the present document defines, besides the floating-point c-code specified in TS 26.304, one valid reference implementation of the extended adaptive multi-rate wideband transcoder (TS 26.290). Standard conformance is enforced by meeting the conformance criteria defined in TS 26.274.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.273V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26273-700.pdf
CCSA	CCSA-TSD-126 273	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 273	7.0.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426273v700
ATIS	ATIS.3GPP.26.273V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.273(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.273(R7-7.0.0).zip

10.5.47 TS 26.274 Audio codec processing functions; Extended adaptive multi-rate – wideband (AMR-WB+) codec; Conformance testing

This document specifies test procedures and digital test sequences to be used for conformance testing of implementations of the extended adaptive multi-rate wideband (AMR-WB+) codec.

	Document No.	Version	Status	Issued date	Location
TTA	TTAT.3G-26.274(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.274(R7-7.0.0).zip

10.5.48 TS 26.290 Audio codec processing functions; Extended adaptive multi-rate – wideband (AMR-WB+) codec; Transcoding functions

This Telecommunication Standard describes the detailed mapping from input blocks of monophonic or stereophonic audio samples in 16-bit uniform PCM format to encoded blocks and from encoded blocks to output blocks of reconstructed monophonic or stereophonic audio samples. The coding scheme is an extension of the AMR-WB coding scheme (3G TS 26.194) and is referred to as extended AMR-WB or AMR-WB+ codec. It comprises all AMR-WB speech codec modes including VAD/DTX (TS 26.190) as well as extended functionality for encoding general audio signals such as music, speech, mixed, and other signals.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.290V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26290-700.pdf
CCSA	CCSA-TSD-126 290	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 290	7.0.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426290v700
ATIS	ATIS.3GPP.26.290V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.290(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.290(R7-7.0.0).zip

10.5.49 TS 26.304 Extended adaptive multi-rate – wideband (AMR-WB+) codec; floating-point ANSI-C code

The present document contains an electronic copy of the ANSI-C code for the floating-point extended adaptive multi-rate wideband codec. Alternatively, fixed-point ANSI-C code is specified in 3G TS 26.273. The floating-point codec/encoder/decoder specified in this document or the fixed-point codec/encoder/decoder may be used depending on if the implementation platform is better suited for a floating-point or a fixed-point implementation. It has been verified that the fixed-point and floating-point codecs interoperate with each other without any artifacts.

The floating-point ANSI-C code in the present document defines, besides the fixed-point c-code specified in 3G TS 26.273, one valid reference implementation of the extended adaptive multi-rate wideband transcoder (3G TS 26.290). Standard conformance is enforced by meeting the conformance criteria defined in 3G TS 26.290.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.304V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26304-700.pdf
CCSA	CCSA-TSD-126 304	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 304	7.0.0	Published	2007-04-13	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426304v700
ATIS	ATIS.3GPP.26.304V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.304(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.304(R7-7.0.0).zip

10.5.50 TS 26.346 Multimedia broadcast/multicast service (MBMS); Protocols and codecs

This document defines a set of media codecs, formats and transport/application protocols to enable the deployment of MBMS user services either over the MBMS bearer service or other UMTS bearer services within the 3GPP system.

In this version of the specification, only MBMS download and streaming delivery methods are specified. The present document does not preclude the use of other delivery methods.

The present document includes information applicable to network operators, service providers and manufacturers.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.346V7.5.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26346-750.pdf
CCSA	CCSA-TSD-126 346	7.5.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 346	7.5.0	Published	2007-10-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426346v750
ATIS	ATIS.3GPP.26.346V750-2007	7.5.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.346(R7-7.4.0)	7.4.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.346(R7-7.4.0).zip

10.5.51 TS 26.401 General audio codec audio processing functions; Enhanced aacPlus general audio codec; General description

This Telecommunication Standard (TS) describes the detailed mapping from an MPEG-4 bitstream containing enhanced aacPlus coded audio to PCM sample output. The enhanced aacPlus audio codec is based on the AAC, SBR and parametric stereo coding tools defined in the MPEG-4 audio standard. In addition, it includes further tools such as error concealment, spline resampler, and stereo-to-mono downmix.

This Telecommunication Standard (TS) also describes the detailed mapping from a PCM sample input to an MPEG-4 bitstream containing enhanced aacPlus coded audio.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.401V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26401-700.pdf
CCSA	CCSA-TSD-126 401	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 401	7.0.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426401v700
ATIS	ATIS.3GPP.26.401V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.401(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.401(R7-7.0.0).zip

10.5.52 TS 26.402 General audio codec audio processing functions; Enhanced aacPlus general audio codec; Additional decoder tools

This Telecommunication Standard (TS) describes the error concealment algorithm, SBR parameter downmix and output resampling for the enhanced aacPlus general audio codec (3G TS 26.401).

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.402V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26402-700.pdf
CCSA	CCSA-TSD-126 402	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 402	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426402v700
ATIS	ATIS.3GPP.26.402V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.402(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.402(R7-7.0.0).zip

10.5.53 TS 26.403 General audio codec audio processing functions; Enhanced aacPlus general audio codec; Encoder specification AAC part

This Telecommunication Standard (TS) describes the AAC encoder part of the enhanced aacPlus general audio codec (3G TS 26.401).

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.403V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26403-700.pdf
CCSA	CCSA-TSD-126 403	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 403	7.0.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426403v700
ATIS	ATIS.3GPP.26.403V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.403(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.403(R7-7.0.0).zip

10.5.54 TS 26.404 General audio codec audio processing functions; Enhanced aacPlus general audio codec; Enhanced aacPlus encoder SBR part

This Telecommunication Standard (TS) describes the SBR encoder part of the enhanced aacPlus general audio codec (3G TS 26.401).

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.404V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26404-700.pdf
CCSA	CCSA-TSD-126 404	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 404	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426404v700
ATIS	ATIS.3GPP.26.404V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.404(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.404(R7-7.0.0).zip

10.5.55 TS 26.405 General audio codec audio processing functions; Enhanced aacPlus general audio codec; Encoder specification parametric stereo part

This Telecommunication Standard (TS) describes the parametric stereo encoder part of the enhanced aacPlus general audio codec (3G TS 26.401).

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.405V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26405-700.pdf
CCSA	CCSA-TSD-126 405	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 405	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426405v700
ATIS	ATIS.3GPP.26.405V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.405(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.405(R7-7.0.0).zip

10.5.56 TS 26.410 General audio codec audio processing functions; Enhanced aacPlus general audio codec; Floating-point ANSI-C code

The present document contains an electronic copy of the ANSI-C code for the floating-point enhanced aacPlus codec (3G TS 26.401).

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.410V7.2.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26410-720.pdf
CCSA	CCSA-TSD-126 410	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 410	7.2.0	Published	2007-10-12	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426410v720
ATIS	ATIS.3GPP.26.410V 720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.410(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.410(R7-7.2.0).zip

10.5.57 TS 26.411 General audio codec audio processing functions; Enhanced aacPlus general audio codec; Fixed-point ANSI-C code

This document contains an electronic copy of the ANSI-C code for the fixed-point enhanced aacPlus codec as specified in TS 26.401.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.411V7.3.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26411-730.pdf
CCSA	CCSA-TSD-126 411	7.3.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 411	7.3.0	Published	2007-10-12	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426411v730
ATIS	ATIS.3GPP.26.411V730-2007	7.3.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.411(R7-7.3.0)	7.3.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.411(R7-7.3.0).zip

10.5.58 TS 26.412 Source code for 3GP file format

This document contains the source code of the 3GPP file format as specified in TS 26.244.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-26.412V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/26/A26412-700.pdf
CCSA	CCSA-TSD-126 412	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 126 412	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0426412v700
ATIS	ATIS.3GPP.26.412V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-26.412(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-26.412(R7-7.0.0).zip

10.5.59 TR 26.902 Video codec performance

This document comprises a technical report on video codec performance, for packet-switched video-capable multimedia services standardized by 3GPP.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB TR-T12-26.902V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/3_T12/ARIB-TR-T12/Rel7/26/A26902-700.pdf
CCSA	CCSA-TSD-126 902	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 126 902	7.0.0	Published	2007-07-17	http://pda.etsi.org/pda/home.asp?wkr=DTR/TSGS-0426902v700
ATIS	ATIS.3GPP.26.902V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.5.60 TR 26.911 Codec(s) for circuit-switched multimedia telephony service; Terminal Implementor's Guide

This document provides non-mandatory recommendations for the use of the different codec implementation options for the circuit-switched multimedia telephony service which is based on [ITU-T H.324], and in Annex C of [ITU-T H.324] in particular. These Recommendations address issues specific to the 3G operating environment, including guaranteeing sufficient error resilience and interworking between terminals.

The contents of this document are provided for information to assist in high-quality implementation of multimedia telephony terminals. All references to "terminals" in this report are to terminals supporting the Circuit-Switched Multimedia Telephony Service as described in [ITU-T H.324], Recs ITU-T G.723.1, and H.263.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB TR-T12-26.911V7.1.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/3_T12/ARIB-TR-T12/Rel7/26/A26911-710.pdf
CCSA	CCSA-TSD-126 911	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 126 911	7.1.0	Published	2006-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGS-0426911v710
ATIS	ATIS.3GPP.26.911V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.5.61 TR 26.214 Multimedia telephony over IP multimedia subsystem (IMS); Optimization opportunities

This document:

- identifies opportunities for optimization of service quality and efficiency of multimedia telephony over IP in a qualitative sense;

- provides the basis for developing a set of optional backward-compatible tools implementing such optimizations.

The optimized multimedia telephony targets many different system configurations and operating conditions, e.g., GERAN, UTRAN, interworking between GERAN, UTRAN, GAN, and different PLMNs. Of the various use cases for multimedia telephony, the main focus of the present document is on voice calls, but the focus also includes other core media components, such as video. In particular, areas with optimization opportunities include handling of degraded channels, delay jitter, packet losses, efficiency, interworking with other voice systems, etc.

The scope includes proposing solutions that maintain backward compatibility in order to ensure seamless interworking with existing services available in the CS domain, such as CS voice telephony and 3G-324M, as well as with terminals of earlier 3GPP releases. Alignment with legacy media formats avoids transcoding and even allows realizing at least parts of the optimization gains. All optimizations are hence based on the default codecs specified in TS 26.235 and TS 26.141.

The optimizations identified in this document address mainly media transport and signalling. Most of the SIP signalling is out of scope. Issues regarding registration to the network and/or to IMS at power-on or at other occurrences are not included either.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB TR-T12-26.914V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/3_T12/ARIB-TR-T12/Rel7/26/A26914-700.pdf
CCSA	CCSA-TSD-126 914	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 126 914	7.0.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=DTR/TSGS-0426914v700
ATIS	ATIS.3GPP.26.914V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.5.62 TR 26.935 Packet-switched conversational multimedia applications; Performance characterization of default codecs

The present document provides information on the performances of default speech codecs in packet-switched conversational multimedia applications. The codecs under test are AMR-NB (adaptive multi-rate narrowband) and AMR-WB (adaptive multi-rate wideband). In addition, several ITU-T codecs (G.723.1, G.729, G.722 and G.711) are included in the testing. Experimental test results from the speech quality testing are reported to illustrate the behaviour of these codecs.

The results give information of the performance of PS conversational multimedia applications under various operating and transmission conditions (e.g., considering radio transmission errors, IP packet losses, end-to-end delays, and several types of background noise). The performance results can be used, e.g., as guidance for network planning and to appropriately adjust the radio network parameters.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB TR-T12-26.935V7.1.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/3_T12/ARIB-TR-T12/Rel7/26/A26935-710.pdf
CCSA	CCSA-TSD-126 935	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 126 935	7.1.0	Published	2007-10-26	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGS-0426935v710
ATIS	ATIS.3GPP.26.935V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.5.63 TR 26.936 Performance characterization of 3GPP audio codecs

This document comprises the Technical Report for the characterization of the 3GPP audio codecs, enhanced aacPlus (*Eaac+*) and extended AMR-WB (*AMR-WB+*), standardized by 3GPP in release 6 for packet-switched streaming service (PSS), multimedia messaging service (MMS), multimedia broadcast and multicast service (MBMS), and IMS messaging service and presence service.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB TR-T12-26.936V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/3_T12/ARIB-TR-T12/Rel7/26/A26936-700.pdf
CCSA	CCSA-TSD-126 936	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 126 936	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGS-0426936v700
ATIS	ATIS.3GPP.26.936V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.5.64 TR 26.937 Transparent end-to-end packet-switched streaming service (PSS); RTP usage model

The objective of this document is to characterize the 3GPP packet-switched streaming service (PSS). In doing so, the document considers the impacts of the underlying network configurations and how the streaming mechanism itself could be optimized.

The scope of this document includes consideration of (non-exhaustive):

• trade-off between radio usage efficiency and streaming QoS;

• feedback of network conditions and adaptation of stream and/or the transmission of the stream;

• optimal packetization of the media stream in line with the segmentation within the transport mechanism;

• error robustness mechanisms (such as retransmission).

Client buffering to ease the QoS requirements on the network and enable more flexibility in how the network transport resources are applied.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB TR-T12-26.937V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/3_T12/ARIB-TR-T12/Rel7/26/A26937-700.pdf
CCSA	CCSA-TSD-126 937	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 126 937	7.0.0	Published	2007-07-02	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGS-0426937v700
ATIS	ATIS.3GPP.26.937V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.5.65 TR 26.943 Recognition performance evaluations of codecs for speech-enabled services (SES)

This technical report provides information on the recognition performance of the DSR extended advanced front end conducted by speech recognition vendors IBM and scansoft for the selection of a codec for speech-enabled services. The performance results are provided both as absolute word error rates for DSR and AMR-NB/AMR-WB on a range of extensive evaluation databases and as relative word error rate reductions when compared to both the AMR-NB and AMR-WB codecs.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB TR-T12-26.943V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/3_T12/ARIB-TR-T12/Rel7/26/A26943-700.pdf
CCSA	CCSA-TSD-126 943	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 126 943	7.0.0	Published	2007-07-02	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGS-0426943v700
ATIS	ATIS.3GPP.26.943V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.5.66 TR 26.944 End-to-end multimedia services performance metrics

The present document describes and defines performance metrics for popular multimedia services in 3G networks, including packed-switched streaming service (PSS), multimedia broadcast multicast service (MBMS), video telephony (VT), and IP multimedia subsystem service (IMS). The present document has a top-down approach, which starts with the quality of experience (QoE) parameters and metrics, and then provides end-to-end service QoS (ESQoS) and system quality of service (SQoS) parameters and metrics and mapping between these different layers.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB TR-T12-26.944V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/3_T12/ARIB-TR-T12/Rel7/26/A26944-700.pdf
CCSA	CCSA-TSD-126 944	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 126 944	7.0.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=DTR/TSGS-0426944v700
ATIS	ATIS.3GPP.26.944V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.5.67 TR 26.946 Multimedia broadcast/multicast service (MBMS) user service guidelines

MBMS user services can be built on top of the MBMS bearer service. This document describes the usage of the two delivery methods, which are defined in TS 26.346. The two delivery methods are streaming and download. Examples of applications using the download delivery method are news and software upgrades. Delivery of live music is an example of an application using the streaming delivery method.

The objective of the document is to provide an overview of the MBMS system, and describes how the MBMS user services use the MBMS bearer services.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB TR-T12-26.946V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/3_T12/ARIB-TR-T12/Rel7/26/A26946-700.pdf
CCSA	CCSA-TSD-126 946	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 126 946	7.0.0	Published	2007-07-02	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGS-0426946v700
ATIS	ATIS.3GPP.26.946V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.5.68 TR 26.975 Performance characterization of the adaptive multi-rate (AMR) speech codec

This document provides background information on the performances of the adaptive multi-rate (AMR) speech codec. Experimental test results from the verification and characterization phases of testing are reported to illustrate the behaviour of AMR in multiple operational conditions.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB TR-T12-26.975V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/3_T12/ARIB-TR-T12/Rel7/26/A26975-700.pdf
CCSA	CCSA-TSD-126 975	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 126 975	7.0.0	Published	2007-07-02	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGS-0426975v700
ATIS	ATIS.3GPP.26.975V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.5.69 TR 26.976 Performance characterization of the adaptive multi-rate wideband (AMR-WB) speech codec

This document provides information of the AMR wideband (AMR-WB) characterization, verification and selection phases. Experimental test results from the speech quality-related testing are reported to illustrate the behaviour of the AMR-WB codec. Additional information is provided, e.g., on implementation complexity of the AMR-WB codec. Also the verification results for the floating-point version of the AMR-WB codec (3G TS 26.204) are presented.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB TR-T12-26.976V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/3_T12/ARIB-TR-T12/Rel7/26/A26976-700.pdf
CCSA	CCSA-TSD-126 976	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 126 976	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGS-0426976v700
ATIS	ATIS.3GPP.26.976V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.5.70 TR 26.978 Results of the adaptive multi-rate (AMR) noise suppression selection phase

The present document provides background information on the performance of the six candidates which were proposed as solutions for publication of an example noise suppression solution for application to the GSM adaptive multi-rate (AMR) speech codec. Experimental test results from the speech quality-related testing are reported to illustrate the behaviour of the candidate algorithms in multiple operational conditions. Additional information is also provided covering data not necessarily directly associated with speech quality (such as complexity, delay, effect on voice activity factor).

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB TR-T12-26.978V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/3_T12/ARIB-TR-T12/Rel7/26/A26978-700.pdf
CCSA	CCSA-TSD-126 978	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 126 978	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGS-0426978v700
ATIS	ATIS.3GPP.26.978V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.6 27-series, Data

10.6.1 TS 27.001 General on terminal adaptation functions (TAF) for mobile stations (MS)

The present document is based on the principles of terminal adaptor functions presented in the ITU-T I-series of Recommendations (I.460 to I.463).

The PLMN supports a wide range of voice and non-voice services in the same network. In order to enable non-voice traffic in the PLMN, there is a need to connect various kinds of terminal equipment to the mobile termination (MT). The target of the present document is to outline the functions needed for the terminal adaptation.

The bearer services are described in 3GPP TS 22.002 and the general network configuration is described in 3GPP TS 23.002. The PLMN access reference configuration is defined in 3GPP TS 23.002. The various connection types used in the A/Gb mode or GERAN Iu mode PLMN are presented in 3GPP TR 21.905 and 3GPP TS 29.990. For support of data services between a PLMN and other networks, see 3GPP TS 29.007.

The present document is valid for a 2nd generation PLMN (A/Gb mode) as well as for a 3rd generation PLMN (Iu mode). If text applies only for one of these systems, it is explicitly mentioned by using the terms "A/Gb mode" and "Iu mode". If text applies to both of the systems, but a distinction between the ISDN/PSTN and the PLMN is necessary, the term "PLMN" is used.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-127 001	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 127 001	7.0.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0327001v700
ATIS	ATIS.3GPP.27.001V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-27.001(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-27.001(R7-7.0.0).zip
TTC	TS-3GA-27.001(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts27001rel7v700.pdf

10.6.2 TS 27.002 Terminal adaptation functions (TAF) for services using asynchronous bearer capabilities

The document defines the interfaces and terminal adaptation functions (TAFs) integral to a mobile termination (MT) which enable the use of asynchronous bearer services in the PLMN and the attachment of asynchronous terminals to a MT (see TS 44.002 and TS 23.101).

The general aspects of terminal adaptation functions are contained in TS 27.001.

This document covers support of these services for the following interfaces and procedures:

– [ITU-T V.14] procedures;

– [ITU-T V.21] DTE/DCE interface;

– [ITU-T V.22 *bis*] DTE/DCE interface;

– [ITU-T V.32] DTE/DCE procedures;

– [ITU-T I.420] S interface;

– [ITU-T V.250] signalling procedures.

The asynchronous data rates between the MT and the IWF are defined in TS 22.002.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-127 002	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 127 002	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0327002v700
ATIS	ATIS.3GPP.27.002V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-27.002(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-27.002(R7-7.0.0).zip
TTC	TS-3GA-27.002(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts27002rel7v700.pdf

10.6.3 TS 27.003 Terminal adaptation functions (TAFs) for services using synchronous bearer capabilities

The document defines terminal adaptation functions (TAFs) which are integrated in a mobile termination (MT) and which enable the use of synchronous bearer services in the PLMN and the attachment of synchronous terminals to an MT (see TS 24.002). For the case where asynchronous terminals are attached to the TAF when using synchronous bearer services in the PLMN, the reader is referred to TS 27.002 for the asynchronous MT-TAF interface specifics and to this document for synchronous bearer service specifics on the TAF-IWF interface. The general aspects of terminal adaptation functions are contained in specification TS 27.001. This document covers support of synchronous data services (see TS 22.002) for the following interfaces and procedures:

– [ITU-T V.22] DTE/DCE interface;

– [ITU-T V.22 *bis*] DTE/DCE interface;

– [ITU-T V.26 *ter*] DTE/DCE interface;

– [ITU-T X.21 *bis*] DTE/DCE interface;

– [ITU-T X.32] procedure;

– [ITU-T V.25 *bis*] procedure.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-127 003	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 127 003	7.0.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0327003v700
ATIS	ATIS.3GPP.27.003V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-27.003(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-27.003(R7-7.0.0).zip
TTC	TS-3GA-27.003(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts27003rel7v700.pdf

10.6.4 TS 27.005 Use of data terminal equipment – data circuit-terminating equipment (DTE – DCE) interface for short message service (SMS) and cell broadcast service (CBS)

This Technical Specification (TS) defines three interface protocols for control of SMS functions within a GSM/UMTS mobile telephone from a remote terminal via an asynchronous interface.

This document defines a binary protocol ("Block Mode"). The protocol includes error protection and is suitable for use where the link may not be completely reliable. It will be of particular use where control of remote devices is required. Efficient transfer of binary encoded user data is possible.

This document defines a character-based interfaced based on "AT" commands ("Text Mode"). This mode is suitable for unintelligent terminals or terminal emulators, and for application software built on command structures like those defined in [ITU-T V.25 *ter*]. Some of the commands defined in clause 3 will also be useful for implementations of clause 2 and/or clause 4, for example enabling an indication of incoming SMS messages.

This document defines a character-based interface with hex-encoded binary transfer of message blocks ("PDU Mode"). This mode is suitable for software drivers based on AT command structures which do not understand the content of the message blocks and can only pass them between the MT and "upper level" software resident in the TE.

In all three modes, the terminal is considered to be in control for SMS/CBS transactions.

This specification considers the mobile termination to be a single entity. Other 3G/GSM Technical Specifications describe the split of functionality between the mobile equipment and (U)SIM.

The three "modes" referred to above are represented in Figure 10.6.4-1.

The "Block mode" is a self-contained mode in its own right, and when entered, control will remain within that mode until the procedures to exit the mode are executed, after which control is returned to the V.25 *ter* "command" state or "on-line command" state.

The "Text" and "PDU" modes are not in themselves V.25 *ter* states but are simply sets of commands that will operate in either the V.25 *ter* "command" state or "on-line command" state. The "Text" and "PDU" modes are transitory states and after each operation, control is automatically

returned to the V.25 *ter* "command" state or "on-line command" state. Whilst in the V.25 *ter* command state, the MS is available to handle incoming and outgoing calls such as data or facsimile.
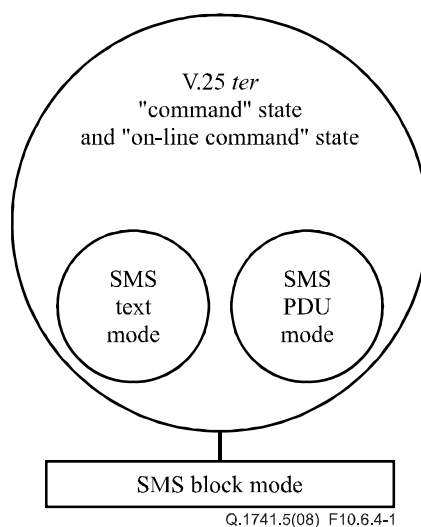
Figure 10.6.4-1 – Block, text and PDU modes

In the "Block mode" and "PDU" mode, a mobile is not permitted to modify any component of an SMS/CBS message received from the air interface or an SMS message received from a TE, before passing it on, except where TS 23.040 or TS 23.041 defines a "component modification facility" and where this "component modification facility" is supported by the mobile. In the text mode, the mobile may be unable to display characters coded in particular coding schemes. In this case, the mobile shall behave as described in TS 23.038 and assume the coding scheme to be the GSM 7-bit default alphabet.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-27.005V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/27/A27005-700.pdf
CCSA	CCSA-TSD-127 005	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 127 005	7.0.0	Published	2007-04-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0127005v700
ATIS	ATIS.3GPP.27.005V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-27.005(R7-7.0.0)	7.0.0	Approved	2007-12-24	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-27.005(R7-7.0.0).zip

10.6.5 TS 27.007 AT command set for user equipment (UE)

The document specifies a profile of AT commands and recommends that this profile be used for controlling mobile termination (MT) functions and GSM/UMTS network services from a terminal equipment (TE) through terminal adaptor (TA). The command prefix +C is reserved for digital cellular in [ITU-T V.25 *ter*]. This document has also the syntax details used to construct these extended GSM/UMTS commands. Commands from [ITU-T V.25 *ter*] and existing digital cellular

standards (TIA IS-99 and TIA IS-135) are used whenever applicable. Some of the new commands are defined in such way that they can be easily applied to MT of networks other than GSM/UMTS. [ITU-T T.31] and [ITU-T T.32] fax AT commands may be used for GSM/UMTS fax transmission from TE. GSM/UMTS short message service AT commands are defined in 3G TS 27.005. GPRS AT commands are defined in clause 10 of this specification. This document assumes an abstract architecture comprising a TE (e.g., a computer) and a MT interfaced by a TA (see Figure 10.6.5-1). The span of control of the defined commands should allow handling any physical implementation that this abstract architecture may lead to:

– TA, MT and TE as three separate entities;

– TA integrated under the MT cover, and the TE implemented as a separate entity;

– TA integrated under the TE cover, and the MT implemented as a separate entity;

– TA and MT integrated under the TE cover as a single entity.

Q.1741.5(08)_F10.6.5-1
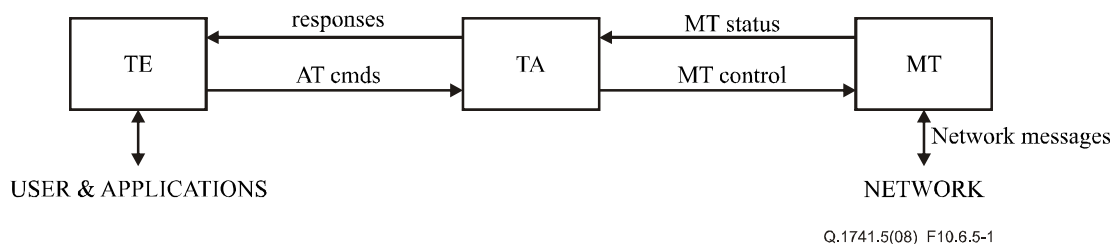
Figure 10.6.5-1 – Set-up

The commands described in this document may be observed on the link between the TE and the TA. However, most of the commands retrieve information about the MT, not about the TA.

Interface between TE and TA is intended to operate over existing serial [ITU-T V.24] cables, infrared link, and all link types with similar behaviour. For correct operation, many of the defined commands require eight-bit data, and therefore it is recommended that TE-TA link is set to eight bits/byte mode. (For infrared operation implementation, refer to informative references IrDA. For embedding AT commands and data during on-line data state, refer to TIA IS-617 [ITU-T V.80]). Interface between TA and MT is dependent on the interface in the MT.

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ARIB	ARIB STD-T63-27.007V7.4.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/27/A27007-740.pdf
CCSA	CCSA-TSD-127 007	7.4.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 127 007	7.4.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0127007v740
ATIS	ATIS.3GPP.27.007V740-2007	7.4.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-27.007(R7-7.4.0)	7.4.0	Approved	2007-12-24	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-27.007(R7-7.4.0).zip

10.6.6   TS 27.010 Terminal equipment to user equipment (TE-UE) multiplexer protocol

The document is to define a multiplexing protocol between a UE and a TE. The multiplexing protocol can be used to send any data, for instance, voice, SMS, USSD, fax, etc.

The document describes the protocol, but not the commands or data transported with it.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-27.010V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/27/A27010-700.pdf
CCSA	CCSA-TSD-127 010	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 127 010	7.0.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0327010v700
ATIS	ATIS.3GPP.27.010V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-27.010(R7-7.0.0)	7.0.0	Approved	2007-12-24	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-27.010(R7-7.0.0).zip

10.6.7   TS 27.060 Packet domain; Mobile station (MS) supporting packet-switched services

The document defines the requirements for TE-MT interworking over the R-reference point for the packet domain, within the GSM and 3G systems. It is up to the manufacturer how to implement the various functions but this document and existing Technical Specifications 27.001, 27.002, and 27.003 shall be followed where applicable.

It is the intention that this document shall remain as the specification to develop a MS for the support of packet-switched services and its text includes references to UMTS/GSM standards.

The UMTS/GSM PLMN supports a wide range of voice and non-voice services in the same network. In order to enable non-voice traffic in the PLMN, there is a need to connect various kinds of terminal equipments to the mobile station (MS). This document defines the requirements for TE-MT interworking over the R-reference point for the packet domain, including the protocols and signalling needed to support packet-switched services, as defined in TS 22.060 and TS 23.060.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-127 060	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 127 060	7.0.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0327060v700
ATIS	ATIS.3GPP.27.060V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-27.060(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-27.060(R7-7.0.0).zip
TTC	TS-3GA-27.060(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts27060rel7v700.pdf

10.7 28-series, Signalling protocols (RSS-CN)

10.7.1 TS 28.062 In-band tandem free operation (TFO) of speech codecs; Service description; Stage 3

The document contains the service description for the in-band signalling protocol for the support of tandem free operation of speech codecs in GSM and GSM-evolved 3G systems.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-28.062V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/28/A28062-700.pdf
CCSA	CCSA-TSD-128 062	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 128 062	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0428062v700
ATIS	ATIS.3GPP.28.062V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-28.062(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-28.062(R7-7.0.0).zip

10.8 29-series, Signalling protocols (NSS)

10.8.1 TS 29.002 Mobile application part (MAP) specification

It is necessary to transfer between entities of a public land mobile network (PLMN) information specific to the PLMN in order to deal with the specific behaviour of roaming mobile stations (MS)s. The Signalling System No. 7 specified by ITU-T is used to transfer this information.

This document describes the requirements for the signalling system and the procedures needed at the application level in order to fulfil these signalling needs.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 002	7.9.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 002	7.9.0	Published	2007-10-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0429002v790
ATIS	ATIS.3GPP.29.002V790-2007	7.9.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.002(R7-7.7.0)	7.7.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.002(R7-7.7.0).zip
TTC	TS-3GA-29.002(Rel7)v7.9.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29002rel7v790.pdf

10.8.2 TS 29.007 General requirements on interworking between the public land mobile network (PLMN) and the integrated services digital network (ISDN) or public switched telephone network (PSTN)

The document identifies the mobile-services switching centre/interworking functions (MSC/IWFs) and requirements to support interworking between:

a) PLMN and PSTN;

b) PLMN and ISDN;

for circuit-switched services in the PLMN. It is not possible to treat ISDN and PSTN as one type of network, even when both ISDN and PSTN subscribers are served by the same exchange because of the limitations of the PSTN subscriber's access, i.e., analogue connection without D-channel signalling.

Within this document, the requirements for voice and non-voice (data) calls are considered separately.

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CCSA	CCSA-TSD-129 007	7.3.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 007	7.3.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0329007v730
ATIS	ATIS.3GPP.29.007V730-2007	7.3.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.007(R7-7.3.0)	7.3.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.007(R7-7.3.0).zip
TTC	TS-3GA-29.007(Rel7)v7.3.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29007rel7v730.pdf

10.8.3 TS 29.010 Information element mapping between mobile station – base station system (MS – BSS) and base station system – mobile-services switching centre (BSS – MSC) signalling procedures and the mobile application part (MAP)

The scope of the document is:

i) to provide a detailed specification for the interworking between information elements contained in layer 3 messages sent on the MS-MSC interface (call control and mobility management parts of GSM 04.08) and parameters contained in MAP services sent over the MSC-VLR interface (GSM 09.02) where the MSC acts as a transparent relay of information;

ii) to provide a detailed specification for the interworking between information elements contained in BSSMAP messages sent on the BSC-MSC interface (GSM 08.08) and parameters contained in MAP services sent over the MSC-VLR interface (GSM 09.02) where the MSC acts as a transparent relay of information;

iii) to provide a detailed specification for the interworking between information elements contained in BSSMAP messages (TS 48.008) and RANAP (TS 25.413);

iv) to provide a detailed specification for the interworking as in i) and ii) above when the MSC also processes the information.

Interworking for supplementary services is given in GSM 09.11. Interworking for the short message service is given in GSM 03.40 and GSM 04.11. Interworking between the call control signalling of GSM 04.08 and the PSTN/ISDN is given in GSM 09.03, GSM 09.07 and TS 49.008. Interworking between the 'A' and 'E' interfaces for inter-MSC handover signalling is given in GSM 09.07 and 09.08.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 010	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 010	7.1.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0429010v710
ATIS	ATIS.3GPP.29.010V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.010(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.010(R7-7.1.0).zip
TTC	TS-3GA-29.010(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29010rel7v710.pdf

10.8.4 TS 29.011 Signalling interworking for supplementary services

This Technical Specification is to provide a detailed specification for interworking between the A interface protocol and the mobile application part for handling of supplementary services. The MAP interfaces of interest are the B, C, D and E interfaces.

The A, C, D and E interfaces are physical interfaces while the B interface is an internal interface defined for modelling purposes. Information relating to the modelling interface is not normative in this specification.

Supplementary service signalling may be passed by the MSC/VLR between the A and E interfaces after inter-MSC handover. This procedure is transparent as far as supplementary services are concerned therefore interworking concerning this process is not described in this specification.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 011	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 011	7.0.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0429011v700
ATIS	ATIS.3GPP.29.011V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.011(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.011(R7-7.0.0).zip
TTC	TS-3GA-29.011(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29011rel7v700.pdf

10.8.5 TS 29.013 Signalling interworking between ISDN supplementary services application service element (ASE) and mobile application part (MAP) protocols

This document is to provide a specification for interworking between the ISDN application service element (ASE) protocol for supplementary services and the mobile application part (MAP) protocol on MAP D-interface protocol for handling of supplementary services within the digital cellular telecommunications system (Phase 2+). This version of the specification includes the interworking for the call completion to busy subscriber (CCBS) service between the ISDN CCBS-ASE and MAP.

The MAP protocol for CCBS service is specified in GSM 09.02. The ISDN CCBS-ASE protocol is specified in [ETSI ETS 300 356-18]. The ISDN CCBS-ASE protocol is also commonly referred to as the SSAP protocol in GSM 03.93. This specification clarifies the interworking within the HLR between these protocols for the call completion to busy subscriber (CCBS) service.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 013	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 013	7.0.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0429013v700
ATIS	ATIS.3GPP.29.013V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.013(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.013(R7-7.0.0).zip
TTC	TS-3GA-29.013(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29013rel7v700.pdf

10.8.6 TS 29.016 Serving GPRS support node (SGSN) – visitor location register (VLR); Gs interface network service specification

This document specifies or references the subset of MTP and SCCP that is used for the reliable transport of BSSAP+ messages in the Gs interface. This document references the TS 29.202 that specifies alternative transport layers that can be applied instead of the MTP. This document also specifies the SCCP addressing capabilities to be provided in the Gs interface.

The SCCP is used to provide message routing between the SGSN and the VLR. The SCCP routing principles specified in this Technical Specification allow connecting one SGSN to several VLR. No segmentation at SCCP level is needed on the Gs interface. Only SCCP class 0 is used on the Gs interface.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 016	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 016	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0129016v700
ATIS	ATIS.3GPP.29.016V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.016(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.016(R7-7.0.0).zip
TTC	TS-3GA-29.016(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29016rel7v700.pdf

10.8.7 TS 29.018 Serving GPRS support node (SGSN) – visitor location register (VLR); Gs interface layer 3 specification

The document specifies or references procedures used on the serving GPRS support node (SGSN) to visitor location register (VLR) interface for interoperability between GSM circuit-switched services and GSM packet data services.

The document specifies the layer 3 messages and procedures on the Gs interface to allow coordination between databases and to relay certain messages related to GSM circuit-switched services over the GPRS subsystem.

The functional split between VLR and SGSN is defined in TS 23.060. The required procedures between VLR and SGSN are defined in detail in the document.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 018	7.3.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 018	7.3.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0129018v730
ATIS	ATIS.3GPP.29.018V730-2007	7.3.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.018(R7-7.3.0)	7.3.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.018(R7-7.3.0).zip
TTC	TS-3GA-29.018(Rel7)v7.3.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29018rel7v730.pdf

10.8.8 TS 29.060 GPRS tunnelling protocol (GTP) across the Gn and Gp interface

The document defines the second version of GTP used on:

– the Gn and Gp interfaces of the general packet radio service (GPRS);

– the Iu, Gn and Gp interfaces of the UMTS system.

NOTE – The version number used in the message headers is 0 for the first version of GTP described in GSM 09.60, and 1 for the second version in TS 29.060.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 060	7.7.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 060	7.7.0	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0429060v770
ATIS	ATIS.3GPP.29.060V770-2007	7.7.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.060(R7-7.6.0)	7.6.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.060(R7-7.6.0).zip
TTC	TS-3GA-29.060(Rel7)v7.7.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29060rel7v770.pdf

10.8.9 TS 29.061 Interworking between the public land mobile network (PLMN) supporting packet-based services and packet data networks (PDNs)

The document defines the requirements for packet domain interworking between a:

a)   PLMN and PDN;

b)   PLMN and PLMN.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 061	7.5.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 061	7.5.0	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0329061v750
ATIS	ATIS.3GPP.29.061V750-2007	7.5.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.061(R7-7.4.0)	7.4.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.061(R7-7.4.0).zip
TTC	TS-3GA-29.061(Rel7)v7.5.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29061rel7v750.pdf

10.8.10 TS 29.078 Customized application for mobile network enhanced logic (CAMEL) Phase 3; CAMEL application part (CAP) specification

The document specifies the CAMEL application part (CAP) supporting the third phase of the network feature customized applications for mobile network enhanced logic. CAP is based on a sub-set of the ETSI core INAP CS-2 as specified by [ETSI EN 301 140-1]. Descriptions and definitions provided by [ETSI EN 301 140-1] are directly referenced by this standard in case no additions or clarifications are needed for the use in the CAP.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 078	7.4.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 078	7.4.0	Published	2007-10-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0429078v740
ATIS	ATIS.3GPP.29.078V 740-2007	7.4.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.078(R7-7.4.0)	7.4.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.078(R7-7.4.0).zip
TTC	TS-3GA-29.078(Rel7)v7.4.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29078rel7v740.pdf

10.8.11 TS 29.108 Application of the radio access network application part (RANAP) on the E interface

The document describes the subset of radio access network application part (RANAP) messages and procedures, defined in TS 25.413, which is used on the E interface. A general description can be found in TS 23.002 and TS 23.009.

For the initiation and execution of relocation of SRNS ("relocation" for short, throughout the whole document) between MSCs, a subset of RANAP procedures are used. For the subsequent control of resources allocated to the user equipment (UE), RANAP procedures are used. The direct transfer elementary procedure (EP) of RANAP is used for the transfer of connection management and mobility management messages between the UE and the controlling 3G_MSC.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 108	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 108	7.1.0	Published	2006-07-21	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGR-0329108v710
ATIS	ATIS.3GPP.29.108V 710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.108(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.108(R7-7.1.0).zip
TTC	TS-3GA-29.108(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29108rel7v710.pdf

10.8.12 TS 29.109 Generic authentication architecture (GAA); Zh and Zn interfaces based on the diameter protocol; Stage 3

The present Stage 3 specification defines the Diameter-based implementation for bootstrapping Z interface (BSF-HSS) and GAA application Zn interface (BSF-NAF) in generic authentication architecture (GAA). The definition contains procedures, message contents and coding. The procedures for bootstrapping and usage of bootstrapped security association are defined in 3G TS 33.220.

This specification is a part of the generic authentication architecture (GAA) specification series.

The diameter-based implementation is based on re-usage of Cx interface Multimedia-Auth-Request/Answer messages originally between CSCF and HSS. These messages are defined in 3GPP TS 29.229. The 3GPP IMS mobility management uses the same definitions between CSCF and HSS. The present document defines how the defined messages are used with the bootstrapping and GAA application procedures (e.g., subscriber certificates) and the application logic that is needed in GAA network elements (BSF, HSS, and NAF).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 109	7.7.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 109	7.7.0	Published	2007-10-15	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0429109v770
ATIS	ATIS.3GPP.29.109V770-2007	7.7.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.109(R7-7.0.0)	7.6.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.109_R7-7.6.0.zip
TTC	TS-3GA-29.109(Rel7)v7.7.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29109rel7v770.pdf

10.8.13 TS 29.119 GPRS tunnelling protocol (GTP) specification for gateway location register (GLR)

The document describes the signalling requirements and procedures used at network elements related to the GLR for GTP within the 3G system at the application level.

The document gives the description of the systems needed only in the network utilizing GLR as the delta document against TS 29.060.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 119	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 119	7.0.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0429119v700
ATIS	ATIS.3GPP.29.119V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	ATIS.3GPP.29.119V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTC	TS-3GA-29.119(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29119rel7v700.pdf

10.8.14 TS 29.120 Mobile application part (MAP) specification for gateway location register (GLR)

The document describes the signalling requirements and procedures used at network elements related to the GLR for MAP within the 3G system at the application level.

The document gives the description of the systems needed only in the network utilizing GLR as the delta document against TS 29.002.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 120	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 120	7.0.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0429120v700
ATIS	ATIS.3GPP.29.120V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.120(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.120(R7-7.0.0).zip
TTC	TS-3GA-29.120(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29120rel7v700.pdf

10.8.15 TS 29.140 Multimedia messaging service (MMS); MM10 interface based on diameter protocol; Stage 3

The present document defines the procedures and the transport protocol for use in the multimedia messaging service (MMS) based on diameter.

The present document is applicable to:

– the MM10 interface between an MMS relay/server and the MSCF.

Whenever it is possible, this document specifies the requirements for this protocol by reference to specifications produced by the IETF within the scope of diameter. Where this is not possible, extensions to Diameter are defined within this document.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-29.140V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/29/A29140-700.pdf
CCSA	CCSA-TSD-129 140	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 140	7.0.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0429140v700
ATIS	ATIS.3GPP.29.140V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.140(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.140(R7-7.0.0).zip

10.8.16 TS 29.161 Interworking between the public land mobile network (PLMN) supporting packet-based services with wireless local area network (WLAN) access and packet data networks (PDNs)

The present document describes the network interworking for the packet domain. Interworking to various external networks is defined together with the interworking for data forwarding while subscribers roam within the 3GPP system.

The present document defines the requirements for packet domain interworking between a:

a)   PLMN with WLAN access and PDN;

b)   PLMN with WLAN access and PLMN.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 161	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 161	7.2.0	Published	2007-04-03	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0329161v720
ATIS	ATIS.3GPP.29.161V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.161(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.161(R7-7.2.0).zip
TTC	TS-3GA-29.161(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29161rel7v720.pdf

10.8.17 TS 29.162 Interworking between the IM CN subsystem and IP networks

The IM CN subsystem interworks with the external IP networks through the Mb reference point.

This document details the interworking between the IM CN subsystem and external IP networks for IM service support. It addresses the issues of control plane interworking, user plane interworking and IP version interworking.

The IP version interworking, between IP version 4 IETF RFC 791: "*Internet Protocol*" and IP version 6 IETF RFC 1883 (IETF RFC 2460: "*Internet Protocol, Version 6 (IPv6) Specification*") detailed in terms of the processes and protocol mappings required in order to support both mobile originated and terminated calls.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 162	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 162	7.1.0	Published	2006-06-08	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0329162v710
ATIS	ATIS.3GPP.29.162V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.162(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.162(R7-7.1.0).zip
TTC	TS-3GA-29.162(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29162rel7v710.pdf

10.8.18 TS 29.163 Interworking between the IP multimedia (IM) core network (CN) subsystem and circuit-switched (CS) networks

The present document specifies the principles of interworking between the 3GPP IM CN subsystem and BICC/ISUP based legacy CS networks, in order to support IM basic voice calls.

The present document addresses the areas of control and user plane interworking between the IM CN subsystem and CS networks through the network functions, which include the MGCF and IM-MGW. For the specification of control plane interworking, areas such as the interworking between SIP and BICC or ISUP are detailed in terms of the processes and protocol mappings required for the support of both IM originated and terminated voice calls.

Other areas addressed encompass the transport protocol and signalling issues for negotiation and mapping of bearer capabilities and QoS information.

The present document specifies the interworking between 3GPP profile of SIP (as detailed according to 3GPP TS 24.229) and BICC or ISUP, as specified in [ITU-T Q.1902.1] to [ITU-T Q.1902.6]: "*Bearer Independent Call Control*" and ITU-T Recs Q.761 to Q.764: "*Signalling System No. 7 – ISDN User Part Signalling procedures*" respectively.

The present document addresses two interworking scenarios with respect to the properties of the CS network:

• The CS network does not use any 3GPP specific additions.

• The CS network uses 3GPP-specific additions.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 163	7.9.0	Approved	2008-01-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 163	7.9.0	Published	2008-01-31	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0329163v790
ATIS	ATIS.3GPP.29.163V 780-2007	7.8.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.163(R7-7.6.0)		Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.163(R7-7.6.0).zip
TTC	TS-3GA-29.163(Rel7)v7.8.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29163rel7v780.pdf

10.8.19 TS 29.164 Interworking between the 3GPP CS domain with BICC or ISUP as signalling protocol and external SIP-I networks

The present document defines interworking procedures between a 3GPP CS domain (see TS 23.205) which applies either BICC or ISUP as signalling protocol, and external networks that use SIP-I (see ITU-T Q.1912.5, Profile C) as signalling protocol. The document also describes the related interworking architecture. The control plane interworking is performed by an interworking unit at the interconnection between the 3GPP CS domain and an external SIP-I network. The user plane interworking is performed by an MGW. The present document defines stage 2 procedures for the control of the MGW.

The present specification reuses existing interworking procedures of TS 29.163 and ITU-T Q.1912.5, Profile C, as far as possible.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 164	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 164	7.0.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0329164v700
ATIS	ATIS.3GPP.29.164V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.164(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.164(R7-7.0.0).zip
TTC	TS-3GA-29.164(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29164rel7v700.pdf

10.8.20 TS 29.198-01 Open service access (OSA) application programming interface (API); Part 1: Overview

The document is the first part of the Specification defining the application programming interface (API) for open service access (OSA), and provides an overview of the content and structure of the various parts of this specification, and of the relation to other standards documents.

The OSA specifications define an architecture that enables service application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The concepts and the functional architecture for the OSA are contained in TS 23.127. The requirements for OSA are contained in TS 22.127.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 198-1	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 198-1	7.0.0	Published	2007-03-27	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529198-01v700
ATIS	ATIS.3GPP.29.198-01V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.198-01(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.198-01(R7-7.0.0).zip
TTC	TS-3GA-29.198-01(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29198-01rel7v700.pdf

10.8.21 TS 29.198-02 Open service access (OSA) application programming interface (API); Part 2: Common data definitions

The document is Part 2 of the Stage 3 specification for an application programming interface (API) for open service access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The concepts and the functional architecture for the OSA are contained in TS 23.127. The requirements for OSA are contained in TS 22.127.

The document specifies the common data definitions of the OSA. The common data definitions contain data-types that are common across the rest of the OSA API.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 198-2	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 198-2	7.0.0	Published	2007-03-27	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529198-02v700
ATIS	ATIS.3GPP.29.198-02V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.198-02(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.198-02(R7-7.0.0).zip
TTC	TS-3GA-29.198-02(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29198-02rel7v700.pdf

10.8.22 TS 29.198-03 Open service access (OSA) application programming interface (API); Part 3: Framework

The document is Part 3 of the Stage 3 specification for an application programming interface (API) for open service access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The concepts and the functional architecture for the OSA are contained in TS 23.127. The requirements for OSA are contained in TS 22.127.

The document specifies the framework aspects of the interface.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 198-3	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 198-3	7.1.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529198-03v710
ATIS	ATIS.3GPP.29.198-03V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.198-03(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.198-03(R7-7.1.0).zip
TTC	TS-3GA-29.198-03(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29198-03rel7v710.pdf

10.8.23 TS 29.198-04-1 Open service access (OSA) application programming interface (API); Part 4: Call control; Sub-part 1: Call control common definitions

This document is Part 4, sub-part 1 of the Stage 3 specification for an application programming interface (API) for open service access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The concepts and the functional architecture for the OSA are contained in 3G TS 23.127. The requirements for OSA are contained in 3G TS 22.127.

This document specifies the common definitions used by the call control service capability features (SCF).

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CCSA	CCSA-TSD-129 198-4-1	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 198-4-1	7.0.0	Published	2007-03-27	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529198-04-1v700
ATIS	ATIS.3GPP.29.198-04-1V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.198-04-1(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.198-04-1(R7-7.0.0).zip
TTC	TS-3GA-29.198-04-1(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29198-04-1rel7v700.pdf

10.8.24 TS 29.198-04-2 Open service access (OSA) application programming interface (API); Part 4: Call control; Sub-part 2: Generic call control SCF

The document is Part 4, sub-part 2 of the Stage 3 specification for an application programming interface (API) for open service access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The concepts and the functional architecture for the OSA are contained in 3G TS 23.127. The requirements for OSA are contained in 3G TS 22.127.

This document specifies the generic call control service capability feature (SCF) aspects of the interface. All aspects of the generic call control SCF are defined here, these being:

• sequence diagrams;

• class diagrams;

• interface specification plus detailed method descriptions;

• state transition diagrams;

• data definitions;

• IDL description of the interfaces;

• WSDL description of the interfaces;

• reference to the Java API description of the interfaces.

The process by which this task is accomplished is through the use of object modelling techniques described by the unified modelling language (UML).

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CCSA	CCSA-TSD-129 198-4-2	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 198-4-2	7.0.0	Published	2007-03-27	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529198-04-2v700
ATIS	ATIS.3GPP.29.198-04-2V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.198-04-2(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.198-04-2(R7-7.0.0).zip
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10.8.25 TS 29.198-04-3 Open service access (OSA) application programming interface (API); Part 4: Call control; Sub-part 3: Multi-party call control SCF

The document is Part 4, sub-part 3 of the Stage 3 specification for an application programming interface (API) for open service access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The concepts and the functional architecture for the OSA are contained in 3G TS 23.127. The requirements for OSA are contained in 3G TS 22.127.

This document specifies the multi-party call control service capability feature (SCF) aspects of the interface. All aspects of the multi-party call control SCF are defined here, these being:

• sequence diagrams;

• class diagrams;

• interface specification plus detailed method descriptions;

• state transition diagrams;

• data definitions;

• IDL description of the interfaces;

• WSDL description of the interfaces;

• reference to the Java API description of the interfaces.

The process by which this task is accomplished is through the use of object modelling techniques described by the unified modelling language (UML).

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TTC	TS-3GA-29.198-04-3(Rel7)v7.0.1	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29198-04-3rel7v701.pdf

10.8.26 TS 29.198-04-4 Open service access (OSA) application programming interface (API); Part 4: Call control; Sub-part 4: Multi-media call control SCF

The document is Part 4, sub-part 4 of the Stage 3 specification for an application programming interface (API) for open service access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The concepts and the functional architecture for the OSA are contained in 3G TS 23.127. The requirements for OSA are contained in 3G TS 22.127.

This document specifies the multi-party call control service capability feature (SCF) aspects of the interface. All aspects of the multi-party call control SCF are defined here, these being:

- sequence diagrams;
- class diagrams;
- interface specification plus detailed method descriptions;
- state transition diagrams;
- data definitions;
- IDL description of the interfaces;
- WSDL description of the interfaces;
- reference to the Java API description of the interfaces.

The process by which this task is accomplished is through the use of object modelling techniques described by the unified modelling language (UML).

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ETSI	TS 129 198-4-4	7.0.0	Published	2007-04-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529198-04-4v700
ATIS	ATIS.3GPP.29.198-04-4V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.198-04-4(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.198-04-4(R7-7.0.0).zip
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10.8.27 TS 29.198-04-5 Open service access (OSA) application programming interface (API); Part 4: Call control; Sub-part 5: Conference call control service capability feature (SCF)

This document is Part 4, sub-part 5 of the Stage 3 specification for an application programming interface (API) for open service access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The concepts and the functional architecture for the OSA are contained in 3GPP TS 23.198. The requirements for OSA are contained in 3GPP TS 22.127.

The present document specifies the conference call control service capability feature (SCF) aspects of the interface. All aspects of the conference call control SCF are defined here, these being:

- sequence diagrams

- class diagrams

- interface specification plus detailed method descriptions

- state transition diagrams

- data definitions

- IDL description of the interfaces

- WSDL description of the interfaces

- reference to the Java™ API description of the interfaces

The process by which this task is accomplished is through the use of object modelling techniques described by the unified modelling language (UML).

This specification has been defined jointly between 3GPP TSG CT WG5, ETSI TISPAN and the Parlay Group, in co-operation with a number of JAIN™ Community member companies.

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ETSI	TS 129 198-4-5	7.0.0	Published	2007-03-27	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGC-0529198-04-5v700
ATIS	ATIS.3GPP.29.198-04-5V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.198-04-5(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.198-04-5(R7-7.0.0).zip
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10.8.28 TS 29.198-05 Open service access (OSA); application programming interface (API); Part 5: User interaction service capability feature (SCF)

This document is Part 5 of the Stage 3 specification for an application programming interface (API) for open service access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The concepts and the functional architecture for the OSA are contained in TS 23.127. The requirements for OSA are contained in TS 22.127.

The document specifies the user interaction (UI) service capability feature (SCF) aspects of the interface.

The process by which this task is accomplished is through the use of object modelling techniques described by the unified modelling language (UML).

This specification has been defined jointly between 3GPP TSG CN WG5, ETSI TISPAN and the Parlay Group, in cooperation with a number of JAIN™ Community member companies.

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TTC	TS-3GA-29.198-05(Rel7)v7.1.1	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29198-05rel7v711.pdf

10.8.29 TS 29.198-06 Open service access (OSA) application programming interface (API); Part 6: Mobility SCF

The document is Part 6 of the Stage 3 specification for an application programming interface (API) for open service access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The concepts and the functional architecture for the OSA are contained in TS 23.127. The requirements for OSA are contained in TS 22.127.

The document specifies the mobility service capability feature (SCF) aspects of the interface.

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CCSA	CCSA-TSD-129 198-6	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 198-6	7.0.0	Published	2007-03-27	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529198-06v700
ATIS	ATIS.3GPP.29.198-06V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.198-06(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.198-06(R7-7.0.0).zip
TTC	TS-3GA-29.198-06(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29198-06rel7v700.pdf

10.8.30 TS 29.198-07 Open service access (OSA) application programming interface (API); Part 7: Terminal capabilities SCF

The document is part 7 of the Stage 3 specification for an application programming interface (API) for open service access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The concepts and the functional architecture for the OSA are contained in TS 23.127. The requirements for OSA are contained in TS 22.127.

The document specifies the terminal capabilities service capability feature (SCF) aspects of the interface.

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CCSA	CCSA-TSD-129 198-7	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 198-7	7.0.0	Published	2007-03-27	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529198-07v700
ATIS	ATIS.3GPP.29.198-07V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.198-07(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.198-07(R7-7.0.0).zip
TTC	TS-3GA-29.198-07(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29198-07rel7v700.pdf

10.8.31 TS 29.198-08 Open service access (OSA) application programming interface (API); Part 8: Data session control SCF

The document is Part 8 of the Stage 3 specification for an application programming interface (API) for open service access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The concepts and the functional architecture for the OSA are contained in TS 23.127. The requirements for OSA are contained in TS 22.127.

The document specifies the data session control service capability feature (SCF) aspects of the interface.

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TTA	TTAT.3G-29.198-08(R7-7.0.1)	7.0.1	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.198-08(R7-7.0.1).zip
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10.8.32 TS 29.198-11 Open service access (OSA) application programming interface (API); Part 11: Account management SCF

The document is Part 11 of the Stage 3 specification for an application programming interface (API) for open service access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The concepts and the functional architecture for the OSA are contained in TS 23.127. The requirements for OSA are contained in TS 22.127.

The document specifies the account management service capability feature (SCF) aspects of the interface.

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CCSA	CCSA-TSD-129 198-11	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 198-11	7.0.0	Published	2007-03-27	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529198-11v700
ATIS	ATIS.3GPP.29.198-11V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.198-11(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.198-11(R7-7.0.0).zip
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10.8.33 TS 29.198-12 Open service access (OSA) application programming interface (API); Part 12: Charging SCF

The document is Part 12 of the Stage 3 specification for an application programming interface (API) for open service access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The concepts and the functional architecture for the OSA are contained in TS 23.127. The requirements for OSA are contained in TS 22.127.

The document specifies the charging service capability feature (SCF) aspects of the interface.

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ETSI	TS 129 198-12	7.0.0	Published	2007-03-27	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529198-12v700
ATIS	ATIS.3GPP.29.198-12V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.198-12(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.198-12(R7-7.0.0).zip
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10.8.34 TS 29.198-13 Open service access (OSA) application programming interface (API); Part 13: Policy management SCF

The document is part 13 of the Stage 3 specification for an application programming interface (API) for open service access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The concepts and the functional architecture for the OSA are contained in 3G TS 23.127. The requirements for OSA are contained in 3G TS 22.127.

This document specifies the policy management service capability feature (SCF) aspects of the interface. All aspects of the policy management SCF are defined here, these being:

- sequence diagrams;
- class diagrams;
- interface specification plus detailed method descriptions;
- state transition diagrams;
- data definitions;
- IDL description of the interfaces.

The process by which this task is accomplished is through the use of object modelling techniques described by the unified modelling language (UML).

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ETSI	TS 129 198-13	7.0.0	Published	2007-03-27	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529198-13v700
ATIS	ATIS.3GPP.29.198-13V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.198-13(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.198-13(R7-7.0.0).zip
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10.8.35 TS 29.198-14 Open service access (OSA) application programming interface (API); Part 14: Presence and availability management (PAM) SCF

The document is part 14 of the Stage 3 specification for an application programming interface (API) for open service access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The concepts and the functional architecture for the OSA are contained in 3G TS 23.127. The requirements for OSA are contained in 3G TS 22.127.

This document specifies the presence and availability management service capability feature (SCF) aspects of the interface. All aspects of the presence and availability management SCF are defined here, these being:

- sequence diagrams;
- class diagrams;
- interface specification plus detailed method descriptions;
- state transition diagrams;
- data definitions;

- IDL description of the interfaces.

The process by which this task is accomplished is through the use of object modelling techniques described by the unified modelling language (UML).

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ETSI	TS 129 198-14	7.0.0	Published	2007-03-27	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529198-14v700
ATIS	ATIS.3GPP.29.198-14V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.198-14(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.198-14(R7-7.0.0).zip
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10.8.36 TS 29.198-15 Open service access (OSA); application programming interface (API); Part 15: Multimedia messaging (MM) SCF

The present document is Part 15 of the Stage 3 specification for an application programming interface (API) for open service access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The concepts and the functional architecture for the OSA are contained in 3GPP TS 23.198. The requirements for OSA are contained in 3GPP TS 22.127.

The present document specifies the multimedia messaging service capability feature (SCF) aspects of the interface. All aspects of the multimedia messaging SCF are defined here, these being:

- sequence diagrams;
- class diagrams;
- interface specification plus detailed method descriptions;
- state transition diagrams;
- data definitions;
- IDL description of the interfaces;
- WSDL description of the interfaces.

The process by which this task is accomplished is through the use of object modelling techniques described by the unified modelling language (UML).

The present document has been defined jointly between 3GPP TSG CN WG5, ETSI TISPAN and the Parlay Group, in cooperation with a number of JAIN™ Community member companies.

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ETSI	TS 129 198-15	7.1.0	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529198-15v710
ATIS	ATIS.3GPP.29.198-15V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.198-15(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.198-15(R7-7.0.0).zip
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10.8.37 TS 29.198-16 Open service access (OSA); Application programming interface (API); Part 16: Service broker service capability feature (SCF)

The present document is Part 16 of the Stage 3 specification for an application programming interface (API) for open service access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The concepts and the functional architecture for the OSA are contained in 3GPP TS 23.198. The requirements for OSA are contained in 3GPP TS 22.127.

The present document specifies the service broker service capability feature (SCF) aspects of the interface. All aspects of the service broker SCF are defined here, these being:

- sequence diagrams
- class diagrams
- interface specification plus detailed method descriptions
- state transition diagrams
- data definitions
- IDL description of the interfaces
- WSDL description of the interfaces

The process by which this task is accomplished is through the use of object modelling techniques described by the unified modelling language (UML).

This specification has been defined jointly between 3GPP TSG CT WG5, ETSI TISPAN and the Parlay Group, in co-operation with a number of JAIN™ Community member companies.

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CCSA	CCSA-TSD-129 198-16	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 198-16	7.0.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529198-16v700
ATIS	ATIS.3GPP.29.198-16V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.198-16(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.198-16(R7-7.0.0).zip
TTC	TS-3GA-29.198-16(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29198-16rel7v700.pdf

10.8.38 TS 29.199-01 Open service access (OSA); Parlay X web services; Part 1: Common

The present document is Part 1 of the Stage 3 Parlay X web services specification for open service access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The concepts and the functional architecture for the OSA are contained in 3G TS 23.127. The requirements for OSA are contained in 3G TS 22.127.

The present document specifies the common aspects of the Parlay X web services. The following are defined here:

- name spaces;
- data definitions;
- fault definitions;
- WSDL description of the interfaces.

The present document has been defined jointly between 3GPP TSG CN WG5, ETSI TISPAN and The Parlay Group.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 199-1	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 199-1	7.2.0	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529199-01v720
ATIS	ATIS.3GPP.29.199-01V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.199-01(R7-7.1.1)	7.1.1	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.199-01(R7-7.1.1).zip
TTC	TS-3GA-29.199-01(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29199-01rel7v720.pdf

10.8.39 TS 29.199-02 Open service access (OSA); Parlay X web services; Part 2: Third-party call

The present document is Part 2 of the Stage 3 Parlay X web services specification for open service access (OSA).

The present document specifies the third-party call web service aspects of the interface. All aspects of the third-party call web service are defined here, these being:

- name spaces;
- sequence diagrams;
- data definitions;
- interface specification plus detailed method descriptions;
- fault definitions;
- service policies;
- WSDL description of the interfaces.

The present document has been defined jointly between 3GPP TSG CN WG5, ETSI TISPAN and The Parlay Group.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 199-2	7.4.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 199-2	7.4.0	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529199-02v740
ATIS	ATIS.3GPP.29.199-02V740-2007	7.4.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.199-02(R7-7.3.0)	7.3.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.199-02(R7-7.3.0).zip
TTC	TS-3GA-29.199-02(Rel7)v7.4.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29199-02rel7v740.pdf

10.8.40 TS 29.199-03 Open service access (OSA); Parlay X web services; Part 3: Call notification

The present document is Part 3 of the Stage 3 Parlay X web services specification for open service access (OSA).

The present document specifies the call notification web service aspects of the interface. All aspects of the call notification web service are defined here, these being:

- name spaces;
- sequence diagrams;
- data definitions;
- interface specification plus detailed method descriptions;
- fault definitions;
- service policies;
- WSDL description of the interfaces.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 199-3	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 199-3	7.2.0	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529199-03v720
ATIS	ATIS.3GPP.29.199-03V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.199-03(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.199-03(R7-7.1.0).zip
TTC	TS-3GA-29.199-03(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29199-03rel7v720.pdf

10.8.41 TS 29.199-04 Open service access (OSA); Parlay X web services; Part 4: Short messaging

The present document specifies the short messaging web service aspects of the interface. All aspects of the short messaging web service are defined here, these being:

- name spaces;
- sequence diagrams;
- data definitions;
- interface specification plus detailed method descriptions;
- fault definitions;
- service policies;
- WSDL description of the interfaces.

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CCSA	CCSA-TSD-129 199-4	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 199-4	7.2.0	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529199-04v720
ATIS	ATIS.3GPP.29.199-04V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.199-04(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.199-04(R7-7.1.0).zip
TTC	TS-3GA-29.199-04(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29199-04rel7v720.pdf

10.8.42 TS 29.199-05 Open service access (OSA); Parlay X web services; Part 5: Multimedia messaging

The present document specifies the multimedia messaging web service aspects of the interface. All aspects of the multimedia messaging web service are defined here, these being:

- name spaces;

- sequence diagrams;
- data definitions;
- interface specification plus detailed method descriptions;
- fault definitions;
- service policies;
- WSDL description of the interfaces.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 199-5	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 199-5	7.2.0	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529199-05v720
ATIS	ATIS.3GPP.29.199-05V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.199-05(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.199-05(R7-7.1.0).zip
TTC	TS-3GA-29.199-05(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29199-05rel7v720.pdf

10.8.43 TS 29.199-06 Open service access (OSA); Parlay X web services; Part 6: Payment

The present document specifies the payment web service aspects of the interface. All aspects of the payment web service are defined here, these being:

- name spaces;
- sequence diagrams;
- data definitions;
- interface specification plus detailed method descriptions;
- fault definitions;
- service policies;
- WSDL description of the interfaces.

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CCSA	CCSA-TSD-129 199-6	7.2.2	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 199-6	7.2.2	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529199-06v722
ATIS	ATIS.3GPP.29.199-06V722-2007	7.2.2	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.199-06(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.199-06(R7-7.2.0).zip
TTC	TS-3GA-29.199-06(Rel7)v7.2.2	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29199-06rel7v722.pdf

10.8.44 TS 29.199-07 Open service access (OSA); Parlay X web services; Part 7: Account management

The present document specifies the account management web service aspects of the interface. All aspects of the account management web service are defined here.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 199-7	7.2.2	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 199-7	7.2.2	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529199-07v722
ATIS	ATIS.3GPP.29.199-07V722-2007	7.2.2	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.199-07(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.199-07(R7-7.2.0).zip
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10.8.45 TS 29.199-08 Open service access (OSA); Parlay X web services; Part 8: Terminal status

The present document specifies the terminal status web service aspects of the interface. All aspects of the terminal status web service are defined here.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 199-8	7.0.2	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 199-8	7.0.2	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529199-08v702
ATIS	ATIS.3GPP.29.199-08V702-2007	7.0.2	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.199-08(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.199-08(R7-7.0.0).zip
TTC	TS-3GA-29.199-08(Rel7)v7.0.2	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29199-08rel7v702.pdf

10.8.46 TS 29.199-09 Open service access (OSA); Parlay X web services; Part 9: Terminal location

The present document specifies the terminal location web service aspects of the interface. All aspects of the terminal location web service are defined here.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 199-9	7.2.2	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 199-9	7.2.2	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529199-09v722
ATIS	ATIS.3GPP.29.199-09V722-2007	7.2.2	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.199-09(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.199-09(R7-7.2.0).zip
TTC	TS-3GA-29.199-09(Rel7)v7.2.2	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29199-09rel7v722.pdf

10.8.47 TS 29.199-10 Open service access (OSA); Parlay X web services; Part 10: Call handling

The present document specifies the call handling web service aspects of the interface. All aspects of the call handling web service are defined here.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 199-10	7.0.2	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 199-10	7.0.2	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529199-10v702
ATIS	ATIS.3GPP.29.199-10V702-2007	7.0.2	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.199-10(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.199-10(R7-7.0.0).zip
TTC	TS-3GA-29.199-10(Rel7)v7.0.2	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29199-10rel7v702.pdf

10.8.48 TS 29.199-11 Open service access (OSA); Parlay X web services; Part 11: Audio call

The present document specifies the audio call web service aspects of the interface. All aspects of the audio call web service are defined here.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 199-11	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 199-11	7.2.0	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529199-11v720
ATIS	ATIS.3GPP.29.199-11V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.199-11(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.199-11(R7-7.1.0).zip
TTC	TS-3GA-29.199-11(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29199-11rel7v720.pdf

10.8.49 TS 29.199-12 Open service access (OSA); Parlay X web services; Part 12: Multimedia conference

The present document specifies the multimedia conference web service aspects of the interface. All aspects of the multimedia conference web service are defined here.

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CCSA	CCSA-TSD-129 199-12	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 199-12	7.1.0	Published	2007-10-16	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529199-12v710
ATIS	ATIS.3GPP.29.199-12V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.199-12(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.199-12(R7-7.0.0).zip
TTC	TS-3GA-29.199-12(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29199-12rel7v710.pdf

10.8.50 TS 29.199-13 Open service access (OSA); Parlay X web services; Part 13: Address list management

The present document specifies the address list management web service aspects of the interface. All aspects of the address list management web service are defined here.

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CCSA	CCSA-TSD-129 199-13	7.0.2	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 199-13	7.0.2	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529199-13v702
ATIS	ATIS.3GPP.29.199-13V702-2007	7.0.2	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.199-13(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.199-13(R7-7.0.0).zip
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10.8.51 TS 29.199-14 Open service access (OSA); Parlay X web services; Part 14: Presence

The present document specifies the presence web service aspects of the interface. All aspects of the presence web service are defined here.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 199-14	7.4.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 199-14	7.4.0	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529199-14v740
ATIS	ATIS.3GPP.29.199-14V740-2007	7.4.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.199-14(R7-7.3.0)	7.3.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.199-14(R7-7.3.0).zip
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10.8.52 TS 29.199-15 Open service access (OSA); Parlay X web services; Part 15: Message broadcast

The present document is Part 15 of the Stage 3 Parlay X web services specification for open service access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The concepts and the functional architecture for the OSA are contained in 3GPP TS 23.198. The requirements for OSA are contained in 3GPP TS 22.127.

The present document specifies the message broadcast web service aspects of the interface. All aspects of the message broadcast web service are defined here, these being:

•   Name spaces.

•   Sequence diagrams.

•   Data definitions.

•   Interface specification plus detailed method descriptions.

•   Fault definitions.

•   Service policies.

•   WSDL description of the interfaces.

The present document has been defined jointly between 3GPP TSG CT WG5, ETSI TISPAN and The Parlay Group.

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ETSI	TS 129 199-15	7.2.0	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529199-15v720
ATIS	ATIS.3GPP.29.199-15V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.199-15(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.199-15(R7-7.1.0).zip
TTC	TS-3GA-29.199-15(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29199-15rel7v720.pdf

10.8.53 TS 29.199-16 Open service access (OSA); Parlay X web services; Part 16: Geocoding

This document is Part 16 of the Stage 3 Parlay X web services specification for open service access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The concepts and the functional architecture for the OSA are contained in 3GPP TS 23.198. The requirements for OSA are contained in 3GPP TS 22.127.

The document specifies the geocoding web service aspects of the interface. All aspects of the geocoding web service are defined here, these being:

- Name spaces
- Sequence diagrams
- Data definitions
- Interface specification plus detailed method descriptions
- Fault definitions
- Service policies
- WSDL Description of the interfaces

This document has been defined jointly between 3GPP TSG CT WG5, ETSI TISPAN and The Parlay Group.

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ETSI	TS 129 199-16	7.1.2	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529199-16v712
ATIS	ATIS.3GPP.29.199-16V712-2007	7.1.2	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.199-16(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.199-16(R7-7.1.0).zip
TTC	TS-3GA-29.199-16(Rel7)v7.1.2	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29199-16rel7v712.pdf

10.8.54 TS 29.199-17 Open service access (OSA); Parlay X web services; Part 17: Application-driven quality of service (QoS)

This document is Part 17 of the Stage 3 Parlay X web services specification for open service access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The concepts and the functional architecture for the OSA are contained in 3GPP TS 23.198. The requirements for OSA are contained in 3GPP TS 22.127.

The document specifies the application-driven quality of service (QoS) web service aspects of the interface. All aspects of the application-driven QoS web service are defined here, these being:

- Name spaces.
- Sequence diagrams.
- Data definitions.
- Interface specification plus detailed method descriptions.
- Fault definitions.
- Service policies.
- WSDL Description of the interfaces.

This document has been defined jointly between 3GPP TSG CT WG5, ETSI TISPAN and the Parlay Consortium.

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CCSA	CCSA-TSD-129 199-17	7.0.2	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 199-17	7.0.2	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529199-17v702
ATIS	ATIS.3GPP.29.199-17V702-2007	7.0.2	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.199-17(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.199-17(R7-7.0.0).zip
TTC	TS-3GA-29.199-17(Rel7)v7.0.2	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29199-17rel7v702.pdf

10.8.55 TS 29.199-18 Open Service Access (OSA); Parlay X web services; Part 18: Device capabilities and configuration

This document is Part 18 of the Stage 3 Parlay X web services specification for open service access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The concepts and the functional architecture for the OSA are contained in 3GPP TS 23.198. The requirements for OSA are contained in 3GPP TS 22.127.

The document specifies the device capabilities and configuration web service aspects of the interface. All aspects of the device capabilities and configuration web service are defined here, these being:

• Name spaces.

• Sequence diagrams.

• Data definitions.

• Interface specification plus detailed method descriptions.

• Fault definitions.

• Service policies.

• WSDL description of the interfaces.

This document has been defined jointly between 3GPP TSG CT WG5, ETSI TISPAN and the Parlay Consortium.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 199-18	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 199-18	7.0.0	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGC-0529199-18v700
ATIS	ATIS.3GPP.29.199-18V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.199-18(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.199-18(R7-7.0.0).zip
TTC	TS-3GA-29.199-18(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29199-18rel7v700.pdf

10.8.56 TS 29.199-19 Open service access (OSA); Parlay X web services; Part 19: Multimedia streaming control

This document is Part 19 of the Stage 3 Parlay X web services specification for open service access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The concepts and the functional architecture for the OSA are contained in 3GPP TS 23.198. The requirements for OSA are contained in 3GPP TS 22.127.

The document specifies the Multimedia streaming control web service aspects of the interface. All aspects of the multimedia streaming control web service are defined here, these being:

• Name spaces.

• Sequence diagrams.

• Data definitions.

• Interface specification plus detailed method descriptions.

• Fault definitions.

• Service policies.

• WSDL description of the interfaces.

This document has been defined jointly between 3GPP TSG CT WG5, ETSI TISPAN and the Parlay Consortium.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 199-19	7.0.2	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 199-19	7.0.2	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529199-19v702
ATIS	ATIS.3GPP.29.199-19V702-2007	7.0.2	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.199-19(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.199-19(R7-7.0.0).zip
TTC	TS-3GA-29.199-19(Rel7)v7.0.2	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29199-19rel7v702.pdf

10.8.57 TS 29.199-20 Open service access (OSA); Parlay X web services; Part 20: Multimedia multicast session management

This document is Part 20 of the Stage 3 Parlay X web services specification for open service access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The concepts and the functional architecture for the OSA are contained in 3GPP TS 23.198. The requirements for OSA are contained in 3GPP TS 22.127.

The document specifies the multimedia multicast session management web service aspects of the interface. All aspects of the multimedia multicast session management web service are defined here, these being:

• Name spaces.

• Sequence diagrams.

• Data definitions.

• Interface specification plus detailed method descriptions.

• Fault definitions.

• Service policies.

• WSDL description of the interfaces.

This document has been defined jointly between 3GPP TSG CT WG5, ETSI TISPAN and the Parlay Consortium.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 199-20	7.0.2	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 199-20	7.0.2	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0529199-20v702
ATIS	ATIS.3GPP.29.199-20V702-2007	7.0.2	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.199-20(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.199-20(R7-7.0.0).zip
TTC	TS-3GA-29.199-20(Rel7)v7.0.2	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29199-20rel7v702.pdf

10.8.58 TS 29.202 Signalling System No. 7 (SS7) signalling transport in core network; Stage 3

The document defines the possible protocol architectures for transport of SS7 signalling protocols in core network.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 202	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 202	7.0.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0429202v700
ATIS	ATIS.3GPP.29.202V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.202(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.202(R7-7.0.0).zip
TTC	TS-3GA-29.202(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29202rel7v700.pdf

10.8.59 TS 29.204 Signalling System No. 7 (SS7) security gateway; Architecture, functional description and protocol details

This document provides functional description of the SS7 security gateway. The document covers also network architecture, routeing considerations, and protocol details.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 204	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 204	7.1.0	Published	2007-04-23	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGC-0429204v710
ATIS	ATIS.3GPP.29.204V 710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.204(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.204(R7-7.1.0).zip
TTC	TS-3GA-29.204(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29204rel7v710.pdf

10.8.60 TS 29.205 Application of Q.1900-series to bearer-independent circuit-switched core network architecture; Stage 3

The document describes the protocols to be used when [ITU-T Q.1902.x] "*Bearer Independent Call Control*" are used as call control protocol in a 3G bearer independent CS core network 3G TS 23.205. [ITU-T Q.1902.x], operate between (G)MSC servers. The BICC architecture, as described in [ITU-T Q.1902.x] consists of a number of protocols. The following types of protocols are described: call control protocol, bearer control protocols and a resource control protocol for this architecture. The architecture complies with the requirements imposed by 3G TS 23.205 and 3G TS 23.153.

NOTE – [ITU-T Q.1902.x] can be used in other network architectures than the one defined in TS 23.205.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 205	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 205	7.0.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0429205v700
ATIS	ATIS.3GPP.29.205V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.205(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.205(R7-7.0.0).zip
TTC	TS-3GA-29.205(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29205rel7v700.pdf

10.8.61 TS 29.212 Policy and charging control over Gx reference point

This document provides the stage 3 specification of the Gx reference point for the present release. The functional requirements and the stage 2 specifications of the Gx refernce point are contained in TS 23.203. The Gx reference point lies between the policy and charging rule function and the policy and charging enforcement function.

Whenever it is possible, the present document specifies the requirements for the protocol by reference to specifications produced by the IETF within the scope of Diameter. Where this is not possible, extensions to Diameter are defined within the present document.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 212	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 212	7.2.0	Published	2007-10-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0329212v720
ATIS	ATIS.3GPP.29.212V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.212(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.212(R7-7.1.0).zip
TTC	TS-3GA-29.212(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29212rel7v720.pdf

10.8.62 TS 29.213 Policy and charging control signalling flows and QoS parameter mapping

The specification adds detailed flows of policy and charging control (PCC) over the Rx and Gx reference points and their relationship with the bearer level signalling flows over the Gn interface.

The calls flows depicted in this Technical Specification represent usual cases, i.e., not all situations are covered. Detailed information provided in TS 29.212 and TS 29.214 shall be taken into consideration.

The present specification also describes the binding and the mapping of QoS parameters among SDP, UMTS QoS parameters, and QoS authorization parameters.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 213	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 213	7.2.0	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0329213v720
ATIS	ATIS.3GPP.29.213V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.213(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.213(R7-7.1.0).zip
TTC	TS-3GA-29.213(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29213rel7v720.pdf

10.8.63 TS 29.214 Policy and charging control over Rx reference point

The present document provides the stage 3 specification of the Rx reference point for the present release. The functional requirements and the stage 2 specifications of the Rx reference point are contained in TS 23.203. The Rx reference point lies between the application function and the policy and charging rule function.

Whenever it is possible, the present document specifies the requirements for the protocol by reference to specifications produced by the IETF within the scope of Diameter. Where this is not possible, extensions to Diameter are defined within the present document.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 214	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 214	7.2.0	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0329214v720
ATIS	ATIS.3GPP.29.214V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.214(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.214(R7-7.1.0).zip
TTC	TS-3GA-29.214(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29214rel7v720.pdf

10.8.64 TS 29.228 IP multimedia (IM) subsystem Cx and Dx interfaces; Signalling flows and message contents

This Technical Specification (TS) specifies:

1)   the interactions between the HSS (home subscriber server) and the CSCF (call session control functions), referred to as the Cx interface;

2)   the interactions between the CSCF and the SLF (server locator function), referred to as the Dx interface.

The IP multimedia (IM) subsystem Stage 2 is specified in 3G TS 23.228 and the signalling flows for the IP multimedia call control based on SIP and SDP are specified in 3G TS 24.228.

This document addresses the signalling flows for Cx and Dx interfaces.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 228	7.7.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 228	7.7.0	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0429228v770
ATIS	ATIS.3GPP.29.228V770-2007	7.7.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.228(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.228(R7-7.2.0).zip
TTC	TS-3GA-29.228(Rel7)v7.7.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29228rel7v770.pdf

10.8.65 TS 29.229 Cx and Dx interfaces based on the diameter protocol; Protocol details

The document defines a transport protocol for use in the IP multimedia (IM) core network (CN) subsystem based on Diameter.

This document is applicable to:

– the Cx interface between the I-CSCF/S-CSCF and the HSS;

– the Dx interface between the I-CSCF/S-CSCF and the SLF.

Whenever it is possible, this document specifies the requirements for this protocol by reference to specifications produced by the IETF within the scope of Diameter. Where this is not possible, extensions to Diameter are defined within this document.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 229	7.6.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 229	7.6.0	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0429229v760
ATIS	ATIS.3GPP.29.229V760-2007	7.6.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.229(R7-7.6.0)	7.6.0	Approved	2007-12-24	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.229(R7-7.6.0).zip
TTC	TS-3GA-29.229(Rel7)v7.6.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29229rel7v760.pdf

10.8.66 TS 29.230 Diameter applications; 3GPP specific codes and identifiers

The present document lists the 3GPP-specific Diameter protocol codes, including the AVP codes and experimental result codes.

This document lists also the application identifiers assigned to 3GPP-specific Diameter applications by IANA and the Diameter command code range which is assigned to 3GPP by IANA.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 230	7.8.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 230	7.8.0	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0429230v780
ATIS	ATIS.3GPP.29.230V780-2007	7.8.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.230(R7-7.7.0)	7.7.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.230(R7-7.7.0).zip
TTC	TS-3GA-29.230(Rel7)v7.8.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29230rel7v780.pdf

10.8.67 TS 29.232 Media gateway controller (MGC) – Media gateway (MGW) interface; Stage 3

The document describes the protocol to be used on the media gateway controller (MGC) – media gateway (MGW) interface. The media gateway controllers covered in this specification are the MSC server and the GMSC server. The basis for this protocol is the H.248.1 MEGACO protocol as

specified in ITU-T and IETF. The BICC architecture, as described in TS 23.205 and 29.205, defines the usage of this protocol.

This specification describes the changes to H.248.1/MEGACO which are needed to handle 3G specific traffic cases. This is done by using the H.248.1/MEGACO standard extension mechanism.

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CCSA	CCSA-TSD-129 232	7.7.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 232	7.7.0	Published	2007-10-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0429232v770
ATIS	ATIS.3GPP.29.232V770-2007	7.7.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.232(R7-7.6.0)	7.6.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.232(R7-7.6.0).zip
TTC	TS-3GA-29.232(Rel7)v7.7.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29232rel7v770.pdf

10.8.68 TS 29.234 3GPP system to wireless local area network (WLAN) interworking; Stage 3

The present document defines the Stage 3 protocol description for several reference points in the WLAN-3GPP interworking system.

The present document is applicable to:

• the Dw reference point between the 3GPP AAA server and an SLF;

• the Wa reference point between the WLAN AN and the 3GPP AAA proxy;

• the Wd reference point between the 3GPP AAA proxy and 3GPP AAA server;

• the Wx reference point between the 3GPP AAA server and the HSS;

• the Wm reference point between the 3GPP AAA server and the PDG;

• the Wn reference point between the WLAN AN and the 3GPP WAG;

• the Wg reference point between the 3GPP AAA server/proxy and the WAG.

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CCSA	CCSA-TSD-129 234	7.7.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 234	7.7.0	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0429234v770
ATIS	ATIS.3GPP.29.234V770-2007	7.7.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.234(R7-7.6.0)	7.6.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.234(R7-7.6.0).zip
TTC	TS-3GA-29.234(Rel7)v7.7.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29234rel7v770.pdf

10.8.69 TS 29.240 3GPP generic user profile (GUP); Stage 3; Network

This document defines the stage 3 network protocol description to the 3GPP generic user profile (GUP), which includes the elements necessary to realise the stage 2 requirements in TS 23.240.

The fact of having several domains within the 3GPP mobile system (e.g., circuit-switched, packet-switched, IP multimedia subsystem) and access technologies (e.g., GERAN, UTRAN and WLAN) introduces a wide distribution of data associated with the user. Further, the new functions both in terminals and networks mean that the data related to users, services and user equipment will be increased greatly. This causes difficulties for users, subscribers, network operators and value-added service providers to create, access and manage the user-related data located in different entities.

The objective of specifying the 3GPP generic user profile is to provide a conceptual description to enable harmonized usage of the user-related information located in different entities. Technically, the 3GPP generic user profile provides an architecture, data description and interface with mechanisms to handle the data.

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CCSA	CCSA-TSD-129 240	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 240	7.0.0	Published	2007-07-19	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0429240v700
ATIS	ATIS.3GPP.29.240V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.240(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.240(R7-7.0.0).zip
TTC	TS-3GA-29.240(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29240rel7v700.pdf

10.8.70 TS 29.278 Customized applications for mobile network enhanced logic (CAMEL) Phase 4; CAMEL application part (CAP) specification for IP multimedia subsystems (IMS)

The document specifies the CAMEL application part (CAP) supporting the fourth phase of the network feature customized applications for mobile network enhanced logic for IP multimedia CN subsystems. CAP is based on a sub-set of the ETSI core INAP CS-2 as specified by [ETSI EN 301 140-1]. Descriptions and definitions provided by [ETSI EN 301 140-1] are directly referenced by this standard in case no additions or clarifications are needed for the use in the CAP.

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CCSA	CCSA-TSD-129 278	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 278	7.0.0	Published	2006-01-10	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0429278v700
ATIS	ATIS.3GPP.29.278V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.278(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.278(R7-7.0.0).zip
TTC	TS-3GA-29.278(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29278rel7v700.pdf

10.8.71 TS 29.328 IP multimedia (IM) subsystem Sh interface; signalling flows and message contents

This Technical Specification (TS) specifies the interactions between the HSS (home subscriber server) and the SIP AS (application server) and between the HSS and the OSA SCS (service capability server). This interface is referred to as the Sh reference point.

The IP multimedia (IM) core network subsystem Stage 2 is specified in 3G TS 23.228 and the signalling flows for the IP multimedia call control based on SIP and SDP are specified in 3G TS 24.228.

The IP multimedia (IM) session handling with the IP multimedia (IM) call model is specified in 3G TS 23.218.

This document addresses the signalling flows and message contents for the protocol at the Sh interface.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 328	7.7.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 328	7.7.0	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0429328v770
ATIS	ATIS.3GPP.29.328V770-2007	7.7.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.328(R7-7.6.0)	7.6.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.328(R7-7.6.0).zip
TTC	TS-3GA-29.328(Rel7)v7.7.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29328rel7v770.pdf

10.8.72 TS 29.329 Sh interface based on the Diameter protocol; Protocol details

The document defines a transport protocol for use in the IP multimedia (IM) core network (CN) subsystem based on diameter.

This document is applicable to:

– the Sh interface between an AS and the HSS;

– the Sh interface between an SCS and the HSS.

Whenever it is possible, this document specifies the requirements for this protocol by reference to specifications produced by the IETF within the scope of diameter. Where this is not possible, extensions to diameter are defined within this document.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 329	7.4.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 329	7.4.0	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0429329v740
ATIS	ATIS.3GPP.29.329V 740-2007	7.4.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.329(R7-7.4.0)	7.4.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.329(R7-7.4.0).zip
TTC	TS-3GA-29.329(Rel7)v7.4.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29329rel7v740.pdf

10.8.73 TS 29.332 Media gateway control function (MGCF) – IM media gateway; Mn interface

The present document describes the protocol to be used on the media gateway control function (MGCF) – IM media gateway (IM-MGW) interface. The basis for this protocol is the H.248.1/MEGACO protocol as specified in ITU-T and IETF. The IMS architecture is described in 3G TS 23.228. The interaction of the MGCF-IM MGW interface signalling procedures in relation to the SIP, and BICC/ISUP signalling at the MGCF are described in 3G TS 29.163.

This specification describes the application of H.248.1/MEGACO on the Mn interface. Required extensions use the H.248.1/MEGACO standard extension mechanism.

The present document is valid for a 3rd generation PLMN (UMTS) complying with Release 6 and later.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 332	7.8.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 332	7.8.0	Published	2007-10-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0429332v780
ATIS	ATIS.3GPP.29.332V 780-2007	7.8.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.332(R7-7.7.0)	7.7.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.332(R7-7.7.0).zip
TTC	TS-3GA-29.332(Rel7)v7.8.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29332rel7v780.pdf

10.8.74 TS 29.333 Multimedia resource function controller (MRFC) – Multimedia resource function processor (MRFP) Mp interface; Stage 3

This document describes the protocol to be used on the multimedia resource function controller (MRFC) – multimedia resource function processor (MRFP) interface (Mp interface). The IMS architecture is described in TS 23.228, the functional requirements are described in 3G TS 23.333.

This specification defines a profile of the gateway control protocol [ITU-T H.248.1], for controlling multimedia resource function processor supporting in-band user interaction, conferencing and transcoding for multimedia-services.

The document is valid for a 3rd generation PLMN (UMTS) complying with Release 7 and later.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 333	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 333	7.1.0	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0429333v710
ATIS	ATIS.3GPP.29.333V 710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.333(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.333(R7-7.0.0).zip
TTC	TS-3GA-29.333(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29333rel7v710.pdf

10.8.75 TS 29.414 Core network Nb data transport and transport signalling

The document specifies the bearer data transport and bearer control protocols used between MGWs within the CS core network across the Nb Interface. This document assumes the implementation of the split of the call control and the bearer transport and control, as specified in TS 23.205; see Figure 10.8.75-1. The user plane protocol that uses this bearer data transport (Nb UP) is described in TS 29.415. Note that the document does not preclude an implementation of a combined MSC server and MGW.
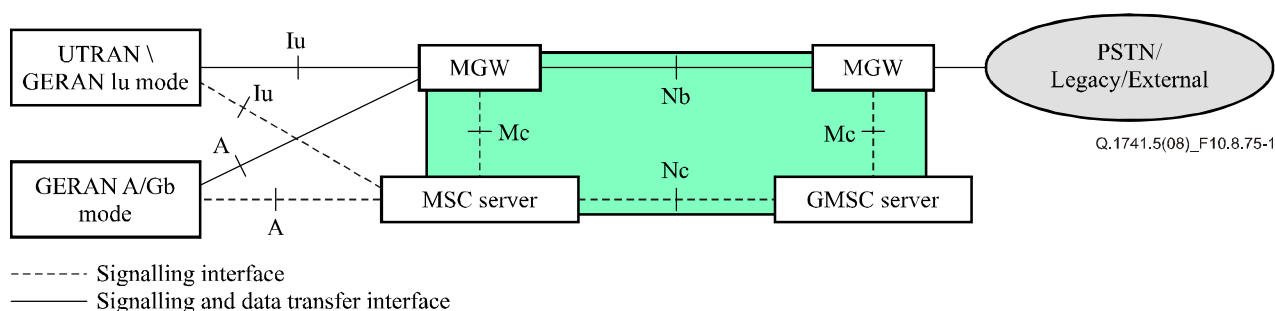
Figure 10.8.75-1 – CS core network logical architecture

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 414	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 414	7.2.0	Published	2007-04-05	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0329414v720
ATIS	ATIS.3GPP.29.414V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.414(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.414(R7-7.2.0).zip
TTC	TS-3GA-29.414(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29414rel7v720.pdf

10.8.76 TS 29.415 Core network Nb user plane protocols

The document specifies the user plane protocol of the bearer used between two MGWs within the CS core network, called the Nb UP protocol. This document assumes the implementation of the split between call control and the bearer transport and control, as specified in TS 23.205. Note that the document does not preclude an implementation of a combined MSC server and MGW.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 415	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 129 415	7.0.0	Published	2007-07-19	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0329415v700
ATIS	ATIS.3GPP.29.415V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-29.415(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-29.415(R7-7.0.0).zip
TTC	TS-3GA-29.415(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts29415rel7v700.pdf

10.8.77 TR 29.994 Recommended infrastructure measures to overcome specific mobile station (MS) faults

The present document clarifies recommended measures which may be adopted by 3GPP infrastructure utilizing GSM or GERAN as access network to enable interworking to be obtained between network and various user equipment (UE) implementations of the 3GPP specification. The objective is to obtain compatibility without changing the consolidated set of specifications. The present document describes the recommended changes to the infrastructure to cater for specific faults within some types of UE.

The lifetime of the herein-described measures together with their potential impact on optimal network performance is out of the scope of the present document.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 994	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 129 994	7.0.0	Published	2007-07-25	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGC-0129994v700
ATIS	ATIS.3GPP.29.994V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTC	TR-3GA-29.994(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/tr/tr29994rel7v700.pdf

10.8.78 TR 29.998-01 Open service access (OSA) application programming interface (API) mapping for open service access; Part 1: General issues on API mapping

The document is suggesting a mapping of the application programming interface (API) for open service access (OSA) onto CAMEL application part (CAP) operations and mobile application part (MAP) operations, and provides an overview of the content and structure of the various parts of this document. The mapping of the OSA API to the CAP and relevant MAP operations is considered informative and not normative.

The API specification is contained in the 3G TS 29.198 series of specifications. An overview of these is available in the introduction of this document as well as in 3G TS 29.198-1. The concepts and the functional architecture for the open service access (OSA) are described by 3G TS 23.127. The requirements for OSA are defined in 3G TS 22.127.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 998-1	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 129 998-1	7.0.0	Published	2007-03-30	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGC-0529998-01v700
ATIS	ATIS.3GPP.29.998-01V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTC	TR-3GA-29.998-01(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/tr/tr29998-01rel7v700.pdf

10.8.79 TR 29.998-04-1 Open service access (OSA) application programming interface (API) mapping for open service access; Part 4: Call control service mapping; Sub-part 1: API to CAP mapping

This document investigates how the OSA call control interface class methods defined in 3G TS 29.198-4 can be mapped onto CAMEL application part (CAP) operations and mobile application part (MAP) operations.

The mapping of the OSA API to the CAP and relevant MAP operations is considered informative, and not normative. An overview of the mapping TR is contained in the introduction of this document as well as in 3G TR 29.998-1.

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The API specification is contained in the 3G TS 29.198 series of specifications. An overview of these is

available in the introduction of this document as well as in 3G TS 29.198-1. The concepts and the functional architecture for the open service access (OSA) are described by 3G TS 23.127. The requirements for OSA are defined in 3G TS 22.127.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 998-4-1	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 129 998-4-1	7.0.0	Published	2007-03-30	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGC-0529998-04-1v700
TTC	TR-3GA-29.998-04-1(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/tr/tr29998-04-1rel7v700.pdf

10.8.80 TR 29.998-04-4 Open service access (OSA) application programming interface (API) mapping for open service access; Part 4: Call control service mapping; Sub-part 4: Multi-party call control internal service control (ISC)

This document investigates how the OSA call control interface Class methods defined in 3G TS 29.198-4 can be mapped onto SIP methods.

The mapping of the OSA API to the SIP is considered informative, and not normative. An overview of the mapping TR is contained in the introduction of this document as well as in 3G TR 29.998-1.

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The API specification is contained in the 3G TS 29.198 series of specifications. An overview of these is available in the introduction of this document as well as in 3G TS 29.198-1. The concepts and the functional architecture for the open service access (OSA) are described by 3G TS 22.121. The requirements for OSA are defined in 3G TS 22.127.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 998-4-4	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 129 998-4-4	7.0.0	Published	2007-03-30	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGC-0529998-04-4v700
ATIS	ATIS.3GPP.29.998-04-4V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTC	TR-3GA-29.998-04-4(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/tr/tr29998-04-4rel7v700.pdf

10.8.81 TR 29.998-05-1 Open service access (OSA) application programming interface (API) mapping for open service access; Part 5: User interaction service mapping; Sub-part 1: API to CAP mapping

This document investigates how the OSA user interaction interface Class methods defined in 3G TS 29.198-5 can be mapped onto CAMEL application part operations and mobile application part operations.

The mapping of the OSA API to the CAP and relevant MAP operations is considered informative, and not normative. An overview of the mapping TR is contained in the introduction of this document as well as in 3G TR 29.998-1.

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The API specification is contained in the 3G TS 29.198 series of specifications. An overview of these is available in the introduction of this document as well as in 3G TS 29.198-1. The concepts and the functional architecture for the open service access (OSA) are described by 3G TS 23.127. The requirements for OSA are defined in 3G TS 22.127.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 998-5-1	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 129 998-5-1	7.0.0	Published	2007-03-30	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGC-0529998-05-1v700
ATIS	ATIS.3GPP.29.998-05-1V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTC	TR-3GA-29.998-05-1(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/tr/tr29998-05-1rel7v700.pdf

10.8.82 TR 29.998-05-4 Open service access (OSA) application programming interface (API) mapping for open service access; Part 5: User interaction service mapping; Sub-part 4: API to SMS mapping

This document investigates how the OSA user interaction interface class methods defined in 3G TS 29.198-5 can be mapped onto CAMEL application part operations and mobile application part operations, within the context of SMS. The mapping of the OSA API to the CAP and relevant MAP operations is considered informative, and not normative. An overview of the mapping TR is contained in the introduction of this document as well as in 3G TR 29.998-1.

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The API specification is contained in the 3G TS 29.198 series of specifications. An overview of these is available in the introduction of this document as well as in 3G TS 29.198-1. The concepts and the functional architecture for the open service access (OSA) are described by 3G TS 23.127. The requirements for OSA are defined in 3G TS 22.127.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 998-5-4	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 129 998-5-4	7.0.0	Published	2007-03-30	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGC-0529998-05-4v700
ATIS	ATIS.3GPP.29.998-05-4V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTC	TR-3GA-29.998-05-4(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/tr/tr29998-05-4rel7v700.pdf

10.8.83 TR 29.988-06-1 Open service access (OSA) application programming interface (API) mapping for open service access; Part 6: User location – user status service mapping; Sub-part 1: Mapping to mobile application part (MAP)

This document investigates how the OSA mobility interface class methods defined in TS 29.198-6 can be mapped onto CAMEL application part (CAP) operations and mobile application part (MAP) operations.

The mapping of the OSA API to the CAP and relevant MAP operations is considered informative, and not normative. An overview of the mapping TR is contained in the introduction of the present document as well as in TR 29.998-1.

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e., the OSA APIs. The API specification is contained in the TS 29.198 series of specifications. An overview of these is available in the introduction of the present document as well as in TS 29.198-1. The concepts and the functional architecture for the open service access (OSA) are described by TS 23.198. The requirements for OSA are defined in TS 22.127.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 998-6-1	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 129 998-6-1	7.0.0	Published	2007-03-30	http://pda.etsi.org/pda/home.asp?wkr=DTR/TSGC-0529998-06-1v700
ATIS	ATIS.3GPP.29.998-06-1V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTC	TR-3GA-29.998-06-1(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/tr/tr29998-06-1rel7v700.pdf

10.8.84 TR 29.988-06-2 Open service access (OSA) application programming interface (API) mapping for open service access; Part 6: User location – user status service mapping; Sub-part 2: Mapping to session initiation protocol (SIP)

This document investigates how the OSA mobility interface class methods defined in TS 29.198-6 can be mapped onto IMS ISC interface (SIP) operations.

The mapping of the OSA API to the SIP is considered informative, and not normative. An overview of the mapping TR is contained in the introduction of the present document as well as in TR 29.998-1.

The OSA specifications define an architecture that enables application developers to make use of the network functionality through an open standardized interface, i.e., the OSA APIs. The API specification is contained in the TS 29.198 series of specifications. An overview of these is available in the introduction of the present document as well as in TS 29.198-1. The concepts and the functional architecture for the open service access (OSA) are described by TS 23.198. The requirements for OSA are defined in TS 22.127.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 998-6-2	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 129 998-6-2	7.0.0	Published	2007-03-30	http://pda.etsi.org/pda/home.asp?wkr=DTR/TSGC-0529998-06-2v700
ATIS	ATIS.3GPP.29.998-06-2V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTC	TR-3GA-29.998-06-2(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/tr/tr29998-06-2rel7v700.pdf

10.8.85 TR 29.998-08 Open service access (OSA) application programming interface (API) mapping for open service access; Part 8: Data session control service mapping to CAP

This document investigates how the OSA data session control interface class methods defined in 3G TS 29.198-8 can be mapped onto CAMEL application part operations and mobile application part operations.

The mapping of the OSA API to the CAP and relevant MAP operations is considered informative, and not normative. An overview of the mapping TR is contained in the introduction of this document as well as in 3G TR 29.998-1.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-129 998-8	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 129 998-8	7.0.0	Published	2007-03-30	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGC-0529998-08v700
ATIS	ATIS.3GPP.29.998-08V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTC	TR-3GA-29.998-06-2(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/tr/tr29998-06-2rel7v700.pdf

10.9   31-series, UIM user identity module

10.9.1   TS 31.101 UICC-terminal interface; Physical and logical characteristics

The document specifies the interface between the UICC and the terminal for 3G-telecom network operation.

The document specifies:

–   the requirements for the physical characteristics of the UICC;

–   the electrical interface between the UICC and the terminal;

–   the initial communication establishment and the transport protocols;

–   the model which serves as a basis for the logical structure of the UICC;

–   the communication commands and the procedures;

–   the application independent files and protocols.

The administrative procedures and initial card management are not part of the document.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-31.101V7.0.1	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/31/A31101-701.pdf
CCSA	CCSA-TSD-131 101	7.0.1	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 131 101	7.0.1	Published	2007-07-19	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0631101v701
ATIS	ATIS.3GPP.31.101V701-2007	7.0.1	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-31.101(R7-7.0.1)	7.0.1	Approved	2007-12-24	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-31.101(R7-7.0.1).zip

10.9.2 TS 31.102 Characteristics of the USIM application

The document defines the USIM application for 3G-telecom network operation.

The document specifies:

– specific command parameters;
– file structures;
– contents of EFs (elementary files);
– security functions;
– application protocol to be used on the interface between UICC (USIM) and ME.

This is to ensure interoperability between a USIM and an ME independently of the respective manufacturer, card issuer or operator.

The document does not define any aspects related to the administrative management phase of the USIM. Any internal technical realization of either the USIM or the ME is only specified where these are reflected over the interface. The document does not specify any of the security algorithms that may be used.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-31.102V7.10.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/31/A31102-7a0.pdf
CCSA	CCSA-TSD-131 102	7.10.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 131 102	7.10.0	Published	2007-10-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0631102v7a0
ATIS	ATIS.3GPP.31.102V7100-2007	7.10.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-31.102(R7-7.8.0)	7.8.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-31.102(R7-7.8.0).zip

10.9.3 TS 31.103 Characteristics of the IP multimedia services identity module (ISIM) application

This document defines the ISIM application for access to IMS services.

This document specifies:

– specific command parameters;
– file structures;
– contents of EFs (elementary files);
– security functions;
– application protocol to be used on the interface between UICC (ISIM) and terminal.

This is to ensure interoperability between an ISIM and terminal independently of the respective manufacturer, card issuer or operator.

This document does not define any aspects related to the administrative management phase of the ISIM. Any internal technical realization of either the ISIM or the terminal is only specified where these are reflected over the interface. This document does not specify any of the security algorithms that may be used.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-31.103V7.3.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/31/A31103-730.pdf
CCSA	CCSA-TSD-131 103	7.3.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 131 103	7.3.0	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0631103v730
ATIS	ATIS.3GPP.31.103V730-2007	7.3.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-31.103(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-31.103(R7-7.2.0).zip

10.9.4 TS 31.111 USIM application toolkit (USAT)

The document defines the interface between the universal ICC (UICC) and the mobile equipment (ME), and mandatory ME procedures, specifically for "USIM application toolkit".

USAT is a set of commands and procedures for use during the network operation phase of 3G, in addition to those defined in TS 31.101.

Specifying the interface is to ensure interoperability between a UICC and an ME independently of the respective manufacturers and operators.

The document defines:

– the commands;
– the application protocol;
– the mandatory requirements on the UICC and ME for each procedure.

This document does not specify any aspects related to the administrative management phase. Any internal technical realization of either the UICC or the ME is only specified where these reflect over the interface. The document does not specify any of the security algorithms that may be used.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-31.111V7.8.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/31/A31111-780.pdf
CCSA	CCSA-TSD-131 111	7.8.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 131 111	7.8.0	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0631111v780
ATIS	ATIS.3GPP.31.111V780-2007	7.8.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-31.111(R7-7.3.0)	7.3.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-31.111(R7-7.3.0).zip

10.9.5   TS 31.112 USAT interpreter architecture description; Stage 2

This document defines the Stage 2 description for the USAT interpreter system. As the second stage of a three-level structure, it is derived from the Stage 1 service description.

This document defines the overall architecture for the USAT interpreter system:

– 	role models;

– 	system architecture;

– 	function and information flow.

The Stage 3 documents shall conform to this document.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-31.112V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/31/A31112-700.pdf
CCSA	CCSA-TSD-131 112	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 131 112	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0631112v700
ATIS	ATIS.3GPP.31.112V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-31.112(R7-7.0.0)	7.0.0	Approved	2007-12-24	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-31.112(R7-7.0.0).zip

10.9.6 TS 31.113 USAT interpreter byte codes

This document specifies the byte codes that are recognized by an USAT interpreter. The byte codes primary purpose is to provide efficient programmatic access to the SIM application toolkit commands.

The design objectives of the byte code set are:

• 	compact representation for efficient transmission over the air interface;

• 	minimization of USAT interpreter complexity to minimize SIM footprint and ease compliance testing;

• 	easily configured and extended;

• 	source language independent although XML-style mark-up languages are explicitly envisioned;

• 	transport bearer independent (e.g., SMS, GPRS, etc.);

• 	transport protocol independent;

• 	independent from design of external entities.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-31.113V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/31/A31113-700.pdf
CCSA	CCSA-TSD-131 113	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 131 113	7.0.0	Published	2007-06-25	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0631113v700
ATIS	ATIS.3GPP.31.113V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-31.113(R7-7.0.0)	7.0.0	Approved	2007-12-24	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-31.113(R7-7.0.0).zip

10.9.7 TS 31.114 USAT interpreter protocol and administration

This document specifies the transmission protocol to be used to communicate with the USAT interpreter and the administrative structures and procedures to administer the USAT interpreter.

This document does not specify any USAT interpreter byte code commands.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-31.114V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/31/A31114-700.pdf
CCSA	CCSA-TSD-131 114	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 131 114	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0631114v700
ATIS	ATIS.3GPP.31.114V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-31.114(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-31.114(R7-7.0.0).zip

10.9.8   TS 31.115 Secured packet structure for (U)SIM toolkit applications

This document specifies the structure of the secured packets in implementations using short message service point-to-point (SMS-PP), short message service cell broadcast (SMS-CB), and unstructured supplementary service data (USSD) based on TS 102 225.

The structure of the secured packets shall comply with the one defined in TS 102 225. The present document only contains additional requirements or explicit limitations for SIM/USIM applications.

It is applicable to the exchange of secured packets between an entity in a 3G or GSM PLMN and an entity in the (U)SIM.

Secured packets contain application messages to which certain mechanisms according to TS 102 224 have been applied. Application messages are commands or data exchanged between an application resident in or behind the 3G or GSM PLMN and on the (U)SIM. The sending/receiving entity in the 3G or GSM PLMN and the UICC are responsible for applying the security mechanisms to the application messages and thus turning them into secured packets.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-31.115V7.1.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/31/A31115-710.pdf
CCSA	CCSA-TSD-131 115	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 131 115	7.1.0	Published	2007-07-19	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0631115v710
ATIS	ATIS.3GPP.31.115V 710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-31.115(R7-7.1.0)	7.1.0	Approved	2007-12-24	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-31.115(R7-7.1.0).zip

10.9.9   TS 31.116 Remote APDU structure for (U)SIM toolkit applications

The present document defines the remote management of files and applets on the SIM/USIM.

It describes the APDU format for remote management.

Furthermore, the document specifies:

- a set of commands coded according to this APDU structure and used in the remote file management on the SIM/USIM specified in 3G TS 51.011, 3G TS 31.101 and 3G TS 31.102;
- a set of commands coded according to this APDU structure and used in the remote applet management on the SIM/USIM. This is based on TS 102 226.

The remote APDU structure for SIM/USIM applications shall comply with the one defined in TS 102 226. The present document only contains additional requirements or explicit limitations for SIM/USIM applications.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-31.116V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/31/A31116-700.pdf
CCSA	CCSA-TSD-131 116	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 131 116	7.0.0	Published	2007-07-19	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0631116v700
ATIS	ATIS.3GPP.31.116V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-31.116(R7-7.0.0)	7.0.0	Approved	2007-12-24	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-31.116(R7-7.0.0).zip

10.9.10 TS 31.120 UICC-terminal interface; Physical, electrical and logical test specification

The present document specifies the interface test for the terminal/UICC.

The present document specifies the tests of:

- physical characteristics of the UICC;
- the electrical interface between the UICC and the terminal;
- the initial communication establishment and the transport protocols;
- the application-independent procedures.

	Document No.	Version	Status	Issued date	Location
TTA	TTAT.3G-31.120(R7-7.0.0)	7.0.0	Approved	2007-12-24	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-31.120(R7-7.0.0).zip

10.9.11 TS 31.121 UICC-terminal interface; Universal subscriber identity module (USIM) application test specification

The present document provides the UICC-terminal interface conformance test specification between the 3rd generation terminal and USIM (universal subscriber identity module) as an application on

the UICC and the terminal for 3G telecom network operation and between a GERAN terminal and USIM (universal subscriber identity module) as an application on the UICC and the GERAN terminal for 2G telecom network operation:

– the default setting of the USIM;

– the applicability of each test case;

– the test configurations;

– the conformance requirement and reference to the core specifications;

– the test purposes; and

– a brief description of the test procedure and the specific acceptance criteria.

	Document No.	Version	Status	Issued date	Location
TTA	TTAT.3G-31.121(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-31.121(R7-7.0.0).zip

10.9.12 TS 31.130 (U)SIM application programming interface; (U)SIM API for Java card

The present document defines the (U)SIM application programming interface extending the "UICC API for Java card™".

This API allows to develop a (U)SAT application running together with a (U)SIM application and using GSM/3G network features.

The present document includes information applicable to network operators, service providers, server manufacturers, SIM manufacturers, USIM manufacturers, and database manufacturers.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-31.130V7.6.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/31/A31130-760.pdf
CCSA	CCSA-TSD-131 130	7.6.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 131 130	7.6.0	Published	2007-06-25	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0631130v760
ATIS	ATIS.3GPP.31.130V760-2007	7.6.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-31.130(R7-7.5.0)	7.5.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-31.130(R7-7.5.0).zip

10.9.13 TS 31.131 C-language binding to (U)SIM API

A subscriber identity module application programming interface (SIM API) has been defined in 3G TS 42.019 as a technology-independent API by which toolkit applications and (U)SIMs cooperate. That specification is independent of the programming language technology used to create the application, the platform used to host the application and the runtime environment used to execute the application.

The present document includes information applicable to (U)SIM toolkit application developers creating applications using the C programming language ISO/IEC 9899. The present document describes an interface between toolkit applications written in the C programming language and the (U)SIM in order to realize the cooperation set forth in 3G TS 42.019. In particular, the API described herein provides the service of assembling proactive commands and disassembling the responses to these commands for the application programmer.

Software tools, integrated software development environments and software management systems that may be used to create application programs are explicitly out of scope of the present document.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-31.131V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/31/A31131-700.pdf
CCSA	CCSA-TSD-131 131	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 131 131	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGC-0631131v700
ATIS	ATIS.3GPP.31.131V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-31.131(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-31.131(R7-7.0.0).zip

10.9.14 TS 31.133 IP multimedia services identity module (ISIM) application programming interface (API); ISIM API for Java card™

This document defines the ISIM application programming interface extending the "UICC API for Java card™" [ETSI TS 102 241].

This API allows to develop an application running together with a ISIM application.

The document includes information applicable to network operators, service providers, and manufacturers of ISIM server equipment and database.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-31.133V7.1.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/31/A31133-710.pdf
CCSA	CCSA-TSD-131 133	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 131 133	7.1.0	Published	2007-06-22	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGC-0631133v710
ATIS	ATIS.3GPP.31.133V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-31.133(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-31.133(R7-7.1.0).zip

10.9.15 TS 31.213 Test specification for (U)SIM; Application programming interface (API) for Java card™

This document covers the minimum characteristics considered necessary in order to provide compliance to TS 31.130.

The document describes the technical characteristics and methods of test for testing the (U)SIM API for Java card™ (TS 31.130) implemented in the (U)SIM. It specifies the following parts:

– test applicability;

– test environment description;

– tests format;

– test area reference;

– conformance requirements;

– test suite files;

– test procedure;

– test coverage; and

– a description of the associated testing tools that shall be used.

	Document No.	Version	Status	Issued date	Location
TTA	TTAT.3G-31.213(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-31.213(R7-7.0.0).zip

10.9.16 TR 31.900 SIM/USIM internal and external interworking aspects

This document describes:

• the different cases of interworking between a 2G or 3G ICC and a 2G or 3G ME;

• the different cases of interworking between any given ME/ICC combination and the rest of the network;

• the possibilities of interworking between a SIM and a USIM together on a single UICC;

• the possibilities of interworking between several USIMs on a single UICC.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB TR-T12-31.900V7.1.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/3_T12/ARIB-TR-T12/Rel7/31/A31900-710.pdf
CCSA	CCSA-TSD-131 900	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 131 900	7.1.0	Published	2007-07-19	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGC-0631900v710
ATIS	ATIS.3GPP.31.900V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.9.17 TR 31.919 2G/3G Java card™ API-based applet interworking

The present document describes:

– description of 3G TS 43.019 APIs and ETSI TS 102 241/3G TS 31.130 APIs interworking;

– the behaviour and limitations of the 3G TS 43.019 APIs used in 3G environment.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB TR-T12-31.919V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/3_T12/ARIB-TR-T12/Rel7/31/A31919-700.pdf
CCSA	CCSA-TSD-131 919	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 131 919	7.0.0	Published	2007-06-22	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGC-0631919v700
ATIS	ATIS.3GPP.31.919V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.10 32-series, operation and maintenance

10.10.1 TS 32.101 3G telecommunication management; Principles and high-level requirements

The document establishes and defines the management principles and high-level requirements for the management of UMTS.

In particular, this document identifies the requirements for:

– the upper level of a UMTS management system;

– the reference model, showing the elements the UMTS management system interacts with;

– the network operator processes needed to run, operate and maintain a UMTS network;

– the functional architecture of the UMTS management system;

– the principles to be applied to UMTS management interfaces.

The requirements identified in this document are directed to the further development of UMTS management specifications, as well as the development of UMTS management products. This document can be seen as guidance for the development of all other Technical Specifications addressing the management of UMTS.

This document does not provide physical architectures of the UMTS management system. These aspects are defined and discussed in more detail in TS 32.102.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 101	7.3.1	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 101	7.3.1	Published	2007-03-30	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532101v731
ATIS	ATIS.3GPP.32.101V731-2007	7.3.1	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.101(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.101(R7-7.0.0).zip
TTC	TS-3GA-32.101(Rel7)v7.3.1	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32101rel7v731.pdf

10.10.2 TS 32.102 3G telecommunication management; Architecture

The document identifies and standardizes the most important and strategic contexts in the physical architecture for the management of UMTS. It serves as a framework to help define a telecom management physical architecture for a planned UMTS and to adopt standards and provide products that are easy to integrate.

The requirements identified in this document are applicable to all further development of UMTS telecom management specifications as well as the development of UMTS management products. This document can be seen as guidance for the development of all other Technical Specifications addressing the management of UMTS, except TS 32.101.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 102	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 102	7.1.0	Published	2007-07-19	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532102v710
ATIS	ATIS.3GPP.32.102V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.102(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.102(R7-7.2.0).zip
TTC	TS-3GA-32.102(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32102rel7v710.pdf

10.10.3 TS 32.111-1 Telecommunication management; Fault management; Part 1: 3G fault management requirements

The document specifies the overall requirements for 3G fault management (FM) as it applies to the network elements (NE), element manager (EM) and network manager (NM).

This document defines the FM concept and functional requirements for the detection of faults and the generation, collection and presentation of alarms, operational state data and test results across 3G systems. These functions are described on a non-formal level since the formal standardization of

these functions across the different vendors' equipment is not required. The functional areas specified in this document cover:

– fault surveillance and detection in the NEs;

– notification of alarms (including alarm cease) and operational state changes;

– retrieval of current alarms from the NEs;

– fault isolation and defence mechanisms in the NEs;

– alarm filtering;

– management of alarm severity levels;

– alarm and operational state data presentation and analysis at the operations system (OS);

– retention of alarm and operational state data in the NEs and the OS; and

– the management of tests.

Any (re)configuration activity exerted from the EM as a consequence of faults will not be subject of this document; these are described in the TS 32.600-series.

This document defines the functional requirements for the standard Itf-N, for the purpose of fault management of 3G networks, as seen from the network manager (NM). The Itf-N is fully standardized so as to connect systems of any vendor to the NM via this interface.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 111-1	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 111-1	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532111-1v700
ATIS	ATIS.3GPP.32.111-1V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.111-01(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.111-01(R7-7.0.0).zip
TTC	TS-3GA-32.111-1(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32111-1rel7v700.pdf

10.10.4 TS 32.111-2 Telecommunication management; Fault management; Part 2: Alarm integration reference point: Information service

The document defines the alarm integration reference point (IRP) information service (IS), which addresses the alarm surveillance aspects of fault management (FM), applied to the N interface.

The purpose of the alarm IRP is to define an interface through which a "system" (typically a network element manager or a network element) can communicate alarm information for its managed objects to one or several manager systems (typically network management systems).

The alarm IRP IS defines the semantics of alarms and the interactions visible across the reference point in a protocol-neutral way. It defines the semantics of the operations and notifications visible in the IRP. It does not define the syntax or encoding of the operations, notifications and their parameters.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 111-2	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 111-2	7.1.0	Published	2007-03-27	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532111-2v710
ATIS	ATIS.3GPP.32.111-2V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.111-02(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.111-02(R7-7.1.0).zip
TTC	TS-3GA-32.111-2(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32111-2rel7v710.pdf

10.10.5 TS 32.111-3 Telecommunication management; Fault management; Part 3: Alarm integration reference point: CORBA solution set

The document specifies the CORBA solution set (SS) for the IRP whose semantics is specified in alarm IRP: information service (IS) (3G TS 32.111-2).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 111-3	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 111-3	7.1.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532111-3v710
ATIS	ATIS.3GPP.32.111-3V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.111-03(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.111-03(R7-7.1.0).zip
TTC	TS-3GA-32.111-3(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32111-3rel7v710.pdf

10.10.6 TS 32.111-5 Telecommunication management; Alarm integration reference point (IRP): eXtensible markup language (XML) definitions

This document specifies the XML definitions for the alarm integration reference point (alarm IRP) as it applies to Itf-N, in accordance with alarm IRP IS definitions in TS 32.111-2 as well as notification log IRP XML definitions in TS 32.335.

The document defines the XML syntax of alarm IRP notifications that is to be used in conjunction with notification log IRP XML definitions for notification log IRP XML data file and the NL IRP XML notification format in TS 32.335.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 111-5	7.0.1	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 111-5	7.0.1	Published	2007-10-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532111-5v701
ATIS	ATIS.3GPP.32.111-5V701-2007	7.0.1	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.111-05(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.111-05(R7-7.0.0).zip
TTC	TS-3GA-32.111-5(Rel7)v7.0.1	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32111-5rel7v710.pdf

10.10.7 TS 32.140 Telecommunication management; Subscription management (SuM) requirements

The present document defines the service requirements and high-level architecture for SuM.

SuM is expected to evolve in stages over several releases of 3GPP specifications.

The present document provides additional supporting material, which whilst not within the scope of this release, provides an insight towards the future evolution. This is in order that initial work may be done with an appreciation of the wider context expected in future releases of 3GPP specifications.

SuM for 3GPP is primarily concerned with the ability to define subscription profiles and associate the profile with subscribers, users and services that are authorized by agreements. The subscription profile may be used in the process of configuring various network resources (access and core) to make the service a reality for the user.

The management capabilities extend to the creation, modification, synchronization, and re-application of subscription profiles.

The present document is oriented towards a standardized interface into the home subscriber server (HSS) in order that services can be provisioned and maintained.

The present document includes information applicable to network operators, content providers, and terminal and network manufacturers.

The present document contains the core requirements for SuM, which are sufficient to provide management services.

The method by which applications subscribe to OSA is not within the scope of the present document.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 140	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 140	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532140v700
ATIS	ATIS.3GPP.32.140V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.140(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.140(R7-7.0.0).zip
TTC	TS-3GA-32.140(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32140rel7v700.pdf

10.10.8 TS 32.141 Telecommunication management; Subscription management (SuM) architecture

Subscription management (SuM) is a feature that permits service providers, value-added service providers, and mobile operators to provision services for a specific subscriber. The feature is necessary to allow service providers and operators to provision, control, monitor and bill the configuration of services that they offer to their subscribers.

For further details, please refer to 3G TS 32.140 SuM requirements specification that gives an overview of SuM requirements.

The present document defines the architecture for subscription management (SuM).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 141	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 141	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532141v700
ATIS	ATIS.3GPP.32.141V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.141(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.141(R7-7.0.0).zip
TTC	TS-3GA-32.141(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32141rel7v700.pdf

10.10.9 TS 32.150 Telecommunication management; Integration reference point (IRP) concept and definitions

The present document provides the overall concept for all integration reference point (IRP) specifications produced by 3GPP. Relevant IRP overview and high-level definitions are already provided in 3G TS 32.101 and 3G TS 32.102.

The present document is a member of a TS-family consisting of 3G TS 32.150, 3G TS 32.151, 3G TS 32.152.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 150	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 150	7.2.0	Published	2007-04-13	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532150v720
ATIS	ATIS.3GPP.32.150V 720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.150(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.150(R7-7.2.0).zip
TTC	TS-3GA-32.150(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32150rel7v720.pdf

10.10.10 TS 32.151 Telecommunication management; Integration reference point (IRP) information service (IS) template

The present document contains the template to be used for the production of all integration reference point (IRP) information service (IS) specifications within the 3GPP 32-series.

The present document is a member of a TS-family consisting of 3G TS 32.150, 3G TS 32.151, 3G TS 32.152.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 151	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 151	7.2.0	Published	2007-03-30	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532151v720
ATIS	ATIS.3GPP.32.151V 720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.151(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.151(R7-7.2.0).zip
TTC	TS-3GA-32.151(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32151rel7v720.pdf

10.10.11 TS 32.152 Telecommunication management; Integration reference point (IRP) information service (IS) unified modelling language (UML) repertoire

This TS documents the necessary and sufficient set of UML notations and model elements, including the ones built by the UML extension mechanism <<stereotype>>, for use by 3GPP IRP IS authors. Collectively, this set of notations and model elements is called the 3GPP IRP IS modelling repertoire.

The selection of the UML notations and model elements in this repertoire is based on the needs of the existing 3GPP IRP IS specifications. Future IRP IS releases may require the use of additional UML notations or model elements.

IRP IS specifications shall employ the UML notation and model elements of this repertoire and may also employ other UML notation and model elements considered necessary. However, before any other UML notation and model elements may be employed in an approved 3GPP IRP specification, the other notation and model elements should be agreed for inclusion first in this repertoire.

The present document is a member of a TS-family consisting of 3G TS 32.150, 3G TS 32.151, 3G TS 32.152.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 152	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 152	7.1.0	Published	2007-04-13	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532152v710
ATIS	ATIS.3GPP.32.152V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.152(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.152(R7-7.1.0).zip
TTC	TS-3GA-32.152(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32152rel7v710.pdf

10.10.12 TS 32.154 Telecommunication management; Backward and forward compatibility (BFC); Concept and definitions

The present document gives recommendations to develop future IRP specifications in a backward compatible (BC) way so that the group of IRPManager(s) and IRPAgent(s) are not forced to be upgraded in lock step.

The business case for supporting such group, as described above, is complex. It may not relate to the functions of the supported IRPs alone. Rather, it can relate to the cost of coordination of IRPVersion upgrades, the cost of maintaining an old IRPVersion and the cost of using single-vendor or multi-vendor IRPAgents. These considerations are operator deployment scenarios specific.

Clause 4 specifies the Recommendations and clause 5 describes the system context where the Recommendations are applicable.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 154	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 154	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532154v700
ATIS	ATIS.3GPP.32.154V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.154(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.154(R7-7.0.0).zip
TTC	TS-3GA-32.154(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32154rel7v700.pdf

10.10.13 TS 32.171 Subscription management (SuM) network resource model (NRM) integration reference point (IRP): Requirements

The present document defines, in addition to the requirements defined in 3G TS 32.101, 3G TS 32.102, 3G TS 32.140, 3G TS 32.141, requirements for the present SuM NRM IRP.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 171	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 171	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532171v700
ATIS	ATIS.3GPP.32.171V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.171(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.171(R7-7.0.0).zip
TTC	TS-3GA-32.171(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32171rel7v700.pdf

10.10.14 TS 32.172 Telecommunication management; Subscription management (SuM) network resource model (NRM) integration reference point (IRP): Information service (IS)

The interface Itf-N, defined in 3G TS 32.102, is built up by a number of integration reference points (IRPs) and a related name convention, which realize the functional capabilities over this interface. The basic structure of the IRPs is defined in 3G TS 32.101 and 3G TS 32.102.

The present document defines the network resources model (NRM) for the SuM IRP.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 172	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 172	7.1.0	Published	2007-10-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532172v710
ATIS	ATIS.3GPP.32.172V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.172(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.172(R7-7.0.0).zip
TTC	TS-3GA-32.172(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32172rel7v710.pdf

10.10.15 TS 32.175 Telecommunication management; Subscription management (SuM) network resource model (NRM) integration reference point (IRP): eXtensible markup language (XML) definition

The purpose of this *Subscription Management (SuM) Network Resource Model IRP XML definition* is to define the mapping of the IRP information model (see TS 32.172) to the protocol specific details necessary for implementation of this IRP in an XML environment.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 175	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 175	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532175v700
ATIS	ATIS.3GPP.32.175V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.175(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.175(R7-7.0.0).zip
TTC	TS-3GA-32.175(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32175rel7v700.pdf

10.10.16 TS 32.240 Telecommunication management; Charging management; Charging architecture and principles

The present document is part of a series of documents that specify charging functionality and charging management in GSM/UMTS networks. The GSM/UMTS core network charging architecture and principles are specified in the present document, which thus provides an umbrella for other charging management TSs that specify:

• the content of the CDRs per domain/subsystem/service (offline charging);

• the content of real-time charging events per domain/subsystem/service (online charging);

• the functionality of online and offline charging for those domains/subsystems/services;

- the interfaces that are used in the charging framework to transfer the charging information (i.e., CDRs or charging events).

The purposes of the present document are:

- to lay down common principles of charging in the network; and
- to specify a logical common charging architecture that applies to all 3GPP domains, subsystems and services.

A set of domain/subsystem/service-specific TSs covers the bearer (CS, PS, WLAN domains), subsystem (IMS) and service (MMS, LCS, etc.) levels, respectively, in the 3G TS 32.25x, 32.26x and 32.27x number range. These 3G TSs describe the mapping of the common architecture specified in the present document onto the specific domain/subsystem/service and the scenarios and information for online and offline charging that are specific to the domain/subsystem/service. They are commonly referred to as the "middle tier (charging) TSs".

A set of 3G TSs in the 32.29x range covers common aspects such as CDR parameter and syntax descriptions, online and offline charging applications, and the charging interactions within the network (CDR transfer) as well as between the network and the billing domain (CDR file transfer).

The complete document structure for these 3G TSs is outlined in Figure 10.10.16-1.
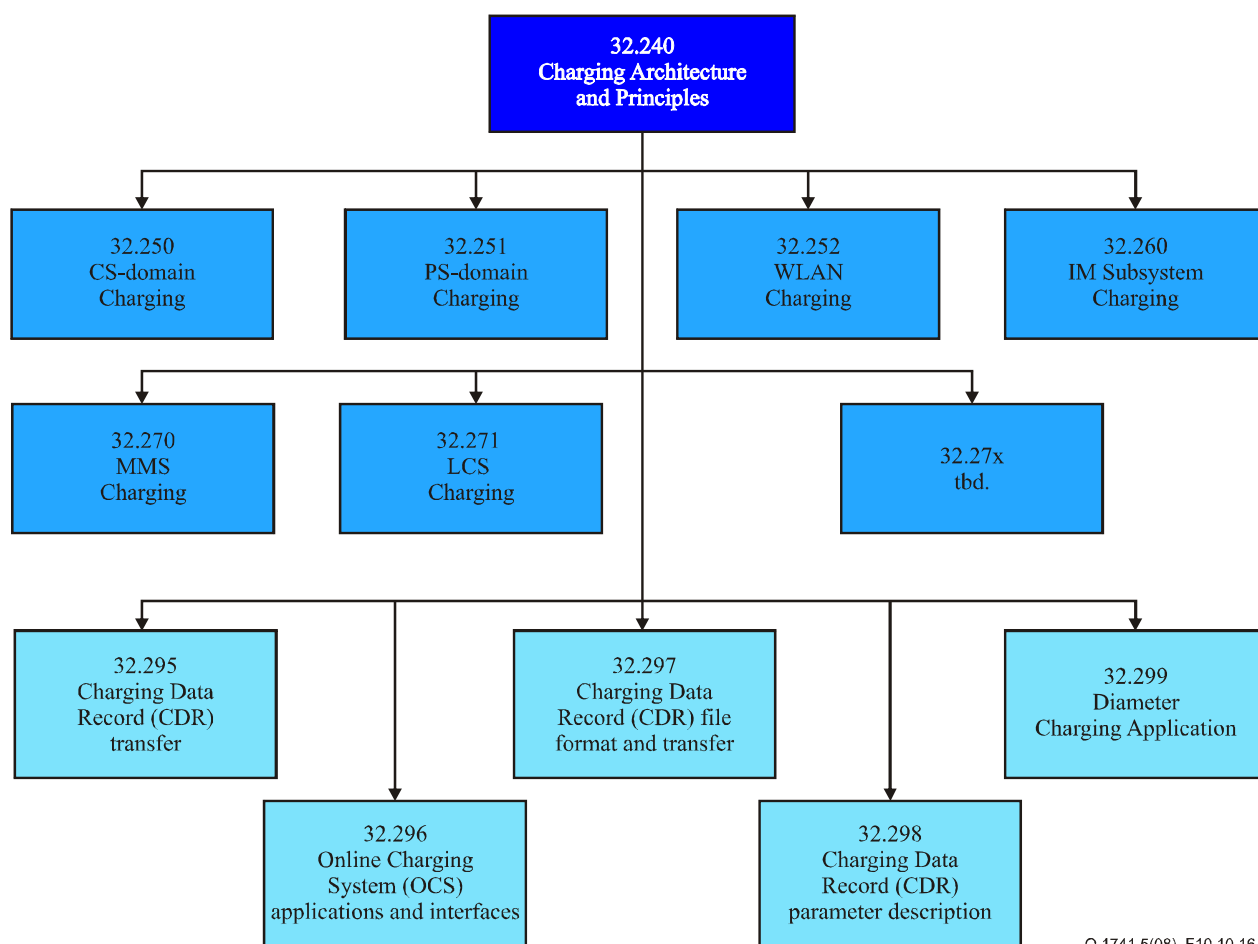
Figure 10.10.16-1 – Charging documents structure

All references, abbreviations, definitions, descriptions, principles and requirements, used in the present document, that are common across 3GPP TSs, are defined in the 3GPP Vocabulary, 3GPP TR 21.905. Those that are common across charging management in GSM/UMTS domains, services or subsystems are provided in the present document (umbrella TS), and are copied into clause 3 of the other TSs depicted in the figure above, for ease of reading. Finally, those items that are specific to the present document are defined exclusively in the present document.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 240	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 240	7.2.0	Published	2007-03-30	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532240v720
ATIS	ATIS.3GPP.32.240 V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.240(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.240(R7-7.2.0).zip
TTC	TS-3GA-32.240(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32240rel7v720.pdf

10.10.17   TS 32.250 Telecommunication management; Charging management; Circuit-switched (CS) domain charging

The present document is part of a series of documents that specify charging functionality and charging management in GSM/UMTS networks. The GSM/UMTS core network charging architecture and principles are specified in 3G TS 32.240, which provides an umbrella for other charging management TSs that specify:

• the content of the CDRs per domain and subsystem (offline charging);

• the content of real-time charging messages per domain/subsystem (online charging);

• the functionality of online and offline charging for those domains and subsystems;

• the interfaces that are used in the charging framework to transfer the charging information (i.e., CDRs or charging events).

The complete document structure for these TSs is defined in 3G TS 32.240.

The present document specifies the offline charging description for the 3GPP circuit-switched domain, based on the functional descriptions of the 3GPP bearer-, tele- and supplementary services in 3G TS 22.002, 3GPP TS 22.003 and 3G TS 22.004, respectively. This charging description includes the offline charging architecture and scenarios specific to the CS domain, as well as the mapping of the common charging architecture specified in 3G TS 32.240 onto the CS domain. It further specifies the structure and content of the CDRs for offline charging. The present document is related to other 3GPP charging TSs as follows:

• The common 3GPP charging architecture is specified in 3G TS 32.240.

• The parameters, abstract syntax and encoding rules for these CDR types are specified in 3G TS 32.298.

• The file-based mechanism used to transfer the CDRs from the network to the operator's billing domain (e.g., the billing system or a mediation device) is specified in 3G TS 32.297.

Note that online charging for the CS domain is solely based on CAMEL (3G TS 23.078 and 3G TS 29.078) and therefore outside the scope of the 32-series charging specifications.

All references, abbreviations, definitions, descriptions, principles and requirements, used in the present document, that are common across 3G TSs, are defined in 3G TR 21.905. Those that are common across charging management in GSM/UMTS domains or subsystems are provided in the umbrella document 3G TS 32.240 and are copied into clause 3 of the present document for ease of reading. Finally, those items that are specific to the present document are defined exclusively in the present document.

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CCSA	CCSA-TSD-132 250	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 250	7.1.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532250v710
ATIS	ATIS.3GPP.32.250V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.250(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.250(R7-7.0.0).zip
TTC	TS-3GA-32.250(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32250rel7v710.pdf

10.10.18 TS 32.251 Telecommunication management; Charging management; Packet-switched (PS) domain charging

The present document is part of a series of documents specifying charging functionality and charging management in GSM/UMTS networks.

The present document specifies the offline and online charging description for the packet-switched (PS) domain (i.e., GPRS), based on the functional Stage 2 description of GPRS in 3G TS 23.060. This charging description includes the offline and online charging architecture and scenarios specific to the PS domain, as well as the mapping of the common 3GPP charging architecture specified in 3G TS 32.240 onto the PS domain. It further specifies the structure and content of the CDRs for offline charging, and the charging events for online charging. The present document is related to other 3GPP charging TSs as follows:

- The common 3GPP charging architecture is specified in 3G TS 32.240.
- The parameters, abstract syntax and encoding rules for the CDRs are specified in 3G TS 32.298.
- A transaction based mechanism for the transfer of CDRs within the network is specified in 3G TS 32.295.
- The file-based mechanism used to transfer the CDRs from the network to the operator's billing domain (e.g., the billing system or a mediation device) is specified in 3G TS 32.297.
- The 3GPP Diameter application that is used for PS domain offline and online charging is specified in 3G TS 32.299.

Note that a CAMEL-based prepaid function and protocol is also specified for the PS domain (3G TS 23.078 and 3G TS 29.078). CAMEL entities and functions are outside the scope of the present document.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 251	7.5.1	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 251	7.5.1	Published	2007-10-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532251v751
ATIS	ATIS.3GPP.32.251V751-2007	7.5.1	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.251(R7-7.4.0)	7.4.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.251(R7-7.4.0).zip
TTC	TS-3GA-32.251(Rel7)v7.5.1	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32251rel7v750.pdf

10.10.19 TS 32.252 Telecommunication management; Charging management; Wireless local area network (WLAN) charging

This document is part of a series of documents that specify charging functionality and charging management in GSM/UMTS networks. The GSM/UMTS core network charging architecture and principles are specified in TS 32.240, which provides an umbrella for other charging management documents that specify:

• the content of the CDRs per domain and subsystem (offline charging);

• the content of real-time charging messages per domain/subsystem (online charging);

• the functionality of online and offline charging for those domains and subsystems;

• the interfaces that are used in the charging framework to transfer the charging information (i.e., CDRs or charging events).

The complete document structure for these TSs is defined in TS 32.240.

The document specifies the offline and online charging description for the 3GPP interworked wireless LAN (WLAN), based on the functional stage 2 description of 3GPP WLAN interworking in TS 23.234. This charging description includes the offline and online charging architecture and scenarios specific to the 3GPP interworked WLAN, as well as the mapping of the common 3GPP charging architecture specified in TS 32.240 onto the 3GPP interworked WLAN. It further specifies the structure and content of the CDRs for offline charging, and the charging events for online charging. The present document is related to other 3GPP charging TSs as follows:

• The common 3GPP charging architecture is specified in TS 32.240.

• The parameters, abstract syntax and encoding rules for these CDR types are specified in TS 32.298.

• The file based mechanism used to transfer the CDRs from the network to the operator's billing domain (e.g., the billing system or a mediation device) is specified in TS 32.297.

• The 3GPP Diameter application that is used for WLAN offline and online charging is specified in TS 32.299.

All terms, definitions and abbreviations used in the present document, that are common across 3GPP TSs, are defined in the 3GPP Vocabulary, TR 21.905. Those that are common across charging management in GSM/UMTS domains or subsystems are provided in the umbrella document TS 32.240 and are copied into clause 3 of the present document for ease of reading. Finally, those items that are specific to the present document are defined exclusively in the present document.

Furthermore, requirements that govern the charging work are specified in TS 22.115.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 252	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 252	7.0.0	Published	2007-07-19	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532252v700
ATIS	ATIS.3GPP.32.252V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.252(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.252(R7-7.0.0).zip
TTC	TS-3GA-32.252(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32252rel7v700.pdf

10.10.20 TS 32.260 Telecommunication management; Charging management; IP multimedia subsystem (IMS) charging

The present document is part of a series of documents that specify charging functionality and charging management in GSM/UMTS networks.

The present document specifies the offline and online charging description for the IP multimedia subsystem (IMS), based on the functional descriptions of the IMS in 3G TS 23.228. This charging description includes the offline and online charging architecture and scenarios specific to IMS, as well as the mapping of common 3GPP charging architecture specified in 3G TS 32.240 onto IMS. It further specifies the structure and content of the CDRs for offline charging, and the charging events for online charging. The present document is related to other 3GPP charging TSs as follows:

- The common 3GPP charging architecture is specified in 3G TS 32.240.

- The parameters, abstract syntax and encoding rules for these CDR types are specified in 3G TS 32.298.

- A transaction-based mechanism for the transfer of CDRs within the network is specified in 3G TS 32.295.

- The file-based mechanism used to transfer the CDRs from the network to the operator's billing domain (e.g., the billing system or a mediation device) is specified in 3G TS 32.297.

- The 3GPP Diameter application that is used for IMS offline and online charging is specified in 3G TS 32.299.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 260	7.4.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 260	7.4.0	Published	2007-10-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532260v740
ATIS	ATIS.3GPP.32.260V740-2007	7.4.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.260(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.260(R7-7.2.0).zip
TTC	TS-3GA-32.260(Rel7)v7.4.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32260rel7v740.pdf

10.10.21   TS 32.270 Telecommunication management; Charging management; Multimedia messaging service (MMS) charging

The present document is part of a series of documents that specify charging functionality and charging management in GSM/UMTS networks.

The complete document structure for these TSs is defined in 3G TS 32.240.

The present document specifies the offline and online charging description for MMS charging, based on the functional Stage 2 descriptions of the MMS in 3G TS 23.140. This charging description includes the offline and online charging architecture and scenarios specific to the MMS, as well as the mapping of the common 3GPP charging architecture specified in 3G TS 32.240 onto MMS. It further specifies the structure and content of the CDRs for offline charging, and the charging events for online charging. The present document is related to other 3GPP charging TSs as follows:

- The common 3GPP charging architecture is specified in 3G TS 32.240.

- The parameters, abstract syntax and encoding rules for these CDR types are specified in 3G TS 32.298.

- A transaction-based mechanism for the transfer of CDRs within the network is specified in 3G TS 32.295.

- The file-based mechanism used to transfer the CDRs from the network to the operator's billing domain (e.g., the billing system or a mediation device) is specified in 3G TS 32.297.

- The 3GPP Diameter application that is used for MMS online charging is specified in 3G TS 32.299.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 270	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 270	7.1.0	Published	2007-10-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532270v710
ATIS	ATIS.3GPP.32.270V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.270(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.270(R7-7.1.0).zip
TTC	TS-3GA-32.270(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32270rel7v710.pdf

10.10.22 TS 32.271 Telecommunication management; Charging management; Location services (LCS) charging

The present document is part of a series of documents that specify charging functionality and charging management in GSM/UMTS networks.

The present document specifies the LCS offline and online charging description for the LCS domain, based on the functional Stage 2 description of the LCS in 3G TS 23.071. This charging description includes the offline and online charging architecture and scenarios specific to the LCS, as well as the mapping of the common 3GPP architecture specified in 3G TS 32.240 onto the LCS domain. It further specifies the structure and content of the CDRs for offline charging and the charging events for online charging.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 271	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 271	7.0.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532271v700
ATIS	ATIS.3GPP.32.271V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.271(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.271(R7-7.0.0).zip
TTC	TS-3GA-32.271(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32271rel7v700.pdf

10.10.23 TS 32.272 Telecommunication management; Charging management; Push-to-talk over cellular (PoC) charging

The present document is part of a series of documents that specify charging functionality and charging management in GSM/UMTS networks. The GSM/UMTS core network charging architecture and principles are specified in TS 32.240, which provides an umbrella for other charging management TSs that specify:

- the content of the CDRs per domain and subsystem (offline charging);

- the content of real-time charging messages per domain/subsystem (online charging);

- the functionality of online and offline charging for those domains and subsystems;

- the interfaces that are used in the charging framework to transfer the charging information (i.e., CDRs or charging events).

The complete document structure for these TSs is defined in TS 32.240.

The present document specifies the offline and online charging description for the "Push-to-Talk over Cellular" (PoC) service, based on the functional description of the PoC service in TR 23.979 "3GPP enablers for OMA PoC Services", in OMA-AD-POC "Push to talk over Cellular (PoC) – Architecture", in OMA-CP-POC "OMA PoC Control Plane" and in OMA-UP-POC: "OMA POC User Plane", respectively. This charging description includes the offline and online charging architecture and scenarios specific to PoC, as well as the mapping of the common 3GPP charging architecture specified in TS 32.240 onto the PoC service. It further specifies the structure and content of the CDRs for offline charging, and the charging events for online charging. The present document is related to other 3GPP charging TSs as follows:

- The common 3GPP charging architecture is specified in TS 32.240.

- The parameters, abstract syntax and encoding rules for these CDR types are specified in TS 32.298.

- The file based mechanism used to transfer the CDRs from the network to the operator's billing domain (e.g., the billing system or a mediation device) is specified in TS 32.297.

- The 3GPP Diameter application that is used for WLAN offline and online charging is specified in TS 32.299.

All terms, definitions and abbreviations used in the present document, that are common across 3GPP TSs, are defined in the 3GPP Vocabulary, TR 21.905. Those that are common across charging management in GSM/UMTS domains or subsystems are provided in the umbrella document TS 32.240 and are copied into clause 3 of the present document for ease of reading. Finally, those items that are specific to the present document are defined exclusively in the present document.

Furthermore, requirements that govern the charging work are specified in TS 22.115.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 272	7.4.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 272	7.4.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532272v740
ATIS	ATIS.3GPP.32.272V 740-2007	7.4.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.272(R7-7.4.0)	7.4.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.272(R7-7.4.0).zip
TTC	TS-3GA-32.272(Rel7)v7.4.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32272rel7v740.pdf

10.10.24 TS 32.273 Telecommunication management; Charging management; Multimedia broadcast and multicast service (MBMS) charging

This document is part of a series of documents that specify charging functionality and charging management in GSM/UMTS networks. The GSM/UMTS core network charging architecture and principles are specified in TS 32.240, which provides an umbrella for other charging management TSs that specify:

- the content of the CDRs per domain and subsystem (offline charging);

- the content of real-time charging messages per domain/subsystem (online charging);

- the functionality of online and offline charging for those domains and subsystems;

- the interfaces that are used in the charging framework to transfer the charging information (i.e., CDRs or charging events).

The complete document structure for these TSs is defined in TS 32.240.

The present document specifies the offline and online charging description for the multimedia broadcast and multicast service (MBMS), based on the functional stage 2 description in TS 23.246. This charging description includes the offline and online charging architecture and scenarios specific to MBMS, as well as the mapping of the common 3GPP charging architecture specified in TS 32.240 onto MBMS. It further specifies the structure and content of the CDRs for offline charging, and the charging events for online charging. The present document is related to other 3GPP charging TSs as follows:

- The common 3GPP charging architecture is specified in TS 32.240.

- The parameters, abstract syntax and encoding rules for these CDR types are specified in TS 32.298.

- The file based mechanism used to transfer the CDRs from the network to the operator's billing domain (e.g., the billing system or a mediation device) is specified in TS 32.297.

- The 3GPP Diameter application that is used for WLAN offline and online charging is specified in TS 32.299.

All terms, definitions and abbreviations used in the present document, that are common across 3GPP TSs, are defined in the 3GPP Vocabulary, TR 21.905. Those that are common across charging management in GSM/UMTS domains or subsystems are provided in the umbrella document TS 32.240 and are copied into clause 3 of the present document for ease of reading. Finally, those items that are specific to the present document are defined exclusively in the present document.

Furthermore, requirements that govern the charging work are specified in TS 22.115.

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CCSA	CCSA-TSD-132 273	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 273	7.0.0	Published	2007-07-19	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532273v700
ATIS	ATIS.3GPP.32.273V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.273(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.273(R7-7.0.0).zip
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10.10.25 TS 32.295 Telecommunication management; Charging management; Charging data record (CDR) transfer

The present document is part of a series of documents that specify charging functionality and charging management in GSM/UMTS networks.

The present document specifies the transaction-based mechanism for the near real-time transfer of CDRs within the network.

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ETSI	TS 132 295	7.0.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532295v700
ATIS	ATIS.3GPP.32.295V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.295(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.295(R7-7.0.0).zip
TTC	TS-3GA-32.295(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32295rel7v700.pdf

10.10.26 TS 32.296 Telecommunication management; Charging management; Online charging system (OCS): Applications and interfaces

The present document is part of a series of documents that specify charging functionality and charging management in GSM/UMTS networks.

The present document covers all internal aspects of the online charging system (OCS). The document contains the architecture and functions of the OCS logical components and thereby derives the functionality of the OCS interfaces. A detailed specification of interfaces between the logical OCS components is also included. The functionality of the OCS, as described in the present document, applies to all charging domains (bearer, session and service).

The interfaces connecting to the OCS (e.g., Ro, CAP) are out of the scope of the present document.

NOTE – In the current release, the present document is limited to the interface between the charging function and the rating function, namely Re.

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CCSA	CCSA-TSD-132 296	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 296	7.0.0	Published	2007-07-19	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532296v700
ATIS	ATIS.3GPP.32.296V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.296(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.296(R7-7.0.0).zip
TTC	TS-3GA-32.296(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32296rel7v700.pdf

10.10.27   TS 32.297 Telecommunication management; Charging management; Charging data record (CDR) file format and transfer

The present document is part of a series of documents specifying charging functionality and charging management in GSM/UMTS networks.

The present document specifies the mechanisms used to transfer the CDRs from the network to the operator's billing domain (e.g., the billing system or a mediation device). This includes the file transfer procedures and the layout of the CDR files, as well as file meta information and the encoding of the CDRs within the files.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 297	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 297	7.0.0	Published	2007-10-11	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532297v700
ATIS	ATIS.3GPP.32.297V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.297(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.297(R7-7.0.0).zip
TTC	TS-3GA-32.297(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32297rel7v700.pdf

10.10.28   TS 32.298 Telecommunication management; Charging management; Charging data record (CDR) parameter description

The present document is part of a series of documents that specify charging functionality and charging management in GSM and UMTS networks. The GSM/UMTS core network charging architecture and principles are specified in document TS 32.240, which provides an umbrella for other charging management documents that specify:

–   the content of the CDRs per domain and subsystem (offline charging);

–   the content of real-time charging events per domain/subsystem (online charging);

–   the functionality of online and offline charging for those domains and subsystems;

–   the interfaces that are used in the charging framework to transfer the charging information (i.e., CDRs or charging events).

The complete document structure for these TSs is defined in TS 32.240.

The present document specifies the CDR parameters, the abstract syntax and encoding rules for all the CDR types that are defined in the charging management TSs described above. Therefore, it is only applicable to offline charging. The mechanisms used to transfer the CDRs from the generating node to the operator's billing domain (e.g., the billing system or a mediation device) are specified in TS 32.297. Further details with respect to the operator's billing domain for offline charging are out of scope of 3GPP standardisation.

Note that a generic Diameter application for online charging in 3GPP networks is specified in TS 32.299. Furthermore, 3GPP TSs are being created to standardize some technical aspects of the operator's billing domain for online charging, i.e., the online charging system (OCS).

All terms, definitions and abbreviations used in the present document, that are common across 3GPP TSs, are defined in the 3GPP Vocabulary, [ETSI TR 121 905]. Those that are common across charging management in UMTS domains or subsystems are provided in the umbrella document TS 32.240 and are copied into clause 3 of the present document for ease of reading. Finally, those items that are specific to the present document are defined exclusively in the present document.

Furthermore, requirements that govern the charging work are specified in TS 22.115.

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CCSA	CCSA-TSD-132 298	7.4.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 298	7.4.0	Published	2007-10-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532298v740
ATIS	ATIS.3GPP.32.298V740-2007	7.4.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.298(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.298(R7-7.2.0).zip
TTC	TS-3GA-32.298(Rel7)v7.4.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32298rel7v740.pdf

10.10.29   TS 32.299 Telecommunication management; Charging management; Diameter charging applications

The present document is part of a series of documents that specify charging functionality and charging management in GSM/UMTS networks.

The present document specifies in detail the Diameter-based offline and online charging applications for 3GPP networks. It includes all charging parameters, scenarios and message flows.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 299	7.7.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 299	7.7.0	Published	2007-10-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532299v770
ATIS	ATIS.3GPP.32.299V 770-2007	7.7.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.299(R7-7.5.0)	7.5.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.299(R7-7.5.0).zip
TTC	TS-3GA-32.299(Rel7)v7.7.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32299rel7v770.pdf

10.10.30 TS 32.300 Telecommunication management; Configuration management (CM); Name convention for managed objects

A more detailed background and introduction of the IRP concept is given in TS 32.101 and TS 32.102.

To perform network management tasks, cooperating applications require identical interpretation of names assigned to network resources under management. Such names are required to be unambiguous as well. The document recommends one name convention for network resources under management in the IRP context.

To facilitate integration of network management information obtained via multiple IRPs of different technologies such as CMIP and CORBA, identical network resource name semantics shall be conveyed in all IRPs. The document specifies one such name convention.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 300	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 300	7.1.0	Published	2007-10-16	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532300v710
ATIS	ATIS.3GPP.32.300V 710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.300(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.300(R7-7.1.0).zip
TTC	TS-3GA-32.300(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32300rel7v710.pdf

10.10.31 TS 32.301 Telecommunication management; Configuration management; Notification integration reference point (IRP): Requirements

The purpose of notification IRP is to define an interface through which an IRPManager can subscribe to an IRPAgent for receiving notifications. This document is the "Requirements" of notification IRP. It defines, for the purpose of subscribing to an IRPAgent for receiving notifications, the basic requirements that shall be fulfilled on Itf-N.

How IRPManager discovers the IRPAgent's address or reference (so that IRPManager can invoke an operation) is outside the scope of this document.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 301	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 301	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532301v700
ATIS	ATIS.3GPP.32.301V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.301(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.301(R7-7.0.0).zip
TTC	TS-3GA-32.301(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32301rel7v700.pdf

10.10.32 TS 32.302 Telecommunication management; Configuration management; Notification integration reference point; Information service

The purpose of notification IRP is to define an interface through which an IRPManager can subscribe to an IRPAgent for receiving notifications. This document is the "Information Service" of notification IRP. It defines, for the purpose of subscribing to an IRPAgent for receiving notifications, the information observable and controlled by management system's client and it also specifies the semantics of the interactions used to carry this information. It also defines the information common to all notifications which is called the "notificationHeader".

An IRPAgent supporting this IRP IS may emit one or multiple categories of notifications, such as alarms (as specified in Alarm IRP: Information service 3G TS 32.111-2) and others. This IRP IS defines a mechanism that IRPManager can use to determine the categories of notifications supported by an IRPAgent. It also defines a mechanism (subscribe and unsubscribe operations) that IRPManager can use to specify the categories of notifications IRPAgent should emit to IRPManager during subscription. It also defines a mechanism (getSubscriptionIds operation) that IRPManager can use to check which categories of notifications it has subscribed to. IRPManager can set and change filter criteria applicable during the life-cycle of a subscription. IRPManager can also exercise flow-control on IRPAgent's emission of notifications (suspendSubscription and resumeSubscription operations).

Using different managerReference, an IRPManager can subscribe several times. It will result in multiple subscriptions. As far as IRPAgent is concerned, notifications are sent to multiple "places".

Using the same managerReference, an IRPManager can subscribe several times specifying different categories of notifications.

This IRP IS does not specify information that is carried in some but not all notifications. That kind of information is specified in other IRP ISs involved. For example, `perceivedSeverity` is a piece of information specific for notifications carrying alarm information. This information is not defined in this document but in Alarm IRP: Information service 3G TS 32.111-2.

How IRPManager discovers the IRPAgent's address or reference (so that IRPManager can invoke an operation) is outside the scope of this document.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 302	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 302	7.0.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532302v700
ATIS	ATIS.3GPP.32.302V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.302(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.302(R7-7.0.0).zip
TTC	TS-3GA-32.302(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32302rel7v700.pdf

10.10.33 TS 32.303 Telecommunication management; Configuration management; Notification integration reference point; CORBA solution set

The document specifies the common object request broker architecture (CORBA) solution set (SS) for the IRP whose semantics is specified in notification IRP: Information service 3G TS 32.302.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 303	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 303	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532303v700
ATIS	ATIS.3GPP.32.303V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.303(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.303(R7-7.0.0).zip
TTC	TS-3GA-32.303(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32303rel7v700.pdf

10.10.34 TS 32.305 Telecommunication management; Configuration management (CM); Notification integration reference point (IRP): eXtensible markup language (XML) definition

This document specifies the XML Definitions for the notification integration reference point (notification IRP) as it applies to Itf-N, in accordance with notification IRP IS definitions.

This XML definitions specification defines the notification IRP XML notification header format.

This specification is related to TS 32.302.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 305	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 305	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532305v700
ATIS	ATIS.3GPP.32.305V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.305(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.305(R7-7.0.0).zip
TTC	TS-3GA-32.305(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32305rel7v700.pdf

10.10.35 TS 32.307 Telecommunication management; Configuration management (CM); Notification integration reference point (IRP): SOAP solution set

This document specifies the SOAP solution set for the IRP whose semantics is specified in notification IRP: Information service (TS 32.302).

This solution set specification is related to TS 32.302.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 307	7.0.2	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 307	7.0.2	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532307v702
ATIS	ATIS.3GPP.32.307V702-2007	7.0.2	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.307(R7-7.0.1)	7.0.1	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.307(R7-7.0.1).zip
TTC	TS-3GA-32.307(Rel7)v7.0.2	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32307rel7v701.pdf

10.10.36 TS 32.311 Telecommunication management; Generic IRP management; Requirements

The purpose of the document is to define a common service supported by all IRPs. This document is the "Requirements" part. It defines, for the purpose of supporting the common service, the requirements that shall be fulfilled by all IRPs supporting this service.

With this common service supported by all IRPs, an IRPManager shall be able to retrieve the profile of operations and notifications supported by a given IRP that are by an IRPAgent. An IRPManager shall also be able to retrieve the different versions supported by an IRP.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 311	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 311	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532311v700
ATIS	ATIS.3GPP.32.311V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.311(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.311(R7-7.0.0).zip
TTC	TS-3GA-32.311(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32311rel7v700.pdf

10.10.37 TS 32.312 Telecommunication management; Generic IRP management; Information service

The purpose of the document is to define a common service supported by all IRPs. This document is the "Information Service" part. It defines, for the purpose of supporting the common service, the information observable and controlled by management system's client and it also specifies the semantics of the interactions used to carry this information.

With this common service supported by all IRPs, an IRPManager can retrieve the profile of operations and notifications supported by a given IRP supported by an IRPAgent. An IRPManager can also retrieve the different versions supported by an IRP.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 312	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 312	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532312v700
ATIS	ATIS.3GPP.32.312V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.312(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.312(R7-7.0.0).zip
TTC	TS-3GA-32.312(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32312rel7v700.pdf

10.10.38 TS 32.313 Telecommunication management; Generic integration reference point (IRP) management; Common object request broker architecture (CORBA) solution set (SS)

The present document specifies the CORBA solution set (SS) for generic integration reference point (IRP) management whose capabilities are specified in "Generic integration reference (IRP) management: Information service (IS)" (3G TS 32.312).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 313	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 313	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532313v700
ATIS	ATIS.3GPP.32.313V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.313(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.313(R7-7.0.0).zip
TTC	TS-3GA-32.313(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32313rel7v700.pdf

10.10.39 TS 32.317 Telecommunication management; Generic integration reference point (IRP) management; SOAP solution set

The present document specifies the SOAP solution set for generic IRP management whose capabilities are specified in Generic IRP management: Information service (TS 32.312).

This solution set specification is related to TS 32.312.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 317	7.0.2	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 317	7.0.2	Published	2007-07-19	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532317v702
ATIS	ATIS.3GPP.32.317V702-2007	7.0.2	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.317(R7-7.0.2)	7.0.2	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.317(R7-7.0.2).zip
TTC	TS-3GA-32.317(Rel7)v7.0.2	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32317rel7v701.pdf

10.10.40 TS 32.321 Telecommunication management; Test management integration reference point (IRP); Requirements

This document describes, in addition to the requirements defined in 3G TS 32.101 and 3G TS 32.102, the requirements for the test management IRP.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 321	7.0.1	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 321	7.0.1	Published	2007-07-19	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532321v701
ATIS	ATIS.3GPP.32.321V701-2007	7.0.1	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.321(R7-7.0.1)	7.0.1	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.321(R7-7.0.1).zip
TTC	TS-3GA-32.321(Rel7)v7.0.1	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32321rel7v701.pdf

10.10.41 TS 32.322 Telecommunication management; Test management integration reference point (IRP); Information service

This document defines the IS part of the test management IRP, which describes the semantics of the information and the interactions visible across Itf-N in a protocol-independent way. The information is specified by means of information object classes and the interactions by means of operations and notifications. This document does not specify the syntax (encoding) of the information.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 322	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 322	7.1.0	Published	2007-10-16	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532322v710
ATIS	ATIS.3GPP.32.322V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.322(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.322(R7-7.1.0).zip
TTC	TS-3GA-32.322(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32322rel7v710.pdf

10.10.42 TS 32.323 Telecommunication management; Test management integration reference point (IRP); CORBA solution set

This document specifies the CORBA solution set (SS) for the IRP whose semantics is specified in test management IRP: Information service (IS) (3G TS 32.322).

Clauses 1 to 3 provide background information. Clause 4 provides key architectural features supporting the SS. Clause 5 defines the mapping of operations, notification, parameters and attributes defined in IS to their SS equivalents. Clause 6 describes the notification interface containing the push method. Annex A contains the IDL specification.

This solution set specification is related to 3G TS 32.322.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 323	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 323	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532323v700
ATIS	ATIS.3GPP.32.323V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.323(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.323(R7-7.0.0).zip
TTC	TS-3GA-32.323(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32323rel7v700.pdf

10.10.43   TS 32.325 Telecommunication management; Test management integration reference point (IRP); eXtensible markup language (XML) definitions

This document specifies the XML definitions for the test management IRP (TMIRP) as it applies to Itf-N, in accordance with TM IRP IS definitions in TS 32.322 as well as notification log IRP XML definitions in TS 32.335.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 325	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 325	7.0.0	Published	2007-07-19	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532325v700
ATIS	ATIS.3GPP.32.325V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.325(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.325(R7-7.0.0).zip
TTC	TS-3GA-32.325(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32325rel7v700.pdf

10.10.44   TS 32.331 Telecommunication management; Notification log integration reference point (IRP): Requirements

The present document describes the requirements and information model necessary for telecommunications management (TM). The TM principles and TM architecture are specified in 3G TS 32.101 and 3G TS 32.102, respectively.

The present document specifies the overall requirements for notification log management over Itf-N.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 331	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 331	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532331v700
ATIS	ATIS.3GPP.32.331V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.331(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.331(R7-7.0.0).zip
TTC	TS-3GA-32.331(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32331rel7v700.pdf

10.10.45   TS 32.332 Telecommunication management; Notification log integration reference point (IRP): Information service (IS)

The present document specifies the information service for the notification log integration reference point (NL IRP) as it applies to Itf-N.

This IRP IS defines the semantics of operations (and their parameters) visible across the Itf-N in a protocol and technology neutral way. It does not define the syntax or encoding of the operations and their parameters.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 332	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 332	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532332v700
ATIS	ATIS.3GPP.32.332V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.332(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.332(R7-7.0.0).zip
TTC	TS-3GA-32.332(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32332rel7v700.pdf

10.10.46   TS 32.333 Telecommunication management; Notification log (NL) integration reference point (IRP): Common object request broker architecture (CORBA) solution set (SS)

The present document specifies the CORBA solution set for the IRP whose semantics is specified in TS 32.332 notification log IRP: Information service.

Clauses 1 to 3 provide background information. Clause 4 provides key architectural features supporting the SS.

Clause 5 defines the mapping of operations, notification, parameters and attributes defined in IS to their SS equivalents. Clause 6 describes the notification interface containing the push method. Annex A contains the IDL specification.

This solution set specification is related to TS 32.332.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 333	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 333	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532333v700
ATIS	ATIS.3GPP.32.333V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.333(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.333(R7-7.0.0).zip
TTC	TS-3GA-32.333(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32333rel7v700.pdf

10.10.47   TS 32.335 Telecommunication management; Notification log (NL) integration reference point (IRP): eXtensible markup language (XML) solution definitions

The present document specifies the XML definitions for the notification log IRP as it applies to Itf-N, in accordance with the requirements in TS 32.331 and information service definitions in TS 32.332.

This XML definitions specification defines the XML syntax of the NL IRP XML data file.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 335	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 335	7.0.0	Published	2007-03-30	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532335v700
ATIS	ATIS.3GPP.32.335V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.335(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.335(R7-7.0.0).zip
TTC	TS-3GA-32.335(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32335rel7v700.pdf

10.10.48   TS 32.341 Telecommunication management; File transfer (FT) integration reference point (IRP): Requirements

The present document specifies the overall requirements for the file transfer integration reference point (FT IRP) as it applies to the Itf-N.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 341	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 341	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532341v700
ATIS	ATIS.3GPP.32.341V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.341(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.341(R7-7.0.0).zip
TTC	TS-3GA-32.341(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32341rel7v700.pdf

10.10.49   TS 32.342 Telecommunication management; File transfer (FT) integration reference point (IRP): Information service (IS)

The present document specifies the information service for the file transfer integration reference point (FileTransferIRP) as it applies to the Itf-N.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 342	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 342	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532342v700
ATIS	ATIS.3GPP.32.342V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.342(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.342(R7-7.0.0).zip
TTC	TS-3GA-32.342(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32342rel7v700.pdf

10.10.50   TS 32.343 Telecommunication management; File transfer (FT) integration reference point (IRP): Common object request broker architecture (CORBA) solution set (SS)

The present document specifies the common object request broker architecture (CORBA) solution set (SS) for the IRP whose semantics is specified in file transfer IRP: Information service TS 32.342.

This solution set specification is related to TS 32.342.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 343	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 343	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532343v700
ATIS	ATIS.3GPP.32.343V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.343(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.343(R7-7.0.0).zip
TTC	TS-3GA-32.343(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32343rel7v700.pdf

10.10.51   TS 32.345 Telecommunication management; File transfer (FT) integration reference point (IRP); eXtensible markup language (XML) definitions

The present document specifies the XML definitions for the file transfer IRP (FTIRP) as it applies to Itf-N, in accordance with FT IRP IS definitions in TS 32.342 as well as notification log IRP XML definitions in TS 32.335.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 345	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 345	7.0.0	Published	2007-07-19	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532345v700
ATIS	ATIS.3GPP.32.345V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.345(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.345(R7-7.0.0).zip
TTC	TS-3GA-32.345(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32345rel7v700.pdf

10.10.52   TS 32.351 Telecommunication management; Communication surveillance (CS) integration reference point (IRP): Requirements

The present document describes the requirements of the communication surveillance IRP (CSIRP).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 351	7.0.1	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 351	7.0.1	Published	2007-07-25	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532351v701
ATIS	ATIS.3GPP.32.351V701-2007	7.0.1	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.351(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.351(R7-7.0.0).zip
TTC	TS-3GA-32.351(Rel7)v7.0.1	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32351rel7v701.pdf

10.10.53 TS 32.352 Telecommunication management; Communication surveillance (CS) integration reference point (IRP): Information service (IS)

The present document defines the IS part of the CSIRP, which describes the semantics of the information and the interactions visible across Itf-N in a protocol-independent way. The information is specified by means of information object classes and the interactions by means of operations and notifications. The present document does not specify the syntax (encoding) of the information.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 352	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 352	7.0.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532352v700
ATIS	ATIS.3GPP.32.352V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.352(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.352(R7-7.0.0).zip
TTC	TS-3GA-32.352(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32352rel7v700.pdf

10.10.54 TS 32.353 Telecommunication management; Communication surveillance (CS) integration reference point (IRP): Common object request broker architecture (CORBA) solution set (SS)

The present document specifies the CORBA solution set for the IRP whose semantics is specified in 3G TS 32.352 communication surveillance IRP: Information service.

This solution set specification is related to TS 32.352.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 353	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 353	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532353v700
ATIS	ATIS.3GPP.32.353V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.353(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.353(R7-7.0.0).zip
TTC	TS-3GA-32.353(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32353rel7v700.pdf

10.10.55 TS 32.361 Telecommunication management; Entry point (EP) integration reference point (IRP): Requirements

The present document describes the requirements of the EPIRP.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 361	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 361	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532361v700
ATIS	ATIS.3GPP.32.361V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.361(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.361(R7-7.0.0).zip
TTC	TS-3GA-32.361(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32361rel7v700.pdf

10.10.56 TS 32.362 Telecommunication management; Entry point (EP) integration reference point (IRP): Information service (IS)

The present document defines the IS part of the EPIRP, which describes the semantics of the information and the interactions visible across Itf-N in a protocol independent way. The information is specified by means of information object classes and the interactions by means of operations and notifications. The present document does not specify the syntax (encoding) of the information.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 362	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 362	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532362v700
ATIS	ATIS.3GPP.32.362V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.362(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.362(R7-7.0.0).zip
TTC	TS-3GA-32.362(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32362rel7v700.pdf

10.10.57 TS 32.363 Telecommunication management; Entry point (EP) integration reference point (IRP): Common object request broker architecture (CORBA) solution set (SS)

The present document specifies the CORBA solution set for the IRP whose semantics is specified in the entry point IRP: Information service (3G TS 32.362).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 363	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 363	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532363v700
ATIS	ATIS.3GPP.32.363V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.363(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.363(R7-7.0.0).zip
TTC	TS-3GA-32.363(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32363rel7v700.pdf

10.10.58 TS 32.365 Telecommunication management; Entry point (EP) integration reference point (IRP); eXtensible markup language (XML) definitions

The present document specifies the XML definitions for the entry point IRP (EPIRP) as it applies to Itf-N, in accordance with EP IRP IS definitions TS 32.362 as well as notification log IRP XML definitions TS 32.335.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 365	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 365	7.0.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532365v700
ATIS	ATIS.3GPP.32.365V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.365(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.365(R7-7.0.0).zip
TTC	TS-3GA-32.365(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32365rel7v700.pdf

10.10.59 TS 32.371 Telecommunication management; Security management concept and requirements

The present document defines, in addition to the requirements defined in 3G TS 32.101 and 3G TS 32.102, the requirements for security management IRP.

The purpose of the present document is to specify the necessary security features, services and functions to protect the network management data, including Requests, Responses, Notifications and Files, exchanged across the Itf-N.

Telecommunication network security can be breached by weaknesses in operational procedures, physical installations, communication links, computational processes and data storage. Of concern here in the present document is the security problems resulting from the weaknesses inherent in the communication technologies (i.e., the 3GPP-defined interface IRPs and their supporting protocol stacks) deployed across the Itf-N.

An appropriate level of security for a telecommunication network is essential. Secured access to the network management applications, and network management data, is essential. The 3GPP-defined interface IRPs (and their supporting protocol stacks), deployed across the Itf-N, are used for such access, and therefore, their security is considered essential.

Many network management security standards exist. However, there is no recommendation on how to apply them in the Itf-N context. Their deployment across the Itf-N is left to operators. The present document and the corresponding solutions identify and recommend security standards in the Itf-N context.

The business case for secured Itf-N is complex as it does not relate to the functions of the interface IRPs (the functions are constant) but rather, it relates to variants such as the cost of recovering from security breaks, the probability of security incidents and the cost of implementing security management, all of which differ depending on specific deployment scenarios.

The present document describes the security functions for a 3G network in terms of security domains.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 371	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 371	7.2.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532371v720
ATIS	ATIS.3GPP.32.371V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.371(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.371(R7-7.2.0).zip
TTC	TS-3GA-32.371(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32371rel7v720.pdf

10.10.60 TS 32.272 Telecommunication management; Security services for integration reference points (IRPs): Information service (IS)

The purpose of the present document is to specify the necessary security features, services and functions to protect the network management data, including Requests, Responses, Notifications and Files, exchanged across the Itf-N.

The present document specifies the security service for IRP information service.

This security service for IRP IS defines the semantics of management information visible across the Itf-N in a protocol and technology neutral way. It does not define the syntax or encoding of the operations and their parameters.

This information service specification is related to TS 32.371.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 272	7.4.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 272	7.4.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532272v740
ATIS	ATIS.3GPP.32.272V740-2007	7.4.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.272(R7-7.4.0)	7.4.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.272(R7-7.4.0).zip
TTC	TS-3GA-32.272(Rel7)v7.4.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32272rel7v740.pdf

10.10.61 TS 32.273 Telecommunication management; Charging management; Multimedia broadcast and multicast service (MBMS) charging

The present document is part of a series of documents that specify charging functionality and charging management in GSM/UMTS networks. The GSM/UMTS core network charging architecture and principles are specified in TS 32.240, which provides an umbrella for other charging management TSs that specify:

• the content of the CDRs per domain/subsystem/service (offline charging);

- the content of real-time charging messages per domain/subsystem/service (online charging);
- the functionality of online and offline charging for those domains/subsystems/services;
- the interfaces that are used in the charging framework to transfer the charging information (i.e., CDRs or charging events).

The complete document structure for these TSs is defined in TS 32.240.

The present document specifies the offline and online charging description for the multimedia broadcast and multicast service (MBMS), based on the functional stage 2 description in TS 23.246. This charging description includes the offline and online charging architecture and scenarios specific to MBMS, as well as the mapping of the common 3GPP charging architecture specified in TS 32.240 onto MBMS. It further specifies the structure and content of the CDRs for offline charging, and the charging events for online charging. The present document is related to other 3GPP charging TSs as follows:

- The common 3GPP charging architecture is specified in TS 32.240;
- The parameters, abstract syntax and encoding rules for the CDRs are specified in TS 32.298;
- A transaction based mechanism for the transfer of CDRs within the network is specified in TS 32.295;
- The file based mechanism used to transfer the CDRs from the network to the operator's billing domain (e.g., the billing system or a mediation device) is specified in TS 32.297;
- The 3GPP Diameter application that is used for MBMS offline and online charging is specified in TS 32.299.

All terms, definitions and abbreviations used in the present document, that are common across 3GPP TSs, are defined in the 3GPP Vocabulary, TR 21.905. Those that are common across charging management in GSM/UMTS domains or subsystems are provided in the umbrella document TS 32.240 and are copied into clause 3 of the present document for ease of reading. Finally, those items that are specific to the present document are defined exclusively in the present document.

Furthermore, requirements that govern the charging work are specified in TS 22.115.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 273	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 273	7.0.0	Published	2007-07-19	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532273v700
ATIS	ATIS.3GPP.32.273V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.273(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.273(R7-7.0.0).zip
TTC	TS-3GA-32.273(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32273rel7v700.pdf

10.10.62 TS 32.295 Telecommunication management; Charging management; Charging data record (CDR) transfer

The present document is part of a series of documents that specify charging functionality and charging management in GSM/UMTS networks. The GSM/UMTS core network charging architecture and principles are specified in TS 32.240, which provides an umbrella for other charging management TSs that specify:

– the content of the CDRs per domain/subsystem/service (offline charging),

– the content of real-time charging messages per domain/subsystem/service (online charging);

– the functionality of online and offline charging for those domains/subsystems/services;

– the interfaces that are used in the charging framework to transfer the charging information (i.e., CDRs or charging events).

The complete document structure for these TSs is defined in TS 32.240.

The present document specifies the transaction based mechanism for the near real-time transfer of CDRs within the network.

The present document is related to other 3GPP charging TSs as follows:

• The common 3GPP charging architecture is specified in TS 32.240;

• The parameters, abstract syntax and encoding rules for the CDRs are specified in TS 32.298;

• The file based mechanism used to transfer the CDRs from the network to the operator's billing domain (e.g., the post-processing system or a mediation device) is specified in TS 32.297.

The 3GPP Diameter application that is used for offline and online charging is specified in TS 32.299.

All terms, definitions and abbreviations used in the present document, that are common across 3GPP TSs, are defined in the 3GPP Vocabulary, TR 21.905. Those that are common across charging management in GSM/UMTS domains services, or subsystems are provided in the umbrella document TS 32.240 and are copied into clause 3 of the present document for ease of reading. Finally, those items that are specific to the present document are defined exclusively in the present document.

Furthermore, requirements that govern the charging work are specified in TS 22.115.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 295	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 295	7.0.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532295v700
ATIS	ATIS.3GPP.32.295V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.295(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.295(R7-7.0.0).zip
TTC	TS-3GA-32.295(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32295rel7v700.pdf

10.10.63 TS 32.296 Telecommunication management; Charging management; Online charging system (OCS): Applications and interfaces

The present document is part of a series of documents that specify charging functionality and charging management in GSM/UMTS networks. The GSM/UMTS core network charging architecture and principles are specified in TS 32.240, which provides an umbrella for other charging management documents that specify:

- the content of the CDRs per domain and subsystem (offline charging);
- the content of real-time charging messages per domain/subsystem (online charging);
- the functionality of online and offline charging for those domains and subsystems;
- the interfaces that are used in the charging framework to transfer the charging information (i.e., CDRs or charging events).

The complete document structure for these TSs is defined in TS 32.240.

The present document covers all internal aspects of the online charging system (OCS). The document contains the architecture and functions of the OCS logical components and thereby derives the functionality of the OCS interfaces. A detailed specification of interfaces between the logical OCS components is also included. The functionality of the OCS, as described in the present document, applies to all charging domains (bearer, session and service).

The interfaces connecting to the OCS (e.g., Ro, CAP) are out of the scope of the present document.

NOTE – In the current release, the present document is limited to the interface between the charging function and the rating function, namely Re.

All terms, definitions and abbreviations used in the present document, that are common across 3GPP TSs, are defined in TR 21.905. Those that are common across charging management in GSM/UMTS domains, services, or subsystems are provided in the umbrella document TS 32.240. Finally, those items that are specific to the present document are defined exclusively in the present document.

Furthermore, requirements that govern the charging work are specified in TS 22.115.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 296	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 296	7.0.0	Published	2007-07-19	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532296v700
ATIS	ATIS.3GPP.32.296V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.296(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.296(R7-7.0.0).zip
TTC	TS-3GA-32.296(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32296rel7v700.pdf

10.10.64 TS 32.297 Telecommunication management; Charging management; Charging data record (CDR) file format and transfer

The present document is part of a series of documents specifying charging functionality and charging management in GSM/UMTS networks. The GSM/UMTS core network charging

architecture and principles are specified in TS 32.240, which provides an umbrella for other charging management documents that specify:

- the content of the CDRs per domain/subsystem/service (offline charging);
- the content of real-time charging messages per domain/subsystem/service (online charging);
- the functionality of online and offline charging for those domains/subsystems/services;
- the interfaces that are used in the charging framework to transfer the charging information (i.e., CDRs or charging events).

The complete document structure for these TSs is defined in TS 32.240.

The present document specifies the mechanisms used to transfer CDR files from the network to the operator's billing domain (e.g., the billing system or a mediation device). This includes the file transfer procedures and the layout of the CDR files, as well as file meta information and the encoding of the CDRs within the files.

The CDR types that can be transported in these files are specified in the respective "middle tier" charging TSs, i.e., TS 32.25x – TS 32.27x. A definition of the parameters, abstract syntax and encoding rules for these CDR types is specified in TS 32.298.

Note that the present document, dealing with CDRs, is consequently only concerned with offline charging. A definition of the corresponding 3GPP online charging functionality and applications can be found in TS 32.299. Furthermore, TS 32.296 specifies the OCS internal charging applications and interfaces.

All terms, definitions and abbreviations used in the present document, that are common across 3GPP TSs, are defined in the 3GPP Vocabulary, TR 21.905. Those that are common across charging management in GSM/UMTS domains, services or subsystems are provided in the umbrella document TS 32.240 and are copied into clause 3 of the present document for ease of reading. Finally, those items that are specific to the present document are defined exclusively in the present document.

Furthermore, requirements that govern the charging work are specified in TS 22.115.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 297	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 297	7.0.0	Published	2007-10-11	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532297v700
ATIS	ATIS.3GPP.32.297V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.297(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.297(R7-7.0.0).zip
TTC	TS-3GA-32.297(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32297rel7v700.pdf

10.10.65   TS 32.298 Telecommunication management; Charging management; Charging data record (CDR) parameter description

The present document is part of a series of documents that specify charging functionality and charging management in GSM and UMTS networks. The GSM/UMTS core network charging

architecture and principles are specified in document TS 32.240, which provides an umbrella for other charging management documents that specify:

– the content of the CDRs per domain and subsystem (offline charging);

– the content of real-time charging events per domain/subsystem (online charging);

– the functionality of online and offline charging for those domains and subsystems;

– the interfaces that are used in the charging framework to transfer the charging information (i.e., CDRs or charging events).

The complete document structure for these TSs is defined in TS 32.240.

The present document specifies the CDR parameters, the abstract syntax and encoding rules for all the CDR types that are defined in the charging management TSs described above. Therefore, it is only applicable to offline charging. The mechanisms used to transfer the CDRs from the generating node to the operator's billing domain (e.g., the billing system or a mediation device) are specified in TS 32.297. Further details with respect to the operator's billing domain for offline charging are out of scope of 3GPP standardization.

Note that a generic Diameter application for online charging in 3GPP networks is specified in TS 32.299. Furthermore, 3GPP TSs are being created to standardize some technical aspects of the operator's billing domain for online charging, i.e., the online charging system (OCS).

All terms, definitions and abbreviations used in the present document, that are common across 3GPP TSs, are defined in the 3GPP Vocabulary, TR 21.905. Those that are common across charging management in UMTS domains or subsystems are provided in the umbrella document TS 32.240 and are copied into clause 3 of the present document for ease of reading. Finally, those items that are specific to the present document are defined exclusively in the present document.

Furthermore, requirements that govern the charging work are specified in TS 22.115.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 298	7.4.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 298	7.4.0	Published	2007-10-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532298v740
ATIS	ATIS.3GPP.32.298V 740-2007	7.4.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.298(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.298(R7-7.2.0).zip
TTC	TS-3GA-32.298(Rel7)v7.4.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32298rel7v740.pdf

10.10.66   TS 32.299 Telecommunication management; Charging management; Diameter charging applications

The present document is part of a series of documents that specify charging functionality and charging management in GSM/UMTS networks. The GSM/UMTS core network-charging architecture and principles are specified in TS 32.240, which provides an umbrella for other charging management documents that specify:

• The content of the CDRs' per domain and subsystem (offline charging);

• The content of real-time charging messages per domain/subsystem (online charging);

- The functionality of online and offline charging for those domains and subsystems;
- The interfaces that are used in the charging framework to transfer the charging information (i.e., CDRs or charging events).

The complete document structure for these TSs is defined in TS 32.240.

The present document specifies in detail the Diameter based offline and online charging applications for 3GPP networks. It includes all charging parameters, scenarios and message flows.

All terms, definitions and, abbreviations used in the present document, that are common across 3GPP TSs, are defined in TR 21.905. Those that are common across charging management in GSM/UMTS domains, services or subsystems are provided in the umbrella document TS 32.240 and are copied into clause 3 of the present document for ease of reading. Finally, those items that are specific to the present document are defined exclusively in the present document.

Furthermore, requirements that govern the charging work are specified in TS 22.115.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 299	7.7.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 299	7.7.0	Published	2007-10-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532299v770
ATIS	ATIS.3GPP.32.299V 770-2007	7.7.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.299(R7-7.5.0)	7.5.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.299(R7-7.5.0).zip
TTC	TS-3GA-32.299(Rel7)v7.7.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32299rel7v770.pdf

10.10.67 TS 32.300 Telecommunication management; Configuration management (CM); Name convention for managed objects

A detailed background and introduction of the IRP concept is given in TS 32.101 and TS 32.102.

To perform network management tasks, co-operating applications require identical interpretation of names assigned to network resources under management. Such names are required to be unambiguous as well. The present document recommends one name convention for network resources under management in the IRP context.

To facilitate integration of network management information obtained via multiple IRPs based on different IRP solution set technologies, identical network resource name semantics shall be conveyed in all IRPs. The present document specifies one such name convention.

This document also specifies an IOC/MOC name recommendation (see Annex E) in order to avoid potential problems with valid characters in some programming languages.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 300	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 300	7.1.0	Published	2007-10-16	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532300v710
ATIS	ATIS.3GPP.32.300V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.300(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.300(R7-7.1.0).zip
TTC	TS-3GA-32.300(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32300rel7v710.pdf

10.10.68 TS 32.301 Telecommunication management; Configuration management (CM); Notification integration reference point (IRP): Requirements

The purpose of notification IRP is to define an interface through which an IRPManager can subscribe to an IRPAgent for receiving notifications. The present document is the "Requirements" of notification IRP. It defines, for the purpose of subscribing to an IRPAgent for receiving notifications, the basic requirements that shall be fulfilled on Itf-N.

How IRPManager discovers the IRPAgent's address or reference (so that IRPManager can invoke an operation) is outside the scope of the present document.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 301	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 301	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532301v700
ATIS	ATIS.3GPP.32.301V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.301(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.301(R7-7.0.0).zip
TTC	TS-3GA-32.301(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32301rel7v700.pdf

10.10.69 TS 32.302 Telecommunication management; Configuration management (CM); Notification integration reference point (IRP): Information service (IS)

The purpose of notification IRP is to define an interface through which an IRPManager can subscribe to an IRPAgent for receiving notifications. The present document is the "information service" of notification IRP. It defines, for the purpose of subscribing to an IRPAgent for receiving notifications, the information observable and controlled by management system's client and it also specifies the semantics of the interactions used to carry this information. It also defines the information common to all notifications which is called the notificationHeader.

An IRPAgent supporting this IRP IS may emit one or multiple categories of notifications, such as alarms (as specified in alarm IRP: Information Service in TS 32.111-2) and others. This IRP IS defines a mechanism that IRPManager can use to determine the categories of notifications supported by an IRPAgent. It also defines a mechanism (subscribe and unsubscribe operations) that IRPManager can use to specify the categories of notifications IRPAgent should emit to IRPManager during subscription. It also defines a mechanism (getSubscriptionIds operation) that IRPManager can use to check which categories of notifications it has subscribed to. IRPManager can set and change filter criteria applicable during the life-cycle of a subscription. IRPManager can also exercise flow-control on IRPAgent's emission of notifications (suspendSubscription and resumeSubscription operations).

Using different managerReference, an IRPManager can subscribe several times. It will result in multiple subscriptions. As far as IRPAgent is concerned, notifications are sent to multiple "places".

Using the same managerReference, an IRPManager can subscribe several times specifying different categories of notifications.

This IRP IS does not specify information that is carried in some but not all notifications. That kind of information is specified in other IRP ISs involved. For example, `perceivedSeverity` is a piece of information specific for notifications carrying alarm information. This information is not defined in the present document but in alarm IRP: Information service in TS 32.111-2.

How IRPManager discovers the IRPAgent's address or reference (so that IRPManager can invoke an operation) is outside the scope of the present document.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 302	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 302	7.0.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532302v700
ATIS	ATIS.3GPP.32.302V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.302(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.302(R7-7.0.0).zip
TTC	TS-3GA-32.302(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32302rel7v700.pdf

10.10.70 TS 32.303 Telecommunication management; Configuration management (CM); Notification integration reference point (IRP): Common object request broker architecture (CORBA) solution set (SS)

The present document specifies the common object request broker architecture (CORBA) solution set (SS) for the IRP whose semantics is specified in notification IRP: Information service (TS 32.302).

This solution set specification is related to 3GPP TS 32.302.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 303	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 303	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532303v700
ATIS	ATIS.3GPP.32.303V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.303(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.303(R7-7.0.0).zip
TTC	TS-3GA-32.303(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32303rel7v700.pdf

10.10.71 TS 32.305 Telecommunication management; Configuration management (CM); Notification integration reference point (IRP): eXtensible markup language (XML) definition

The present document specifies the XML definitions for the notification integration reference point (notification IRP) as it applies to Itf-N, in accordance with notification IRP IS definitions in TS 32.331.

This XML definitions specification defines the notification IRP XML notification header format.

This specification is related to TS 32.302.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 305	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 305	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532305v700
ATIS	ATIS.3GPP.32.305V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.305(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.305(R7-7.0.0).zip
TTC	TS-3GA-32.305(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32305rel7v700.pdf

10.10.72 TS 32.307 Telecommunication management; Configuration management (CM); Notification integration reference point (IRP): SOAP solution set (SS)

The present document specifies the SOAP solution set for the IRP whose semantics is specified in notification IRP: Information service (TS 32.302).

This solution set specification is related to 3GPP TS 32.302.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 307	7.0.2	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 307	7.0.2	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532307v702
ATIS	ATIS.3GPP.32.307V702-2007	7.0.2	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.307(R7-7.0.1)	7.0.1	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.307(R7-7.0.1).zip
TTC	TS-3GA-32.307(Rel7)v7.0.2	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32307rel7v701.pdf

10.10.73 TS 32.311 Telecommunication management; Generic integration reference point (IRP) management; Requirements

The purpose of the present document is to define a common service supported by all IRPs such as AlarmIRP. The present document is the "Requirements" part. It defines the requirements that shall be fulfilled by all IRPs, such as AlarmIRP, supporting this common service.

With this common service supported by all IRPs, an IRPManager shall be able to retrieve the profile of operations and notifications supported by a given IRP which is name-contained by an IRPAgent. An IRPManager shall also be able to retrieve the IRPVersions supported by the given IRP.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 311	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 311	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532311v700
ATIS	ATIS.3GPP.32.311V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.311(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.311(R7-7.0.0).zip
TTC	TS-3GA-32.311(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32311rel7v700.pdf

10.10.74 TS 32.312 Telecommunication management; Generic integration reference point (IRP) management; Information service (IS)

The purpose of the present document is to define a common service supported by all IRPs such as AlarmIRP. The present document is the "Information Service" part. It defines, for the purpose of supporting the common service, the information observable and controllable by management system's client (i.e., IRPManager) via the Itf-N.

It also specifies the semantics of and the interactions used to carry this information.

With this common service supported by all IRPs, an IRPManager can retrieve the profile of operations and notifications supported by a given IRP name-contained by an IRPAgent. An IRPManager can also retrieve the IRPVersions supported by a given IRP.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 312	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 312	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532312v700
ATIS	ATIS.3GPP.32.312V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.312(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.312(R7-7.0.0).zip
TTC	TS-3GA-32.312(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32312rel7v700.pdf

10.10.75 TS 32.313 Telecommunication management; Generic integration reference point (IRP) management; Common object request broker architecture (CORBA) solution set (SS)

The present document specifies the CORBA solution set for generic integration reference point (IRP) management whose capabilities are specified in TS 32.312, the generic IRP management: information service.

This solution set specification is related to TS 32.312.

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CCSA	CCSA-TSD-132 313	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 313	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532313v700
ATIS	ATIS.3GPP.32.313V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.313(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.313(R7-7.0.0).zip
TTC	TS-3GA-32.313(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32313rel7v700.pdf

10.10.76 TS 32.317 Telecommunication management; Generic integration reference point (IRP) management; SOAP solution set (SS)

The present document specifies the SOAP solution set for generic IRP management whose capabilities are specified in generic IRP management: Information service (TS 32.312).

This solution set specification is related to TS 32.312.

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CCSA	CCSA-TSD-132 317	7.0.2	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 317	7.0.2	Published	2007-07-19	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532317v702
ATIS	ATIS.3GPP.32.317V702-2007	7.0.2	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.317(R7-7.0.2)	7.0.2	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.317(R7-7.0.2).zip
TTC	TS-3GA-32.317(Rel7)v7.0.2	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32317rel7v701.pdf

10.10.77 TS 32.321 Telecommunication management; Test management integration reference point (IRP): Requirements

The present document describes, in addition to the requirements defined in TS 32.101 and TS 32.102, the requirements for the test management IRP.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 321	7.0.1	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 321	7.0.1	Published	2007-07-19	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532321v701
ATIS	ATIS.3GPP.32.321V701-2007	7.0.1	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.321(R7-7.0.1)	7.0.1	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.321(R7-7.0.1).zip
TTC	TS-3GA-32.321(Rel7)v7.0.1	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32321rel7v701.pdf

10.10.78 TS 32.322 Telecommunication management; Test management integration reference point (IRP): Information service (IS)

The present document defines the IS part of the test management IRP, which describes the semantics of the information and the interactions visible across Itf-N in a protocol independent way. The information is specified by means of information object classes and the interactions by means of operations and notifications. The present document does not specify the syntax (encoding) of the information.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 322	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 322	7.1.0	Published	2007-10-16	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532322v710
ATIS	ATIS.3GPP.32.322V 710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.322(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.322(R7-7.1.0).zip
TTC	TS-3GA-32.322(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32322rel7v710.pdf

10.10.79 TS 32.323 Telecommunication management; Test management integration reference point (IRP): Common object request broker architecture (CORBA) solution set (SS)

The present document specifies the CORBA SS for the IRP whose semantics is specified in test management IRP IS (TS 32.322).

Clauses 1 to 3 provide background information. Clause 4 provides key architectural features supporting the SS. Clause 5 defines the mapping of operations, notification, parameters and attributes defined in IS to their SS equivalents. Clause 6 describes the notification interface containing the push method. Annex A contains the IDL specification.

This solution set specification is related to 3GPP TS 32.322.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 323	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 323	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532323v700
ATIS	ATIS.3GPP.32.323V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.323(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.323(R7-7.0.0).zip
TTC	TS-3GA-32.323(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32323rel7v700.pdf

10.10.80 TS 32.325 Telecommunication management; Test management integration reference point (IRP); eXtensible markup language (XML) definitions

The present document specifies the XML definitions for the test management IRP (TMIRP) as it applies to Itf-N, in accordance with TM IRP IS definitions TS 32.322 as well as notification log IRP XML definitions TS 32.335.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 325	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 325	7.0.0	Published	2007-07-19	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532325v700
ATIS	ATIS.3GPP.32.325V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.325(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.325(R7-7.0.0).zip
TTC	TS-3GA-32.325(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32325rel7v700.pdf

10.10.81 TS 32.331 Telecommunication management; Notification log (NL) integration reference point (IRP): Requirements

The present document specifies the overall requirements for notification log management over Itf-N.

Clause 4 provides the notification log management concept for the manipulation of notification logs and the retrieval of notifications selected for logging.

Clause 5 of the present document defines the functional requirements for the notification log IRP, for the purpose of notification log management, as seen from a network manager (NM) though Itf-N. The Itf-N is fully standardized so as to connect systems of any vendor to an NM via this interface.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 331	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 331	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532331v700
ATIS	ATIS.3GPP.32.331V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.331(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.331(R7-7.0.0).zip
TTC	TS-3GA-32.331(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32331rel7v700.pdf

10.10.82 TS 32.332 Telecommunication management; Notification log (NL) integration reference point (IRP): Information service (IS)

The present document specifies the information service for the notification log integration reference point (NLIRP) as it applies to Itf-N.

This IRP IS defines the semantics of operations (and their parameters) visible across the Itf-N in a protocol and technology neutral way. It does not define the syntax or encoding of the operations and their parameters.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 332	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 332	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532332v700
ATIS	ATIS.3GPP.32.332V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.332(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.332(R7-7.0.0).zip
TTC	TS-3GA-32.332(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32332rel7v700.pdf

10.10.83 TS 32.333 Telecommunication management; Notification log (NL) integration reference point (IRP): Common object request broker architecture (CORBA) solution set (SS)

The present document specifies the CORBA solution set for the IRP whose semantics is specified in TS 32.332 notification log IRP: Information service.

Clauses 1 to 3 provide background information. Clause 4 provides key architectural features supporting the SS.

Clause 5 defines the mapping of operations, notification, parameters and attributes defined in IS to their SS equivalents. Clause 6 describes the notification interface containing the push method. Annex A contains the IDL specification.

This solution set specification is related to TS 32.332.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 333	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 333	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532333v700
ATIS	ATIS.3GPP.32.333V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.333(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.333(R7-7.0.0).zip
TTC	TS-3GA-32.333(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32333rel7v700.pdf

10.10.84 TS 32.335 Telecommunication management; Notification log (NL) integration reference point (IRP): eXtensible markup language (XML) solution definitions

The present document specifies the XML definitions for the notification log IRP as it applies to Itf-N, in accordance with the requirements in TS 32.331 and information service definitions in TS 32.332.

This XML definitions specification defines the XML syntax of the NL IRP XML data file.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 335	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 335	7.0.0	Published	2007-03-30	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532335v700
ATIS	ATIS.3GPP.32.335V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.335(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.335(R7-7.0.0).zip
TTC	TS-3GA-32.335(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32335rel7v700.pdf

10.10.85 TS 32.341 Telecommunication management; File transfer (FT) integration reference point (IRP): Requirements

The present document specifies the overall requirements for the file transfer integration reference point (FT IRP) as it applies to the Itf-N.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 341	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 341	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532341v700
ATIS	ATIS.3GPP.32.341V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.341(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.341(R7-7.0.0).zip
TTC	TS-3GA-32.341(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32341rel7v700.pdf

10.10.86 TS 32.342 Telecommunication management; File transfer (FT) integration reference point (IRP): Information service (IS)

The present document specifies the information service for the file transfer integration reference point (FileTransferIRP) as it applies to the Itf-N.

The present document defines the semantics of operations (and their parameters) visible across the Itf-N in a protocol and technology neutral way. It does not define the syntax or encoding of the operations and their parameters.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 342	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 342	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532342v700
ATIS	ATIS.3GPP.32.342V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.342(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.342(R7-7.0.0).zip
TTC	TS-3GA-32.342(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32342rel7v700.pdf

10.10.87   TS 32.343 Telecommunication management; File transfer (FT) integration reference point (IRP): Common object request broker architecture (CORBA) solution set (SS)

The present document specifies the common object request broker architecture (CORBA) solution set (SS) for the IRP whose semantics is specified in the file transfer IRP: Information service TS 32.342.

This solution set specification is related to TS 32.342.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 343	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 343	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532343v700
ATIS	ATIS.3GPP.32.343V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.343(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.343(R7-7.0.0).zip
TTC	TS-3GA-32.343(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32343rel7v700.pdf

10.10.88   TS 32.345 Telecommunication management; File transfer (FT) integration reference point (IRP); eXtensible markup language (XML) definitions

The present document specifies the XML definitions for the file transfer IRP (FTIRP) as it applies to Itf-N, in accordance with FT IRP IS definitions TS 32.342, as well as notification log IRP XML definitions TS 32.335.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 345	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 345	7.0.0	Published	2007-07-19	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532345v700
ATIS	ATIS.3GPP.32.345V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.345(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.345(R7-7.0.0).zip
TTC	TS-3GA-32.345(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32345rel7v700.pdf

10.10.89 TS 32.351 Telecommunication management; Communication surveillance (CS) integration reference point (IRP): Requirements

The present document describes the requirements of the communication surveillance IRP (CSIRP).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 351	7.0.1	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 351	7.0.1	Published	2007-07-25	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532351v701
ATIS	ATIS.3GPP.32.351V701-2007	7.0.1	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.351(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.351(R7-7.0.0).zip
TTC	TS-3GA-32.351(Rel7)v7.0.1	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32351rel7v701.pdf

10.10.90 TS 32.352 Telecommunication management; Communication surveillance (CS) integration reference point (IRP): Information service (IS)

The present document defines the information service (IS) part of the communication surveillance IRP (CSIRP).

It describes the semantics of the information and the interactions visible across Itf-N in a protocol independent way.

The information is specified by means of information object classes (IOCs) and the interactions by means of operations and notifications. The present document does not specify the syntax (encoding) of the information.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 352	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 352	7.0.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532352v700
ATIS	ATIS.3GPP.32.352V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.352(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.352(R7-7.0.0).zip
TTC	TS-3GA-32.352(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32352rel7v700.pdf

10.10.91 TS 32.353 Telecommunication management; Communication surveillance (CS) integration reference point (IRP): Common object request broker architecture (CORBA) solution set (SS)

The present document specifies the CORBA solution set for the IRP whose semantics is specified in TS 32.352 communication surveillance IRP: Information service.

This solution set specification is related to TS 32.352.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 353	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 353	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532353v700
ATIS	ATIS.3GPP.32.353V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.353(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.353(R7-7.0.0).zip
TTC	TS-3GA-32.353(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32353rel7v700.pdf

10.10.92 TS 32.361 Telecommunication management; Entry point (EP) integration reference point (IRP): Requirements

The present document describes the requirements of the EPIRP.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 361	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 361	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532361v700
ATIS	ATIS.3GPP.32.361V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.361(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.361(R7-7.0.0).zip
TTC	TS-3GA-32.361(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32361rel7v700.pdf

10.10.93   TS 32.362 Telecommunication management; Entry point (EP) integration reference point (IRP): Information service (IS)

The present document defines the information service (IS) part of the entry point IRP (EPIRP). It describes the semantics of the information and the interactions visible across Itf-N in a protocol independent way.

The information is specified by means of information object classes (IOCs) and the interactions by means of operations and notifications. The present document does not specify the syntax (encoding) of the information.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 362	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 362	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532362v700
ATIS	ATIS.3GPP.32.362V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.362(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.362(R7-7.0.0).zip
TTC	TS-3GA-32.362(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32362rel7v700.pdf

10.10.94   TS 32.363 Telecommunication management; Entry point (EP) integration reference point (IRP): Common object request broker architecture (CORBA) solution set (SS)

The present document specifies the CORBA solution set for the IRP whose semantics is specified in the entry point IRP: Information service (TS 32.362).

This solution set specification is related to TS 32.362.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 363	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 363	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532363v700
ATIS	ATIS.3GPP.32.363V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.363(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.363(R7-7.0.0).zip
TTC	TS-3GA-32.363(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32363rel7v700.pdf

10.10.95 TS 32.365 Telecommunication management; Entry point (EP) integration reference point (IRP); eXtensible markup language (XML) definitions

The present document specifies the XML definitions for the entry point IRP (EPIRP) as it applies to Itf-N, in accordance with EP IRP IS definitions TS 32.362, as well as the notification log IRP XML definitions TS 32.335.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 365	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 365	7.0.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532365v700
ATIS	ATIS.3GPP.32.365V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.365(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.365(R7-7.0.0).zip
TTC	TS-3GA-32.365(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32365rel7v700.pdf

10.10.96 TS 32.371 Telecommunication management; Security management concept and requirements

The present document defines, in addition to the requirements defined in TS 32.101 and TS 32.102, the requirements for security management IRP.

The purpose of the present document is to specify the necessary security features, services and functions to protect the network management data, including Requests, Responses, Notifications and Files, exchanged across the Itf-N.

Telecommunication network security can be breached by weaknesses in operational procedures, physical installations, communication links, computational processes and data storage. Of concern here in the present document is the security problems resulting from the weaknesses inherent in the communication technologies (i.e., the 3GPP-defined interface IRPs and their supporting protocol stacks) deployed across the Itf-N.

An appropriate level of security for a telecommunication network is essential. Secured access to the network management applications, and network management data, is essential. The 3GPP-defined interface IRPs (and their supporting protocol stacks), deployed across the Itf-N, are used for such access, and therefore, their security is considered essential.

Many network management security standards exist. However, there is no recommendation on how to apply them in the Itf-N context. Their deployment across the Itf-N is left to operators. The present document and the corresponding solutions identify and recommend security standards in the Itf-N context.

The business case for secured Itf-N is complex as it does not relate to the functions of the interface IRPs (the functions are constant) but rather, it relates to variants such as the cost of recovering from security breaks, the probability of security incidents and the cost of implementing security management, all of which differ depending on specific deployment scenarios.

The present document describes the security functions for a 3G network in terms of security domains (subclause 4.1). Clause 5 defines the Itf-N security management scope in terms of its context (subclause 5.1) and the possible threats that can occur there are defined in clause 6. Clause 7 specifies the Itf-N security requirements.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 371	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 371	7.2.0	Published	2007-07-18	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532371v720
ATIS	ATIS.3GPP.32.371V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.371(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.371(R7-7.2.0).zip
TTC	TS-3GA-32.371(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32371rel7v720.pdf

10.10.97 TS 32.372 Telecommunication management; Security services for integration reference point (IRP): Information service (IS)

The purpose of the present document is to specify the necessary security features, services and functions to protect the network management data, including Requests, Responses, Notifications and Files, exchanged across the Itf-N.

The present document specifies the security service for IRP information service.

This security service for IRP IS defines the semantics of management information visible across the Itf-N in a protocol and technology neutral way. It does not define the syntax or encoding of the operations and their parameters.

This information service specification is related to 3GPP TS 32.371.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 372	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 372	7.0.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532372v700
ATIS	ATIS.3GPP.32.372V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.372(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.372(R7-7.0.0).zip
TTC	TS-3GA-32.372(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32372rel7v700.pdf

10.10.98   TS 32.373 Telecommunication management; Security service for integration reference point (IRP): Common object request broker architecture (CORBA)

The present document specifies the CORBA solution for the IRP whose semantics is specified in TS 32.372 security service for IRP information service.

This solution set specification is related to TS 32.372.

Note that within the present document, there are several alternate solutions. Specific choices will be made to counter identified security threats, and to consider performance and cost criteria, i.e., an implementation is not expected to have to support every option for every deployment.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 373	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 373	7.0.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532373v700
ATIS	ATIS.3GPP.32.373V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.373(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.373(R7-7.0.0).zip
TTC	TS-3GA-32.373(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32373rel7v700.pdf

10.10.99   TS 32.375 Telecommunication management; Security services for integration reference point (IRP): File integrity solution

The present document contains the security services for IRP: File integrity solution whose semantics is specified in TS 32.372.

This solution specification is related to TS 32.372.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 375	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 375	7.0.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532375v700
ATIS	ATIS.3GPP.32.375V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.375(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.375(R7-7.0.0).zip
TTC	TS-3GA-32.375(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32375rel7v700.pdf

10.10.100   TS 32.381 Telecommunication management; Partial suspension of Itf-N integration reference point (IRP): Requirements

The purpose of partial suspension of Itf-N IRP is to define an interface through which an IRPManager can suspend the forwarding of notifications via Itf-N which were generated in parts of the managed systems.

The present document contains the requirements of partial suspension of Itf-N IRP. It defines, for the purpose of generally suspending the forwarding of notifications, the basic requirements to be fulfilled on Itf-N.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 381	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 381	7.0.0	Published	2007-04-23	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532381v700
ATIS	ATIS.3GPP.32.381V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.381(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.381(R7-7.0.0).zip
TTC	TS-3GA-32.381(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32381rel7v700.pdf

10.10.101   TS 32.382 Telecommunication management; Partial suspension of Itf-N integration reference point (IRP): Information service (IS)

The purpose of partial suspension of Itf-N IRP is to define an interface through which an IRPManager can suspend the forwarding of notifications via Itf-N which were generated in parts of the managed systems.

The present document is the information service of partial suspension of Itf-N IRP. It defines, for the purpose of suspending generally the forwarding of notifications, the information observable and controlled by management system's client and it also specifies the semantics of the interactions used to carry this information.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 382	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 382	7.0.0	Published	2007-04-23	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532382v700
ATIS	ATIS.3GPP.32.382V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.382(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.382(R7-7.0.0).zip
TTC	TS-3GA-32.382(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32382rel7v700.pdf

10.10.102 TS 32.383 Telecommunication management; Partial suspension of Itf-N integration reference point (IRP): Common object request broker architecture (CORBA) solution set (SS)

The purpose of partial suspension of Itf-N IRP is to define an interface through which an IRPManager can suspend the forwarding of notifications via Itf-N which were generated in parts of the managed systems.

The present document is the "CORBA Solution Set" of partial suspension of Itf-N IRP for the IRP whose semantics is specified in partial suspension of Itf-N IRP: Information service (TS 32.382).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 383	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 383	7.0.0	Published	2007-04-23	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532383v700
ATIS	ATIS.3GPP.32.383V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.383(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.383(R7-7.0.0).zip
TTC	TS-3GA-32.383(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32383rel7v700.pdf

10.10.103 TS 32.385 Telecommunication management; Partial suspension of Itf-N integration reference point (IRP): eXtensible markup language (XML) file format definition

The purpose of partial suspension of Itf-N IRP is to define an interface through which an IRPManager can suspend the forwarding of notifications via Itf-N which were generated in parts of the managed systems.

The present document is the eXtensible markup language (XML) file format definition of partial suspension of Itf-N IRP for the IRP whose semantics is specified in partial suspension of Itf-N IRP: Information service (TS 32.382).

This XML definitions specification defines the XML syntax of the partial suspension of Itf-N IRP.

This XML definitions specification is related to TS 32.382.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 385	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 385	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532385v700
ATIS	ATIS.3GPP.32.385V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.385(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.385(R7-7.0.0).zip
TTC	TS-3GA-32.385(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32385rel7v700.pdf

10.10.104 TS 32.391 Telecommunication management; Delta synchronization integration reference point (IRP): Requirements

The purpose of delta synchronization IRP is to define an interface through which an IRPManager can request only those data which changed (i.e., changed, were created or deleted) from a synchronization point onwards.

The present document contains the requirements of delta synchronization IRP. It defines, for the purpose of delta synchronization, the basic requirements to be fulfilled on Itf-N.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 391	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 391	7.0.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532391v700
ATIS	ATIS.3GPP.32.391V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.391(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.391(R7-7.0.0).zip
TTC	TS-3GA-32.391(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32391rel7v700.pdf

10.10.105 TS 32.392 Telecommunication management; Delta synchronization integration reference point (IRP): Information service (IS)

The purpose of delta synchronization IRP is to define an interface through which an IRPManager can request only those data which changed (i.e., changed, were created or deleted) from a synchronization point onwards.

The present document is the information service of delta synchronization IRP. It defines, for the purpose of delta synchronization, the information observable and controlled by management system's client, and it also specifies the semantics of the interactions used to carry this information.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 392	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 392	7.2.0	Published	2007-10-16	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532392v720
ATIS	ATIS.3GPP.32.392V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.392(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.392(R7-7.1.0).zip
TTC	TS-3GA-32.392(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32392rel7v720.pdf

10.10.106 TS 32.393 Telecommunication management; Delta synchronization integration reference point (IRP): Common object tequest broker architecture (CORBA) solution set (SS)

The purpose of delta synchronization IRP is to define an interface through which an IRPManager can request only those data which changed (i.e., changed, were created or deleted) from a synchronization point onwards.

The present document is the "CORBA Solution Set" of delta synchronization IRP for the IRP whose semantics is specified in delta synchronization IRP: Information service (TS 32.392).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 393	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 393	7.1.0	Published	2007-10-16	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532393v710
ATIS	ATIS.3GPP.32.393V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.393(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.393(R7-7.0.0).zip
TTC	TS-3GA-32.393(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32393rel7v710.pdf

10.10.107 TS 32.395 Telecommunication management; Delta synchronization integration reference point (IRP): eXtensible markup language (XML) file format definition

The purpose of delta synchronization IRP is to define an interface through which an IRPManager can request only those data which changed (i.e., changed, were created or deleted) from a synchronization point onwards.

The present document is the eXtensible markup language (XML) file format definition of delta synchronization IRP for the IRP whose semantics is specified in delta synchronization IRP: Information service (TS 32.392).

This XML definitions specification defines the XML syntax of the delta synchronization IRP XML data file.

This XML definitions specification is related to 3GPP TS 32.392.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 395	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 395	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532395v700
ATIS	ATIS.3GPP.32.395V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.395(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.395(R7-7.0.0).zip
TTC	TS-3GA-32.395(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32395rel7v700.pdf

10.10.108 TS 32.401 Telecommunication management; Performance management (PM); Concept and requirements

The present document describes the requirements for the management of performance measurements and the collection of performance measurement result data across GSM and UMTS networks. It defines the administration of measurement schedules by the network element manager (EM), the generation of measurement results in the network elements (NEs) and the transfer of these results to one or more operations systems, i.e., EM(s) and/or network manager(s) (NM(s)).

The basic performance management concept that the present document is built upon is described in clause 4. The requirements of how an EM administers the performance measurements and how the results can be collected are defined in detail in clause 5. Measurements available for collection by NEs are described in the following specifications:

– TS 52.402 for GSM systems;

– TS 32.405, TS 32.406, TS 32.407 and TS 32.408 for UMTS and combined UMTS/GSM systems;

– TS 32.409 for IMS networks.

Effort has been made to ensure consistency in the definition of measurements between different NEs and generations. The performance measurement result is described in performance measurement file format definition (TS 32.432).

The following is beyond the scope of the present document, and therefore the present document does not describe:

– the formal definition of the interface that the EM uses to administer performance measurements in the NEs;

– the formal definition of the interface that the EM uses to collect measurement results from the NEs;

– how the data, once accumulated and collected, could or should be processed, stored, or presented to an end user;

– the information which may be obtained through the collection and processing of call or event-related records which have been produced by the NEs primarily for the purpose of raising bills and other charges.

The management requirements have been derived from existing telecommunications operations experience. The management definitions were then derived from other standardization work so as to minimise the re-invention factor. References are given as appropriate.

The objectives of this standardization are:

– to provide the descriptions for a standard set of measurements;

– to produce a common description of the management technique for measurement administration and result accumulation; and

– to define a method for the bulk transmission of measurement results across a management interface.

The definition of the standard measurements is intended to result in comparability of measurement result data produced in a multi-vendor wireless network, for those measurement types that can be standardized across all vendors' implementations.

As far as possible, existing standardization in the area of performance management has been re-used and enhanced where particular requirements, peculiar to the mobile telephony environment, have been recognized.

The present document considers all the above aspects of performance management for a GSM and UMTS network and its NEs defined in the core Technical Specifications. However, only those aspects which are specific to a GSM/UMTS system and particular to wireless network operation are included in the present document.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 401	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 401	7.0.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532401v700
ATIS	ATIS.3GPP.32.401V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.401(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.401(R7-7.0.0).zip
TTC	TS-3GA-32.401(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32401rel7v700.pdf

10.10.109 TS 32.404 Telecommunication management; Performance management (PM); Performance measurements – Definitions and template

This document describes the measurements for UMTS and combined UMTS/GSM.

TS 32.401 describes performance management concepts and requirements.

The present document is valid for all measurement types provided by an implementation of a UMTS network and combined UMTS/GSM network.

Only measurement types that are specific to UMTS or combined UMTS/GSM networks are defined within the present documents. Vendor-specific measurement types used in UMTS and combined UMTS/GSM networks are not covered. Instead, these could be applied according to the manufacturer's documentation.

Measurements related to "external" technologies (such as ATM or IP), as described by "external" standards bodies (e.g., ITU-T or IETF), shall only be referenced within this specification, wherever there is a need identified for the existence of such a reference.

The definition of the standard measurements is intended to result in comparability of measurement data produced in a multi-vendor network, for those measurement types that can be standardized across all vendors' implementations.

TS 32.411; Telecommunication management; performance management (PM) integration reference point (IRP): Requirements

The present document specifies the overall requirements for the performance management integration reference point (PMIRP) as it applies to the network elements (NE), element manager (EM) and network manager (NM).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 404	7.4.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 404	7.4.0	Published	2007-10-16	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532404v740
ATIS	ATIS.3GPP.32.404V740-2007	7.4.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
ETSI	TTAT.3G-32.404(R7-7.3.0)	7.3.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.404(R7-7.3.0).zip
TTA	TS-3GA-32.404(Rel7)v7.4.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32404rel7v740.pdf

10.10.110   TS 32.405 Telecommunication management; Performance management (PM); Performance measurements universal terrestrial radio access network (UTRAN)

The present document describes the measurements for UMTS and combined UMTS/GSM. TS 32.401 describes performance management concepts and requirements.

The present document is valid for all measurement types provided by an implementation of a UMTS network and combined UMTS/GSM network. Only measurement types that are specific to UMTS or combined UMTS/GSM networks are defined within the present documents.

Vendor-specific measurement types used in UMTS and combined UMTS/GSM networks are not covered. Instead, these could be applied according to the manufacturer's documentation.

Measurements related to "external" technologies (such as ATM or IP), as described by "external" standards bodies (e.g., ITU-T or IETF), shall only be referenced within this specification, wherever there is a need identified for the existence of such a reference.

The definition of the standard measurements is intended to result in comparability of measurement data produced in a multi-vendor network, for those measurement types that can be standardized across all vendors' implementations.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 405	7.6.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 405	7.6.0	Published	2007-10-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532405v760
ATIS	ATIS.3GPP.32.405V760-2007	7.6.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
ETSI	TTAT.3G-32.405(R7-7.5.0)	7.5.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.405(R7-7.5.0).zip
TTA	TS-3GA-32.405(Rel7)v7.6.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32405rel7v760.pdf

10.10.111   TS 32.406 Telecommunication management; Performance management (PM); Performance measurements core network (CN) packet switched (PS) domain

The present document describes the measurements for UMTS and combined UMTS/GSM.

TS 32.401 describes performance management concepts and requirements.

The present document is valid for all measurement types provided by an implementation of a UMTS network and combined UMTS/GSM network.

Only measurement types that are specific to UMTS or combined UMTS/GSM networks are defined within the present documents. Vendor-specific measurement types used in UMTS and combined UMTS/GSM networks are not covered. Instead, these could be applied according to the manufacturer's documentation.

Measurements related to "external" technologies (such as ATM or IP), as described by "external" standards bodies (e.g., ITU-T or IETF), shall only be referenced within this specification, wherever there is a need identified for the existence of such a reference.

The definition of the standard measurements is intended to result in comparability of measurement data produced in a multi-vendor network, for those measurement types that can be standardized across all vendors' implementations.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 406	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 406	7.1.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532406v710
ATIS	ATIS.3GPP.32.406V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
ETSI	TTAT.3G-32.406(R7-7.1.0)	7.1.0	Approved	2007-02-15	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.406(R7-7.1.0).zip
TTA	TS-3GA-32.406(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32406rel7v710.pdf

10.10.112 TS 32.407 Telecommunication management; Performance management (PM); Core network (CN) circuit switched (CS) domain; Performance measurements – UMTS and combined UMTS/GSM

The present document describes the CN CS measurements for UMTS and combined UMTS/GSM.

TS 32.401 describes performance management concepts and requirements.

The present document is valid for all measurement types provided by an implementation of a UMTS network and combined UMTS/GSM network. These may be measurement types defined within the present document, measurements defined within other standards bodies, or vendor-specific measurement types.

Only measurement types that are specific to CN CS UMTS or combined UMTS/GSM networks are defined within the present documents, i.e., vendor-specific measurement types used in UMTS and combined UMTS/GSM networks. Some ATM or IP measurements defined here are only used for load carrying. The definition of the standard measurements is intended to result in comparability of measurement data produced in a multi-vendor network, for those measurement types that can be standardized across all vendors' implementations.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 407	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 407	7.1.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532407v710
ATIS	ATIS.3GPP.32.407V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.407(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.407(R7-7.1.0).zip
TTC	TS-3GA-32.407(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32407rel7v710.pdf

10.10.113 TS 32.408 Telecommunication management; Performance management (PM); Performance measurements teleservice

The present document describes the measurements for UMTS and combined UMTS/GSM.

TS 32.401 describes performance management concepts and requirements.

The present document is valid for all measurement types provided by an implementation of a UMTS network and combined UMTS/GSM network.

Only measurement types that are specific to UMTS or combined UMTS/GSM networks are defined within the present documents. Vendor-specific measurement types used in UMTS and combined UMTS/GSM networks are not covered. Instead, these could be applied according to the manufacturer's documentation.

Measurements related to "external" technologies (such as ATM or IP), as described by "external" standards bodies (e.g., ITU-T or IETF), shall only be referenced within this specification, wherever there is a need identified for the existence of such a reference.

The definition of the standard measurements is intended to result in comparability of measurement data produced in a multi-vendor network, for those measurement types that can be standardized across all vendors' implementations.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 408	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 408	7.2.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532408v720
ATIS	ATIS.3GPP.32.408V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.408(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.408(R7-7.1.0).zip
TTC	TS-3GA-32.408(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32408rel7v720.pdf

10.10.114 TS 32.409 Telecommunication management; Performance management (PM); Performance measurements – IP multimedia subsystem (IMS)

The present document describes the measurements of IMS.

TS 32.401 describes performance management concepts and requirements.

The present document is valid for all measurement types provided by an implementation of an IMS network. These may be measurement types defined within the present document, measurements defined within other standards bodies, or vendor-specific measurement types.

Only measurement types that are specific to IMS network are defined within the present documents, i.e., vendor-specific measurement types and measurements related to "external" technologies used in IMS network, such as ATM or IP, are not covered. Instead, these could be applied as described by the other, "external" standards bodies (e.g., ITU-T or IETF) or according to the manufacturer's documentation.

The definition of the standard measurements is intended to result in comparability of measurement data produced in a multi-vendor network, for those measurement types that can be standardized across all vendors' implementations.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 409	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 409	7.1.0	Published	2007-10-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532409v710
ATIS	ATIS.3GPP.32.409V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.409(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.409(R7-7.0.0).zip
TTC	TS-3GA-32.409(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32409rel7v710.pdf

10.10.115 TS 32.411 Telecommunication management; Performance management (PM) integration reference point (IRP): Requirements

The present document specifies the overall requirements for the performance management integration reference point (PMIRP) as it applies to the network elements (NE), element manager (EM) and network manager (NM).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 411	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 411	7.0.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532411v700
ATIS	ATIS.3GPP.32.411V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.411(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.411(R7-7.0.0).zip
TTC	TS-3GA-32.411(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32411rel7v700.pdf

10.10.116 TS 32.412 Telecommunication management; Performance management (PM) integration reference point (IRP): Information service (IS)

The present document specifies the information service for the performance management integration reference point (PMIRP) as it applies to the Itf-N.

This IRP IS defines the semantics of operations (and their parameters) visible across the Itf-N in a protocol and technology neutral way. It does not define the syntax or encoding of the operations and their parameters.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 412	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 412	7.1.0	Published	2007-10-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532412v710
ATIS	ATIS.3GPP.32.412V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.412(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.412(R7-7.0.0).zip
TTC	TS-3GA-32.412(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32412rel7v710.pdf

10.10.117 TS 32.413 Telecommunication management; Performance management (PM) integration reference point (IRP): Common object request broker architecture (CORBA) solution set (SS)

The present document specifies the common object request broker architecture (CORBA) solution set (SS) for the IRP whose semantics is specified in PM (performance management) IRP: Information service 3G TS 32.412.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 413	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 413	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532413v700
ATIS	ATIS.3GPP.32.413V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.413(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.413(R7-7.0.0).zip
TTC	TS-3GA-32.413(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32413rel7v700.pdf

10.10.118 TS 32.415 Telecommunication management; Performance management (PM) integration reference point (IRP); eXtensible markup language (XML) definitions

The present document specifies the XML definitions for the performance management (PM) integration reference point (IRP) as it applies to Itf-N, in accordance with PM IRP IS definitions in 3GPP TS 32.412, as well as the notification log IRP XML definitions in 3GPP TS 32.335.

This specification is related to 3GPP TS 32.412.

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CCSA	CCSA-TSD-132 415	7.0.1	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 415	7.0.1	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532415v701
ATIS	ATIS.3GPP.32.415V701-2007	7.0.1	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.415(R7-7.0.1)	7.0.1	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.415(R7-7.0.1).zip
TTC	TS-3GA-32.415(Rel7)v7.0.1	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32415rel7v701.pdf

10.10.119 TS 32.421 Telecommunication management; Subscriber and equipment trace: Trace concepts and requirements

The present document describes the requirements for the management of trace and the reporting of trace data across UMTS networks as it refers to subscriber tracing (tracing of IMSI or private ID)

and MS tracing (tracing of IMEI or IMEISV). It defines the administration of trace session activation/deactivation by the element manager (EM) or the network itself via signalling, the generation of trace results in the network elements (NEs) and the transfer of these results to one or more operations systems, i.e., EM(s) and/or network manager(s) (NM(s)).

The basic subscriber and MS trace concept that the present document is built upon is described in clause 4. The high-level requirements for trace data, trace session activation/deactivation and trace reporting are defined in clause 5. Clause 5 also contains an overview of use cases for trace (the use cases are described in Annex B). Annex A provides a high-level view of trace functional architecture. Trace control and configuration management are described in 3GPP TS 32.422, and trace data definition and management are described in 3GPP TS 32.423.

In this release, the present document does not cover any trace capability limitations within a NE (e.g., maximum number of simultaneous traced mobiles for a given NE) or any functionality related to these limitations (e.g., NE aborting a trace session due to resource limitations).

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CCSA	CCSA-TSD-132 421	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 421	7.2.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532421v720
ATIS	ATIS.3GPP.32.421V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.421(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.421(R7-7.2.0).zip
TTC	TS-3GA-32.421(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32421rel7v720.pdf

10.10.120 TS 32.422 Telecommunication management; Subscriber and equipment trace; Trace control and configuration management

The present document describes the mechanisms used for the control and configuration of the trace functionality at the EMs and NEs. It covers the triggering events for starting/stopping of subscriber/MS activity traced over 3GPP standardized signalling interfaces, the types of trace mechanisms, configuration of a trace, level of detail available in the trace data, the generation of trace results in the network elements (NEs) and the transfer of these results to one or more EM(s) and/or network manager(s) (NM(s)).

The mechanisms for trace activation/deactivation are detailed in clause 4; clause 5 details the various trace control and configuration parameters and the triggering events that can be set in a network. Trace concepts and requirements are covered in 3G TS 32.421, while trace data definition and management is covered in 3G TS 32.423.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 422	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 422	7.2.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532422v720
ATIS	ATIS.3GPP.32.422V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.422(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.422(R7-7.2.0).zip
TTC	TS-3GA-32.422(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32422rel7v720.pdf

10.10.121 TS 32.423 Telecommunication management; Subscriber and equipment trace: Trace data definition and management

The present document describes trace data definition and management. It covers trace records content, their format and transfer.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 423	7.4.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 423	7.4.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532423v740
ATIS	ATIS.3GPP.32.423V740-2007	7.4.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.423(R7-7.4.0)	7.4.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.423(R7-7.4.0).zip
TTC	TS-3GA-32.423(Rel7)v7.4.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32423rel7v740.pdf

10.10.122 TS 32.432 Telecommunication management; Performance measurement: File format definition

The present document describes the general semantics of performance measurement result and collection. It defines the report file format, report file conventions and the file transfer procedure. Clause 4 specifies the file format for the bulk transfer of performance measurement results to the NM, while clause 6 discusses the file transfer procedure utilized on that interface.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 432	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 432	7.0.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532432v700
ATIS	ATIS.3GPP.32.432V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.432(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.432(R7-7.0.0).zip
TTC	TS-3GA-32.432(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32432rel7v700.pdf

10.10.123 TS 32.435 Telecommunication management; Performance measurement eXtensible markup language (XML) file format definition

The present document describes the XML file format of performance measurement results whose semantics is defined in 3G TS 32.432.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 435	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 435	7.2.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532435v720
ATIS	ATIS.3GPP.32.435V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.435(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.435(R7-7.2.0).zip
TTC	TS-3GA-32.435(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32435rel7v720.pdf

10.10.124 TS 32.436 Telecommunication management; Performance measurement: Abstract syntax notation one (ASN.1) file format definition

The present document defines the ASN.1 file format definition for performance measurement results collection whose semantics is defined in 3G TS 32.432.

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CCSA	CCSA-TSD-132 436	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 436	7.0.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532436v700
ATIS	ATIS.3GPP.32.436V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.436(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.436(R7-7.0.0).zip
TTC	TS-3GA-32.436(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32436rel7v700.pdf

10.10.125 TS 32.441 Telecommunication management; Trace management integration reference point (IRP): Requirements

The present document specifies the overall requirements for the trace management integration reference point (TraceIRP) as it applies to Itf-N.

The trace IRP supports the operations that are required for the subscriber and equipment trace, the service level trace and the cell traffic trace functionalities.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 441	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 441	7.0.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532441v700
ATIS	ATIS.3GPP.32.441V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.441(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.441(R7-7.0.0).zip
TTC	TS-3GA-32.441(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32441rel7v700.pdf

10.10.126 TS 32.442 Telecommunication management; Trace management integration reference point (IRP): Information service (IS)

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CCSA	CCSA-TSD-132 442	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 442	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532442v700
ATIS	ATIS.3GPP.32.442V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.442(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.442(R7-7.0.0).zip
TTC	TS-3GA-32.442(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32442rel7v700.pdf

10.10.127 TS 32.443 Telecommunication management; Trace management integration reference point (IRP): Common object request broker architecture (CORBA) solution set (SS)

This solution set specification is related to TS 32.442.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 443	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 443	7.0.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532443v700
ATIS	ATIS.3GPP.32.443V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.443(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.443(R7-7.0.0).zip
TTC	TS-3GA-32.443(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32443rel7v700.pdf

10.10.128 TS 32.445 Telecommunication management; Trace management integration reference point (IRP): eXtensible markup language (XML) file format definition

The present document is the eXtensible markup language (XML) file format definition of trace IRP for the IRP whose semantics is specified in trace IRP: Information service (TS 32.442).

This XML definitions specification defines the XML syntax of the trace IRP XML data file for the notifications related to trace IRP. The XML file definitions for a trace data file can be found in Annex A of TS 32.423.

This XML file format definition specification is related to 3GPP TS 32.442.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 445	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 445	7.0.0	Published	2007-07-10	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532445v700
ATIS	ATIS.3GPP.32.445V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.445(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.445(R7-7.0.0).zip
TTC	TS-3GA-32.445(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32445rel7v700.pdf

10.10.129 TS 32.600 Telecommunication management; Configuration management (CM); Concept and high-level requirements

The document describes the configuration management (CM) aspects of managing a 3G network. This is described from the management perspective in TS 32.101 and TS 32.102.

This document defines a set of controls to be employed to effect set-up and changes to a 3G network in such a way that operational capability and quality of service (QoS), network integrity and system interworking are ensured. In this way, this document describes the interface definition and behaviour for the management of relevant 3G NEs in the context of the described management environment. The context is described for both the management system (OS) and network element (NE) functionality.

The Itf-N for CM is built up by a number of integration reference points (IRPs) and a related name convention, which realize the functional capabilities over this interface. The basic structure of the IRPs is defined in TS 32.101 and TS 32.102. For CM, a number of IRPs (and a name convention TS 32.300) are defined, used by this as well as by other specifications for telecom management produced by 3GPP. These IRPs are defined in separate specifications.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 600	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 600	7.0.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532600v700
ATIS	ATIS.3GPP.32.600V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.600(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.600(R7-7.0.0).zip
TTC	TS-3GA-32.600(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32600rel7v700.pdf

10.10.130 TS 32.601 Telecommunication management; Configuration management (CM); Basic CM integration reference point (IRP); Requirements

The present document defines, in addition to the requirements defined in TS 32.101, TS 32.102 and TS 32.600, the requirements for the present IRP: Basic configuration management IRP.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 601	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 601	7.2.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532601v720
ATIS	ATIS.3GPP.32.601V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.601(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.601(R7-7.2.0).zip
TTC	TS-3GA-32.601(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32601rel7v720.pdf

10.10.131 TS 32.602 Telecommunication management; Configuration management; Basic CM integration reference point (IRP) information service

The document defines a component of an integration reference point (IRP) through which an 'IRPAgent' (typically an element manager or network element) can communicate basic configuration management-related information to one or several 'IRPManagers' (typically network managers).

This version of the IRP is mainly intended for "passive management" of high-level network configuration and status information as required by a network manager.

The configuration management (CM) area is very large. The intention is to split the specification of the related interfaces in several IRPs – as described in the introduction clause. An important aspect of such a split is that the network resource models (NRMs) defined in different IRPs containing NRMs are consistent, and that NRMs supported by an IRPAgent implementation can be accessed as one coherent model through one IRP information service. The Basic CM IRP: IS defined herein provides one such information service.

The basic CM IRP: IS defined in the document has the following main purpose: to define an interface for retrieval of configuration management information.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 602	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 602	7.0.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532602v700
ATIS	ATIS.3GPP.32.602V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.602(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.602(R7-7.0.0).zip
TTC	TS-3GA-32.602(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32602rel7v700.pdf

10.10.132 TS 32.603 Telecommunication management; Configuration management; Basic configuration management IRP: CORBA solution set

The purpose of this *Basic Configuration Management (CM) IRP: CORBA Solution Set* is to define the mapping of the basic CM IRP: IS (see TS 32.602) to the protocol-specific details necessary for implementation of this IRP in a CORBA/IDL environment.

This document defines NRM independent data types, methods and notifications.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 603	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 603	7.0.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532603v700
ATIS	ATIS.3GPP.32.603V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.603(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.603(R7-7.0.0).zip
TTC	TS-3GA-32.603(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32603rel7v700.pdf

10.10.133 TS 32.607 Telecommunication management; Configuration management (CM); Basic CM integration reference point (IRP): SOAP solution set (SS)

The purpose of this basic CM IRP: SOAP solution set is to define the mapping of the basic CM IRP: IS (TS 32.602) to the protocol specific details necessary for the implementation of this IRP in a SOAP/WSDL environment.

The present document defines NRM independent data types and methods.

This solution set specification is related to 3G TS 32.602.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 607	7.0.3	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 607	7.0.3	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532607v703
ATIS	ATIS.3GPP.32.607V703-2007	7.0.3	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.607(R7-7.0.3)	7.0.3	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.607(R7-7.0.3).zip
TTC	TS-3GA-32.607(Rel7)v7.0.3	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32607rel7v702.pdf

10.10.134 TS 32.611 Telecommunication management; 3G configuration management (CM); Bulk CM integration reference point (IRP): Requirements

The document describes the bulk configuration management (CM) requirements for managing a 3G network. This is described from the management perspective in TS 32.101 and TS 32.102.

The Itf-N for CM is built up by a number of integration reference points (IRPs) and a related name convention TS 32.300, which realize the functional capabilities over this interface. The basic structure of the IRPs is defined in TS 32.101 and TS 32.102. For CM, a number of IRPs (and a name convention) are defined, used by this as well as by other specifications for telecom management. These IRPs are defined in separate specifications. This document defines the requirements for the bulk CM IRP.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 611	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 611	7.0.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532611v700
ATIS	ATIS.3GPP.32.611V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.611(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.611(R7-7.0.0).zip
TTC	TS-3GA-32.611(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32611rel7v700.pdf

10.10.135 TS 32.612 Telecommunication management; 3G configuration management (CM); Bulk CM integration reference point (IRP): Information service

The document (bulk configuration management IRP: Information service) defines an integration reference point (IRP) through which an 'IRPAgent' (typically an element manager or network element) can communicate bulk configuration management related information to one or several 'IRPManagers' (typically network managers).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 612	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 612	7.2.0	Published	2007-04-05	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532612v720
ATIS	ATIS.3GPP.32.612V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.612(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.612(R7-7.2.0).zip
TTC	TS-3GA-32.612(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32612rel7v720.pdf

10.10.136 TS 32.613 Telecommunication management; 3G configuration management (CM); Bulk CM integration reference point (IRP): CORBA solution set

The purpose of this *Bulk CM IRP: CORBA Solution Set* is to define the mapping of the IRP information service (see TS 32.612) to the protocol-specific details necessary for implementation of this IRP in a CORBA/IDL environment.

The document does not describe any network resource models (NRMs) – they are described in generic network resources IRP: NRM TS 32.622, UTRAN network resources IRP: NRM TS 32.642.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 613	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 613	7.0.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532613v700
ATIS	ATIS.3GPP.32.613V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.613(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.613(R7-7.0.0).zip
TTC	TS-3GA-32.613(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32613rel7v700.pdf

10.10.137 TS 32.615 Telecommunication management; Configuration management (CM); Bulk CM integration reference point (IRP): eXtensible markup language (XML) file format definition

The document defines the XML file formats for the configuration data files and session log files of bulk CM IRP IS TS 32.612.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 615	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 615	7.2.0	Published	2007-10-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532615v720
ATIS	ATIS.3GPP.32.615V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.615(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.615(R7-7.1.0).zip
TTC	TS-3GA-32.615(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32615rel7v720.pdf

10.10.138 TS 32.621 Telecommunication management; Configuration management (CM); Generic network resources integration reference point (IRP): Requirements

The document defines, in addition to the requirements defined in TS 32.101, 32.102 and 32.600, the requirements for the present IRP: Generic network resources IRP.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 621	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 621	7.0.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532621v700
ATIS	ATIS.3GPP.32.621V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.621(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.621(R7-7.0.0).zip
TTC	TS-3GA-32.621(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32621rel7v700.pdf

10.10.139 TS 32.622 Telecommunication management; Configuration management (CM); Generic network resources IRP; Network resource model (NRM)

The document (generic network resources IRP: Network resource model) defines an integration reference point (IRP) through which an 'IRPAgent' (typically an element manager or network element) can communicate network management-related information to one or several 'IRPManagers' (typically network managers).

The document specifies a generic network resource model (NRM) (also referred to as a management information model – MIM) with definitions of managed object classes.

The configuration management (CM) area is very large. The intention is to split the specification of the related interfaces in several IRPs. In addition to the subject IRP, it is expected that IRPs will be defined for functional areas like security management, software management, network & service provisioning, etc. An important aspect of such a split is that the network resource models (NRMs)

defined in different IRPs are consistent. The generic network resources IRP here provides a base for all resource modelling.

The generic network resources IRP main purpose is to define a generic network resource model that constitutes a base from which other (more specialized) resource models can inherit or have associations with.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 622	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 622	7.0.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532622v700
ATIS	ATIS.3GPP.32.622V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.622(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.622(R7-7.0.0).zip
TTC	TS-3GA-32.622(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32622rel7v700.pdf

10.10.140 TS 32.623 Telecommunication management; Configuration management (CM); Generic network resources IRP: CORBA solution set

The TS 32.620 series (generic network resources IRP) defines an integration reference point (IRP) through which an 'IRPAgent' (typically an element manager or network element) can communicate network management-related information to one or several 'IRPManagers' (typically network managers).

This series of documents specifies a generic network resource model (NRM) (also referred to as a management information model – MIM) with definitions of information object classes and managed object classes.

The document specifies the CORBA solution set.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 623	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 623	7.1.0	Published	2007-10-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532623v710
ATIS	ATIS.3GPP.32.623V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.623(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.623(R7-7.0.0).zip
TTC	TS-3GA-32.623(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32623rel7v710.pdf

10.10.141 TS 32.625 Telecommunication management; Configuration management (CM); Generic network resources IRP: Bulk CM eXtensible markup language (XML) file format definition

This document provides the NRM-specific part related to the generic network resources IRP NRM (3G TS 32.622) of the XML file format definition for the bulk configuration management IRP IS (3G TS 32.612).

The main part of this XML file format definition is provided by 3G TS 32.615.

This file format definition specification is related to 3G TS 32.622.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 625	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 625	7.1.0	Published	2007-10-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532625v710
ATIS	ATIS.3GPP.32.625V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.625(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.625(R7-7.0.0).zip
TTC	TS-3GA-32.625(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32625rel7v710.pdf

10.10.142 TS 32.631 Telecommunication management; Configuration management (CM); Core network resources IRP: Requirements

The document defines, in addition to the requirements defined in TS 32.101, 32.102 and 32.600, the requirements for the present IRP: Core network resources IRP.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 631	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 631	7.1.0	Published	2007-04-05	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532631v710
ATIS	ATIS.3GPP.32.631V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.631(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.631(R7-7.1.0).zip
TTC	TS-3GA-32.631(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32631rel7v710.pdf

10.10.143 TS 32.632 Telecommunication management; Configuration management; Core network resources IRP: Network resource model (NRM)

The document is part of an integration reference point (IRP) named "Core Network Resources IRP", through which an 'IRPAgent' (typically an element manager or network element) can communicate configuration management information to one or several 'IRPManagers' (typically network managers) concerning CN resources. This version of the IRP is mainly intended for "passive management" of high-level network configuration and status information as required by a network manager. The "Core Network Resources IRP" comprises a set of specifications defining Requirements, a protocol-neutral network resource model (NRM) and corresponding solution set(s).

The document specifies the protocol-neutral core network resources IRP: Network resource model. It reuses relevant parts of the generic NRM in TS 32.622, either by direct reuse or sub-classing, and in addition to that defines CN-specific managed object classes.

The configuration management (CM) area is very large. The intention is to split the specification of the related interfaces in several IRPs – as described in the Introduction clause. An important aspect of such a split is that the network resource models (NRMs) defined in different IRPs containing NRMs are consistent, and that NRMs supported by an IRPAgent implementation can be accessed as one coherent model through one IRP information service.

The document has the following main purpose: to define the applied CN-specific network resource model, based on the generic NRM in TS 32.622.

Finally, in order to access the information defined by this NRM, an IRP information service (IS) is needed, such as the basic CM IRP: IS TS 32.602. However, which information service that is applicable is outside the scope of this document.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 632	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 632	7.2.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532632v720
ATIS	ATIS.3GPP.32.632V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.632(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.632(R7-7.1.0).zip
TTC	TS-3GA-32.632(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32632rel7v720.pdf

10.10.144 TS 32.633 Telecommunication management; Configuration management (CM); Core network resources IRP: CORBA solution set

The purpose of this *Core Network Resources IRP: CORBA Solution Set* is to define the mapping of the IRP information model (see TS 32.632) to the protocol-specific details necessary for implementation of this IRP in a CORBA/IDL environment.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 633	7.3.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 633	7.3.0	Published	2007-10-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532633v730
ATIS	ATIS.3GPP.32.633V730-2007	7.3.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.633(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.633(R7-7.1.0).zip
TTC	TS-3GA-32.633(Rel7)v7.3.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32633rel7v730.pdf

10.10.145 TS 32.635 Telecommunication management; Configuration management (CM); Core network resources IRP: Bulk CM eXtensible markup language (XML) file format definition

This document provides the NRM-specific part related to the core network resources IRP NRM (3G TS 32.632) of the XML file format definition for the bulk configuration management IRP IS (3G TS 32.612).

The main part of this XML file format definition is provided by 3G TS 32.615.

This file format definition specification is related to 3G TS 32.632.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 635	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 635	7.2.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532635v720
ATIS	ATIS.3GPP.32.635V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.635(R7-7.0.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.635(R7-7.1.0).zip
TTC	TS-3GA-32.635(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32635rel7v720.pdf

10.10.146 TS 32.641 Telecommunication management; Configuration management (CM); UTRAN network resources IRP: Requirements

The document defines, in addition to the requirements defined in TS 32.101, 32.102 and 32.600, the requirements for the present IRP: UTRAN network resources IRP.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 641	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 641	7.0.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532641v700
ATIS	ATIS.3GPP.32.641V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.641(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.641(R7-7.0.0).zip
TTC	TS-3GA-32.641(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32641rel7v700.pdf

10.10.147 TS 32.642 Telecommunication management; Configuration management (CM); UTRAN network resources IRP: NRM

The document is part of an integration reference point (IRP) named "UTRAN Network Resources IRP", through which an 'IRPAgent' (typically an element manager or network element) can communicate configuration management information to one or several 'IRPManagers' (typically network managers) concerning UTRAN resources. The "UTRAN Network Resources IRP" comprises a set of specifications defining Requirements, a protocol neutral network resource model (NRM) and corresponding solution set(s).

The document specifies the protocol neutral UTRAN network resources IRP: Network resource model. It reuses relevant parts of the generic NRM in TS 32.622, either by direct reuse or sub-classing, and in addition to that defines UTRAN specific managed object classes.

The configuration management (CM) area is very large. The intention is to split the specification of the related interfaces in several IRPs – as described in the introduction clause. An important aspect of such a split is that the network resource models (NRMs) defined in different IRPs containing NRMs are consistent, and that NRMs supported by an IRPAgent implementation can be accessed as one coherent model through one IRP information service.

The document has the following main purpose: to define the applied UTRAN-specific network resource model, based on the generic NRM in TS 32.600.

Finally, in order to access the information defined by this NRM, an IRP information service (IS) is needed, such as the basic CM IRP: IS 32.602 or the bulk CM IRP: IS 32.612. However, which information service is applicable is outside the scope of this document.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 642	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 642	7.2.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532642v720
ATIS	ATIS.3GPP.32.642V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.642(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.642(R7-7.1.0).zip
TTC	TS-3GA-32.642(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32642rel7v720.pdf

10.10.148 TS 32.643 Telecommunication management; Configuration management (CM); UTRAN network resources IRP: CORBA solution set

The purpose of this UTRAN network resources IRP: CORBA solution set is to define the mapping of the IRP information model (see TS 32.642) to the protocol-specific details necessary for implementation of this IRP in a CORBA/IDL environment.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 643	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 643	7.2.0	Published	2007-07-02	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532643v720
ATIS	ATIS.3GPP.32.643V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.643(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.643(R7-7.2.0).zip
TTC	TS-3GA-32.643(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32643rel7v720.pdf

10.10.149 TS 32.645 Telecommunication management; Configuration management (CM); UTRAN network resources IRP: Bulk CM eXtensible markup language (XML) file format definition

This document provides the NRM-specific part related to the UTRAN network resources IRP NRM (3G TS 32.642) of the XML file format definition for the bulk configuration management IRP IS (3G TS 32.612).

The main part of this XML file format definition is provided by 3G TS 32.615.

This file format definition specification is related to 3G TS 32.642.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 645	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 645	7.2.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532645v720
ATIS	ATIS.3GPP.32.645V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.645(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.645(R7-7.2.0).zip
TTC	TS-3GA-32.645(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32645rel7v720.pdf

10.10.150 TS 32.661 Telecommunication management; Configuration management (CM); Kernel CM; Requirements

This document defines, in addition to the requirements defined in 3G TS 32.101, 3G TS 32.102, and 3G TS 32.600, the requirements for the present IRP: Kernel configuration management IRP. It is the intent of Kernel configuration management to provide an IRP that contains the configuration management functionality that is basic and minimal. It is the functionality that is common to and required by both basic CM and bulk CM. While neither the basic CM IRP nor bulk CM IRP requires the other, they each require the Kernel CM IRP.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 661	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 661	7.0.0	Published	2007-06-29	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532661v700
ATIS	ATIS.3GPP.32.661V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.661(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.661(R7-7.0.0).zip
TTC	TS-3GA-32.661(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32661rel7v700.pdf

10.10.151 TS 32.662 Telecommunication management; Configuration management (CM); Kernel CM; Information service

This document defines integration reference point (IRP) through which an 'IRPAgent' (typically an element manager or network element) can communicate configuration management-related information to one or several 'IRPManagers' (typically network managers).

The function of this Kernel CM IRP information service is to define an interface that provides the essential CM services. While it is not expected that the Kernel CM IRP alone will provide adequate CM capability, the Kernel CM IRP is expected to provide the common supporting capability required for other IRPs such as the basic CM IRP or the bulk CM IRP, each of which requires the Kernel CM IRP.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 662	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 662	7.0.0	Published	2007-07-02	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532662v700
ATIS	ATIS.3GPP.32.662V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.662(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.662(R7-7.0.0).zip
TTC	TS-3GA-32.662(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32662rel7v700.pdf

10.10.152   TS 32.663 Telecommunication management; Configuration management (CM); Kernel CM: CORBA solution set

The purpose of this document is to define the mapping of the Kernel CM IRP: IS (see 3G TS 32.662) to the protocol-specific details necessary for implementation of this IRP in a CORBA/IDL environment.

This solution set specification is related to 3G TS 32.662.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 663	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 663	7.0.0	Published	2007-07-02	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532663v700
ATIS	ATIS.3GPP.32.663V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.663(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.663(R7-7.0.0).zip
TTC	TS-3GA-32.663(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32663rel7v700.pdf

10.10.153   TS 32.665 Telecommunication management; Configuration management (CM); Kernel CM integration reference point (IRP): eXtensible markup language (XML) definitions

The present document specifies the XML definitions for the Kernel CM integration reference point (IRP) as it applies to Itf-N, in accordance with Kernel CM IRP IS definitions in TS 32.662 as well as the notification log IRP XML definitions in TS 32.335.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 665	7.0.2	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 665	7.0.2	Published	2007-07-25	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532665v702
ATIS	ATIS.3GPP.32.665V702-2007	7.0.2	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.665(R7-7.0.1)	7.0.1	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.665(R7-7.0.1).zip
TTC	TS-3GA-32.665(Rel7)v7.0.2	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32665rel7v701.pdf

10.10.154   TS 32.667 Telecommunication management; Configuration management (CM); Kernel CM integration reference point (IRP): SOAP solution set (SS)

The purpose of the present document is to define the mapping of the Kernel CM IRP: IS (TS 32.662) to the protocol-specific details necessary for the implementation of this IRP in a SOAP/WSDL environment.

This solution set specification is related to TS 32.662.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 667	7.0.2	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 667	7.0.2	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532667v702
ATIS	ATIS.3GPP.32.667V702-2007	7.0.2	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.667(R7-7.0.1)	7.0.1	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.667(R7-7.0.1).zip
TTC	TS-3GA-32.667(Rel7)v7.0.2	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32667rel7v701.pdf

10.10.155   TS 32.671 Telecommunication management; Configuration management (CM); State management integration reference point (IRP): Requirements

This document defines, in addition to the requirements defined in 3G TS 32.101, 3G TS 32.102 and 3G TS 32.600, the requirements for the present IRP: State management.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 671	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 671	7.0.0	Published	2007-07-02	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532671v700
ATIS	ATIS.3GPP.32.671V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.671(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.671(R7-7.0.0).zip
TTC	TS-3GA-32.671(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32671rel7v700.pdf

10.10.156 TS 32.672 Telecommunication management; Configuration management (CM); State management integration reference point (IRP): Information service

This document defines the information service (IS) part of the state management IRP. It specifies the semantics of the network resource state and status information visible across the Itf-N. It also specifies the interaction required for the management of the state and status information.

The state and status attributes specified in this document shall be used, where applicable, as attributes in information object class (IOC) definitions of other 3G IRPs. When used by the IOC definition, the semantics of the state and status attributes can be qualified and enhanced, if deemed necessary.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 672	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 672	7.0.0	Published	2007-07-02	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532672v700
ATIS	ATIS.3GPP.32.672V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.672(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.672(R7-7.0.0).zip
TTC	TS-3GA-32.672(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32672rel7v700.pdf

10.10.157 TS 32.673 Telecommunication management; Configuration management (CM); State management integration reference point (IRP): CORBA solution set

This document specifies the CORBA solution set (SS) for the IRP whose semantics is specified in state management IRP: Information service (IS) (3G TS 32.672).

Clauses 1 to 3 provide background information. Clause 4 provides key architectural features supporting the SS. Clause 5 defines the mapping of operations, notification, parameters and attributes defined in IS to their SS equivalents. Annex A contains the IDL specification.

This solution set specification is related to 3G TS 32.672.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 673	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 673	7.0.0	Published	2007-07-02	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532673v700
ATIS	ATIS.3GPP.32.673V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.673(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.673(R7-7.0.0).zip
TTC	TS-3GA-32.673(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32673rel7v700.pdf

10.10.158 TS 32.675 Telecommunication management; Configuration management (CM); State management integration reference point (IRP): Bulk CM eXtensible markup language (XML) file format definition

The present document specifies the XML file format definition for the bulk configuration management IRP IS for the IRP whose semantics is specified in state management IRP: Information service (IS) (3G TS 32.672).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 675	7.0.2	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 675	7.0.2	Published	2007-07-02	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532675v702
ATIS	ATIS.3GPP.32.675V702-2007	7.0.2	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.675(R7-7.0.1)	7.0.1	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.675(R7-7.0.1).zip
TTC	TS-3GA-32.675(Rel7)v7.0.2	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32675rel7v702.pdf

10.10.159 TS 32.690 Telecommunication management; Inventory management (IM): Requirements

The present document defines the requirements for the present IRP: Inventory management IRP.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 690	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 690	7.0.0	Published	2007-07-02	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532690v700
ATIS	ATIS.3GPP.32.690V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.690(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.690(R7-7.0.0).zip
TTC	TS-3GA-32.690(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32690rel7v700.pdf

10.10.160   TS 32.691 Telecommunication management; Inventory management network resources integration reference point (IRP): Requirements

This document defines, in addition to the requirements defined in 3G TS 32.101, 3G TS 32.102 and 3G TS 32.600, the requirements for the present IRP: Inventory management network resources IRP.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 691	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 691	7.0.0	Published	2007-07-02	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532691v700
ATIS	ATIS.3GPP.32.691V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.691(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.691(R7-7.0.0).zip
TTC	TS-3GA-32.691(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32691rel7v700.pdf

10.10.161   TS 32.692 Telecommunication management; Inventory management network resources integration reference point (IRP): Network resource model

This document defines an integration reference point (IRP) through which an 'IRPAgent' (typically an element manager or network element) can communicate network management-related information to one or several 'IRPManagers' (typically network managers).

This document specifies an inventory management network resource model (NRM) (also referred to as a management information model – MIM) with definitions of information object classes.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 692	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 692	7.0.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532692v700
ATIS	ATIS.3GPP.32.692V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.692(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.692(R7-7.0.0).zip
TTC	TS-3GA-32.692(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32692rel7v700.pdf

10.10.162 TS 32.695 Telecommunication management; Inventory management (IM) network resource model (NRM) integration reference point (IRP): Bulk CM eXtensible markup language (XML) file format definition

The present document provides the NRM-specific part related to the inventory management NRM IRP IS 3GPP TS 32.692 of the XML file format definition for the bulk configuration management IRP IS 3GPP TS 32.612.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 695	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 695	7.0.0	Published	2007-07-02	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532695v700
ATIS	ATIS.3GPP.32.695V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.695(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.695(R7-7.0.0).zip
TTC	TS-3GA-32.695(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32695rel7v700.pdf

10.10.163 TS 32.711 Telecommunication management; Configuration management (CM); Transport network (TN) interface network resource model (NRM) integration reference point (IRP): Requirements

The present document defines the requirements for the present IRP: Transport network (TN) interface network resource model (NRM) integration reference point.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 711	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 711	7.0.0	Published	2007-07-03	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532711v700
ATIS	ATIS.3GPP.32.711V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.711(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.711(R7-7.0.0).zip
TTC	TS-3GA-32.711(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32711rel7v700.pdf

10.10.164 TS 32.712 Telecommunication management; Configuration management (CM); Transport network (TN) interface network resource model (NRM) integration reference point (IRP): Information service (IS)

The present document is part of an integration reference point (IRP) named "Transport Network (TN) interface network resource model (NRM) IRP", through which an "IRPAgent" (typically an element manager or network element) can communicate configuration management information to one or several "IRPManagers" (typically network managers) concerning transport resources. The "Transport Network (TN) Interface Network Resource Model (NRM) IRP" comprises a set of specifications defining Requirements, a protocol-neutral network resource model (NRM) and corresponding solution set(s).

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 712	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 712	7.1.0	Published	2007-10-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532712v710
ATIS	ATIS.3GPP.32.712V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.712(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.712(R7-7.0.0).zip
TTC	TS-3GA-32.712(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32712rel7v710.pdf

10.10.165 TS 32.713 Telecommunication management; Configuration management (CM); Transport network (TN) interface network resource model (NRM) integration reference point (IRP): Common object request broker architecture (CORBA) solution set (SS)

The purpose of this transport network (TN) interface network resource model IRP: CORBA solution set is to define the mapping of the IRP information model (see 3G TS 32.712) to the protocol-specific details necessary for implementation of this IRP in a CORBA/IDL environment.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 713	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 713	7.1.0	Published	2007-10-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532713v710
ATIS	ATIS.3GPP.32.713V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.713(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.713(R7-7.0.0).zip
TTC	TS-3GA-32.713(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32713rel7v710.pdf

10.10.166   TS 32.715 Telecommunication management; Configuration management (CM); Transport network (TN) interface network resource model (NRM) integration reference point (IRP): Bulk CM eXtensible markup language (XML) file format definition

The present document provides the NRM-specific part related to 3G TS 32.712 transport network (TN) interface NRM IRP IS of the XML file format definition for the 3G TS 32.612 bulk configuration management IRP IS.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 715	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 715	7.1.0	Published	2007-10-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532715v710
ATIS	ATIS.3GPP.32.715V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.715(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.715(R7-7.0.0).zip
TTC	TS-3GA-32.715(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32715rel7v710.pdf

10.10.167   TS 32.721 Telecommunication management; Configuration management (CM); Repeater network resources integration reference point (IRP): Requirements

This document defines, in addition to the requirements defined in 3GPP TS 32.101, 3GPP TS 32.102 and 3GPP TS 32.600, the requirements for the present repeater network resources IRP.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 721	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 721	7.1.0	Published	2007-04-23	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532721v710
ATIS	ATIS.3GPP.32.721V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.721(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.721(R7-7.1.0).zip
TTC	TS-3GA-32.721(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32721rel7v710.pdf

10.10.168 TS 32.722 Telecommunication management; Configuration management (CM); Repeater network resources integration reference point (IRP): Information service (IS)

The present document is part of an integration reference point (IRP) named "Repeater Network Resources IRP", through which an "IRPAgent" (typically an element manager or network element) can communicate configuration management information to one or several "IRPManagers" (typically network managers) concerning repeater resources. The "Repeater Network Resources IRP" comprises a set of specifications defining Requirements, a protocol neutral network resource model (NRM) and corresponding solution set(s).

The present document specifies the protocol neutral repeater network resources IRP: Network resource model. It reuses relevant parts of the generic NRM in TS 32.622 and 32.642, either by direct reuse or sub-classing, and in addition to that defines repeater specific information object classes.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 722	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 722	7.0.0	Published	2007-04-23	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532722v700
ATIS	ATIS.3GPP.32.722V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.722(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.722(R7-7.0.0).zip
TTC	TS-3GA-32.722(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32722rel7v700.pdf

10.10.169 TS 32.723 Telecommunication management; Configuration management (CM); Repeater network resources integration reference point (IRP): Common object request broker architecture (CORBA) solution set (SS)

The purpose of this repeater network resources IRP: CORBA solution set is to define the mapping of the IRP information model (see 3GPP TS 32.722) to the protocol-specific details necessary for the implementation of this IRP in a CORBA/IDL environment.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 723	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 723	7.1.0	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532723v710
ATIS	ATIS.3GPP.32.723V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.723(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.723(R7-7.1.0).zip
TTC	TS-3GA-32.723(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32723rel7v700.pdf

10.10.170 TS 32.725 Telecommunication management; Configuration management (CM); Repeater network resources integration reference point (IRP): Bulk CM eXtensible markup language (XML) file format definition

The present document provides the NRM-specific part related to the repeater network resources IRP NRM (3GPP TS 32.722) of the XML file format definition for the bulk configuration management IRP IS (3GPP TS 32.612).

The main part of this XML file format definition is provided by 3GPP TS 32.615.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 725	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 725	7.0.0	Published	2007-04-23	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532725v700
ATIS	ATIS.3GPP.32.725V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.725(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.725(R7-7.0.0).zip
TTC	TS-3GA-32.725(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32725rel7v700.pdf

10.10.171 TS 32.731 Telecommunication management; IP multimedia subsystem (IMS) network resource model (NRM) integration reference point (IRP): Requirements

This document defines, in addition to the requirements defined in 3GPP TS 32.101, 3GPP TS 32.102 and 3GPP TS 32.600, the requirements for the IMS network resource model (NRM) IRP.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 731	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 731	7.0.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0532731v700
ATIS	ATIS.3GPP.32.731V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.731(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.731(R7-7.0.0).zip
TTC	TS-3GA-32.731(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32731rel7v700.pdf

10.10.172 TS 32.732 Telecommunication management; IP multimedia subsystem (IMS) network resource model (NRM) integration reference point (IRP): Information service (IS)

The present document is part of an integration reference point (IRP) named IMS network resource model (NRM) IRP, through which an IRPAgent can communicate configuration management information to one or several IRPManagers concerning IMS resources. The IMS NRM IRP comprises a set of specifications defining Requirements, a protocol neutral information service and one or more solution set(s).

The present document specifies the protocol neutral IMS NRM IRP: Information service (IS). It reuses relevant parts of the generic NRM IRP: IS in 3GPP TS 32.622, either by direct reuse or sub-classing, and in addition to that defines IMS-specific information object classes.

Finally, in order to access the information defined by this NRM, an interface IRP is needed, such as the basic CM IRP in 3GPP TS 32.602. However, which interface IRP is applicable is outside the scope of the present document.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 732	7.3.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 732	7.3.0	Published	2007-10-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532732v730
ATIS	ATIS.3GPP.32.732V730-2007	7.3.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.732(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.732(R7-7.2.0).zip
TTC	TS-3GA-32.732(Rel7)v7.3.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32732rel7v730.pdf

10.10.173 TS 32.733 Telecommunication management; IP multimedia subsystem (IMS) network resource model (NRM) integration reference point (IRP): Common object request broker architecture (CORBA) solution set (SS)

The purpose of this *IMS NRM IRP: CORBA Solution Set* is to define the mapping of the IRP information service (see TS 32.732) to the protocol-specific details necessary for the implementation of this IRP in a CORBA/IDL environment.

This solution set specification is related to 3GPP TS 32.732.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 733	7.3.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 733	7.3.0	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532733v730
ATIS	ATIS.3GPP.32.733V730-2007	7.3.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.733(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.733(R7-7.2.0).zip
TTC	TS-3GA-32.733(Rel7)v7.3.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32733rel7v730.pdf

10.10.174 TS 32.735 Telecommunication management; IP multimedia subsystem (IMS) network resource model (NRM) integration reference point (IRP): eXtensible markup language (XML) file format definition

The present document provides the NRM-specific part related to the IMS NRM IRP (3GPP TS 32.732) of the XML file format definition for the bulk configuration management IRP IS (3GPP TS 32.612).

The main part of this XML file format definition is provided by 3GPP TS 32.615.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 735	7.3.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 735	7.3.0	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532735v730
ATIS	ATIS.3GPP.32.735V730-2007	7.3.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.735(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.735(R7-7.2.0).zip
TTC	TS-3GA-32.735(Rel7)v7.3.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32735rel7v730.pdf

10.10.175   TS 32.741 Telecommunication management; Configuration management (CM); Signalling transport network (STN) interface network resource model (NRM) integration reference point (IRP): Requirements

The present document defines the requirements for the signalling transport network (STN) interface NRM IRP.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 741	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 741	7.1.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532741v710
ATIS	ATIS.3GPP.32.741V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.741(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.741(R7-7.1.0).zip
TTC	TS-3GA-32.741(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32741rel7v710.pdf

10.10.176   TS 32.742 Telecommunication management; Configuration management (CM); Signalling transport network (STN) interface network resource model (NRM) integration reference point (IRP): Information service (IS)

The present document is part of an integration reference point (IRP) named "Signalling Transport Network (STN) network resources IRP", through which an "IRPAgent" (typically an element manager or network element) can communicate configuration management information to one or several "IRPManagers" (typically network managers) concerning signalling transport resources. The "Signalling Transport Network (STN) network resources IRP" comprises a set of specifications defining Requirements, a protocol-neutral network resource model (NRM) and corresponding solution set(s).

The present document specifies the protocol-neutral STN resources IRP: Network resource model.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 742	7.0.1	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 742	7.0.1	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532742v701
ATIS	ATIS.3GPP.32.742V701-2007	7.0.1	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.742(R7-7.0.1)	7.0.1	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.742(R7-7.0.1).zip
TTC	TS-3GA-32.742(Rel7)v7.0.1	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32742rel7v701.pdf

10.10.177 TS 32.743 Telecommunication management; Configuration management (CM); Signalling transport network (STN) interface network resource model (NRM) integration reference point (IRP): Common object request broker architecture (CORBA) solution set (SS)

The purpose of this STN network resources IRP: CORBA solution set is to define the mapping of the IRP information model (see 3G TS 32.742) to the protocol-specific details necessary for implementation of this IRP in a CORBA/IDL environment.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 743	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 743	7.2.0	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532743v720
ATIS	ATIS.3GPP.32.743V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.743(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.743(R7-7.2.0).zip
TTC	TS-3GA-32.743(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32743rel7v720.pdf

10.10.178 TS 32.745 Telecommunication management; Configuration management (CM); Signalling transport network (STN) interface network resource model (NRM) integration reference point (IRP): Bulk CM eXtensible markup language (XML) file format definition

The present document provides the NRM-specific part related to the STN network resources IRP NRM 3G TS 32.742 of the XML file format definition for the bulk configuration management IRP IS 3G TS 32.612.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-132 745	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 132 745	7.1.0	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0532745v710
ATIS	ATIS.3GPP.32.745V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-32.745(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-32.745(R7-7.1.0).zip
TTC	TS-3GA-32.745(Rel7)v7.1.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts32745rel7v710.pdf

10.11   33-series, Security aspects

10.11.1 TS 33.102 3G security; Security architecture

This specification defines the security architecture, i.e., the security features and the security mechanisms, for the third generation mobile telecommunication system.

A security feature is a service capability that meets one or several security requirements. The complete set of security features addresses the security requirements as they are defined in "3G Security: Threats and Requirements" (TS 21.133) and implement the security objectives and principles described in TS 33.120. A security mechanism is an element that is used to realize a security feature. All security features and security mechanisms taken together form the security architecture.

An example of a security feature is user data confidentiality. A security mechanism that may be used to implement that feature is a stream cipher using a derived cipher key.

This specification defines 3G security procedures performed within 3G capable networks (R99+), i.e., intra-UMTS and UMTS-GSM. As an example, UMTS authentication is applicable to UMTS radio access as well as GSM radio access provided that the serving network node and the MS are UMTS capable. Interoperability with non-UMTS capable networks (R98–) is also covered.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-33.102V7.1.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/33/A33102-710.pdf
CCSA	CCSA-TSD-133 102	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 133 102	7.1.0	Published	2006-12-21	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0333102v710
ATIS	ATIS.3GPP.33.102V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-33.102(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-33.102(R7-7.1.0).zip

10.11.2 TS 33.105 3G security; Cryptographic algorithm requirements

This specification constitutes a requirements specification for the security functions which may be used to provide the network access security features defined in 3G TS 33.102.

The specification covers the intended use of the functions, the technical requirements on the functions and the requirements as regards standardization.

For those functions that require standardization, it also covers the intended use of the algorithm specification, the requirements on test data, and quality assurance requirements on both the algorithm and its documentation.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-33.105V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/33/A33105-700.pdf
CCSA	CCSA-TSD-133 105	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 133 105	7.0.0	Published	2007-07-05	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0333105v700
ATIS	ATIS.3GPP.33.105V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-33.105(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-33.105(R7-7.0.0).zip

10.11.3 TS 33.106 Lawful interception requirements

The document provides basic interception requirements within a third generation mobile communication system (3GMS).

The specification describes the service requirements from a law enforcement point of view only. The aim of this document is to define a 3GMS interception system that supports a number of regional interception regulations, but these regulations are not repeated here as they vary. Regional interception requirements shall rely on this specification to derive such information, as they require.

These interception requirements shall be used to derive specific network requirements.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-33.106V7.0.1	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/33/A33106-701.pdf
CCSA	CCSA-TSD-133 106	7.0.1	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 133 106	7.0.1	Published	2006-04-21	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0333106v701
ATIS	ATIS.3GPP.33.106V701-2007	7.0.1	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-33.106(R7-7.0.1)	7.0.1	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-33.106(R7-7.0.1).zip

10.11.4 TS 33.107 3G security; Lawful interception architecture and functions

The document describes the architecture and functional requirements within a third generation mobile communication system (3GMS).

The specification shows the service requirements from a law enforcement point of view only. The aim of this document is to define a 3GMS interception system that supports a number of regional interception regulations, but these regulations are not repeated here as they vary. Regional interception requirements shall be met in using specific (regional) mediation functions allowing only required information to be transported.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-33.107V7.7.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/33/A33107-770.pdf
CCSA	CCSA-TSD-133 107	7.7.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 133 107	7.7.0	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0333107v770
ATIS	ATIS.3GPP.33.107V770-2007	7.7.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-33.107(R7-7.6.0)	7.6.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-33.107(R7-7.6.0).zip

10.11.5 TS 33.108 3G security; Handover interface for lawful interception (LI)

This specification addresses the handover interfaces for lawful interception of packet-data services, circuit-switched services, and multimedia services within the UMTS network. The handover interface in this context includes the delivery of intercept related information (HI2) and content of communication (HI3) to the law enforcement monitoring facility.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-33.108V7.8.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/33/A33108-780.pdf
CCSA	CCSA-TSD-133 108	7.8.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 133 108	7.8.0	Published	2007-07-05	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0333108v780
ATIS	ATIS.3GPP.33.108V 780-2007	7.8.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-33.108(R7-7.8.0)	7.8.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-33.108(R7-7.8.0).zip

10.11.6 TS 33.110 Key establishment between a universal integrated circuit card (UICC) and a terminal

The present document describes the security features and mechanisms to provision a shared key between a UICC and a terminal that may host the UICC or be connected to the device hosting the UICC via a local interface. Candidate applications to use this key establishment mechanism include, but are not restricted to, secure channel between a UICC and a terminal [ETSI TS 102 484].

The scope of this specification includes an architecture overview and the detailed procedure how to establish the shared key between the UICC and the terminal.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-33.110V7.3.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/33/A33110-730.pdf
CCSA	CCSA-TSD-133 110	7.3.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 133 110	7.3.0	Published	2007-10-15	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0333110v730
ATIS	ATIS.3GPP.33.110V 730-2007	7.3.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-33.110(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-33.110(R7-7.2.0).zip

10.11.7 TS 33.141 Presence service; Security

The present document is the Stage 2 specification for the security requirements, security architecture, security features and security mechanisms for the presence service, which includes the elements necessary to realize the requirements in 3G TS 22.141 and 3G TS 23.141. As far as SIP-based procedures are concerned, this specification refers to 3G TS 33.203. The main content of this specification is the security for the Ut reference point, which is HTTP based, as applied in presence services.

The present document includes information applicable to network operators, service providers and manufacturers.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-33.141V7.1.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/33/A33141-710.pdf
CCSA	CCSA-TSD-133 141	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 133 141	7.1.0	Published	2006-07-25	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0333141v710
ATIS	ATIS.3GPP.33.141V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-33.141(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-33.141(R7-7.1.0).zip

10.11.8 TS 33.203 3G security; Access security for IP-based services

The scope for this technical specification is to specify the security features and mechanisms for secure access to the IM subsystem (IMS) for the 3G mobile telecommunication system.

The IMS in UMTS will support IP multimedia applications such as video, audio and multimedia conferences. Session initiation protocol (SIP [IETF RFC 3261]) has been chosen as the signalling protocol for creating and terminating multimedia sessions. This specification only deals with how the SIP signalling is protected between the subscriber and the IMS, how the subscriber is authenticated and how the subscriber authenticates the IMS.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-33.203V7.7.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/33/A33203-770.pdf
CCSA	CCSA-TSD-133 203	7.7.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 133 203	7.7.0	Published	2007-10-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0333203v770
ATIS	ATIS.3GPP.33.203V770-2007	7.7.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-33.203(R7-7.5.0)	7.5.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-33.203(R7-7.5.0).zip

10.11.9 TS 33.204 3G Security; Network domain security (NDS); Transaction capabilities application part (TCAP) user security

This technical specification covers the security mechanisms and procedures necessary to protect all TCAP user messages which are sent between different security domains. The complete set of enhancements and extensions to facilitate security protection for the TCAP protocol is termed

TCAPsec and it covers transport security in the TCAP protocol itself and the security management procedures.

This technical specification contains the stage 2 specification for security protection of the TCAP protocol. The actual implementation (stage 3) specification can be found in TS 29.204.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-133 204	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 133 204	7.2.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0333204v720
ATIS	ATIS.3GPP.33.204V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-33.204(R7-7.2.0)	7.2.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-33.204(R7-7.2.0).zip
TTC	TS-3GA-33.204(Rel7)v7.2.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/ts/ts33204rel7v720.pdf

10.11.10   TS 33.210 3G security; Network domain security (NDS); IP network layer security

This document defines the security architecture for the UMTS network domain IP-based control plane. The scope of the UMTS network domain control plane security is to cover the control signalling on selected interfaces between UMTS network elements.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-33.210V7.3.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/33/A33210-730.pdf
CCSA	CCSA-TSD-133 210	7.3.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 133 210	7.3.0	Published	2007-10-17	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0333210v730
ATIS	ATIS.3GPP.33.210V730-2007	7.3.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-33.210(R7-7.3.0)	7.3.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-33.210(R7-7.3.0).zip

10.11.11   TS 33.220 Generic authentication architecture (GAA); Generic bootstrapping architecture

The present document describes the security features and a mechanism to bootstrap authentication and key agreement for application security from the 3GPP AKA mechanism. Candidate applications to use this bootstrapping mechanism include, but are not restricted to, subscriber certificate distribution 3GPP TS 33.221. Subscriber certificates support services whose provision mobile operator assists, as well as services that mobile operator provides.

The scope of this specification includes a generic AKA bootstrapping function, an architecture overview and the detailed procedure how to bootstrap the credential.

Clause 4 of this specification describes a mechanism, called GBA_ME, to bootstrap authentication and key agreement, which does not require any changes to the UICC. Clause 5 of this specification describes a mechanism, called GBA_U, to bootstrap authentication and key agreement, which does require changes to the UICC, but provides enhanced security by storing certain derived keys on the UICC.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-33.220V7.9.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/33/A33220-790.pdf
CCSA	CCSA-TSD-133 220	7.9.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 133 220	7.9.0	Published	2007-10-26	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0333220v790
ATIS	ATIS.3GPP.33.220V790-2007	7.9.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-33.220(R7-7.7.0)	7.7.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-33.220(R7-7.7.0).zip

10.11.12 TS 33.221 Generic authentication architecture (GAA); Support for subscriber certificates

The present document describes subscriber certificate distribution by means of generic bootsrapping architecture (GBA) 3GPP TS 33.220. Subscriber certificates support services whose provision the mobile operator assists, as well as services that are offered by the mobile operator.

The scope of this specification presents signalling procedures for support of issuing certificates to subscribers and the standard format of certificates and digital signatures. It is not intended to duplicate existing standards being developed by other groups on these topics, and will reference these where appropriate.

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ARIB	ARIB STD-T63-33.221V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/33/A33221-700.pdf
CCSA	CCSA-TSD-133 221	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 133 221	7.0.0	Published	2007-06-25	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0333221v700
ATIS	ATIS.3GPP.33.221V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-33.221(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-33.221(R7-7.0.0).zip

10.11.13   TS 33.222 Generic authentication architecture (GAA); Access to network application functions using hypertext transfer protocol over transport layer security (HTTPS)

The present document specifies secure access methods to network application functions (NAFs) using HTTP over TLS in the generic authentication architecture (GAA), and provides Stage 2 security requirements, principles and procedures for the access. The present document describes both direct access to an application server (AS) and access to an application server through an authentication proxy (AP).

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ARIB	ARIB STD-T63-33.222V7.2.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/33/A33222-720.pdf
CCSA	CCSA-TSD-133 222	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 133 222	7.2.0	Published	2006-10-20	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0333222v720
ATIS	ATIS.3GPP.33.222V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-33.222(R7-7.3.0)	7.3.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-33.222(R7-7.3.0).zip

10.11.14   TS 33.234 3G Security; Wireless local area network (WLAN) interworking security

The present document specifies the security architecture, trust model and security requirements for the interworking of the 3GPP System and WLAN access networks.

Specifications of the appropriate mechanisms for user and network authentication, key management, service authorization, confidentiality and integrity protection of user and signalling data are also provided.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-33.234V7.5.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/33/A33234-750.pdf
CCSA	CCSA-TSD-133 234	7.5.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 133 234	7.5.0	Published	2007-06-28	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0333234v750
ATIS	ATIS.3GPP.33.234V 750-2007	7.5.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-33.234(R7-7.5.0)	7.5.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-33.234(R7-7.5.0).zip

10.11.15   TS 33.246 3G security; Security of multimedia broadcast/multicast service

The Technical Specification covers the security procedures of the multimedia broadcast/multicast service (MBMS) for 3GPP systems (UTRAN and GERAN). MBMS is a 3GPP system network bearer service over which many different applications could be carried. The actual method of protection may vary depending on the type of MBMS application.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-33.246V7.5.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/33/A33246-750.pdf
CCSA	CCSA-TSD-133 246	7.5.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 133 246	7.5.0	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0333246v750
ATIS	ATIS.3GPP.33.246V 750-2007	7.5.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-33.246(R7-7.3.0)	7.3.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-33.246(R7-7.3.0).zip

10.11.16   TS 33.259 Key establishment between a UICC hosting device and a remote device

The present document describes the security features and mechanisms to provision a shared key between a UICC hosting device and a remote device connected via a local interface. The shared secret is then intended to be used to secure the interface between the remote device and the UICC hosting device. Candidate applications to use this key establishment mechanism include, but are not restricted to personal network management (see TS 22.259).

The scope of this specification includes an architecture overview and the detailed procedure how to establish the shared key between the UICC hosting device and the remote device. This is different from Technical Specification TS 33.110 that describes an architecture overview and the detailed procedure how to establish the shared key between the UICC itself and the terminal hosting the

UICC. The use cases utilizing the mechanisms described in this specification are seen to be different to the use cases where "Key establishment between a UICC and a terminal", IETF RFC 4279 is utilized.

The solution described in this document is built on the existing infrastructure defined in "GBA", TS 33.220.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-33.259V7.1.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/33/A33259-710.pdf
CCSA	CCSA-TSD-133 259	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 133 259	7.1.0	Published	2007-10-16	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0333259v710
ATIS	ATIS.3GPP.33.259V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-33.259(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-33.259(R7-7.0.0).zip

10.11.17   TS 33.310 Network Domain Security (NDS); Authentication Framework (AF)

For 3GPP systems, there is a need for truly scalable entity authentication framework (AF) since an increasing number of network elements and interfaces are covered by security mechanisms.

This specification provides a highly scalable entity authentication framework for 3GPP network nodes. This framework is developed in the context of the network domain security work item, which effectively limits the scope to the control plane entities of the core network. Thus, *the Authentication Framework will provide entity authentication for the nodes that are using NDS/IP*.

Feasible trust models (i.e., how CAs are organized) and their effects are provided. Additionally, requirements are presented for the used protocols and certificate profiles, to make it possible for operator IPsec and PKI implementations to interoperate.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-33.310V7.1.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/33/A33310-710.pdf
CCSA	CCSA-TSD-133 310	7.1.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 133 310	7.1.0	Published	2006-10-20	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0333310v710
ATIS	ATIS.3GPP.33.310V710-2007	7.1.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-33.310(R7-7.1.0)	7.1.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-33.310(R7-7.1.0).zip

10.11.18 TR 33.905 Recommendations for trusted open platforms

This technical report investigates relevant trust standards and technologies, both existing as well as the ones that are work-in-progress. It develops the recommendations for trusted open platforms for delivery of new applications and services to open platforms.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-133 905	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 133 905	7.0.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=DTR/TSGS-0333905v700
ATIS	ATIS.3GPP.33.905V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTC	TR-3GA-33.905(Rel7)v7.0.0	1	TTC Published	2008-03-31	http://www.ttc.or.jp/imt2000/tr/tr33905rel7v700.pdf

10.11.19 TR 33.918 Generic authentication architecture (GAA); Early implementation of hypertext transfer protocol over transport layer security (HTTPS) connection between a universal integrated circuit card (UICC) and a network application function (NAF)
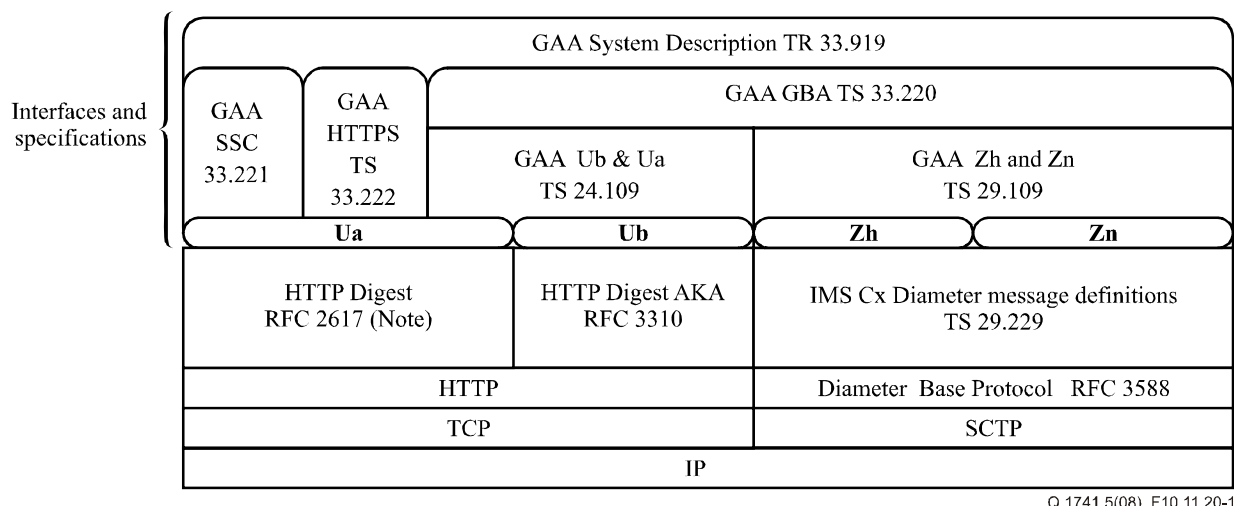
The present document gives guidance on how to perform an early implementation of HTTPS connections between a UICC-based application and a network application function in the generic authentication architecture (GAA).

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB TR-T12-33.918V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/3_T12/ARIB-TR-T12/Rel7/33/A33918-700.pdf
CCSA	CCSA-TSD-133 918	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 133 918	7.0.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=DTR/TSGS-0333918v700
ATIS	ATIS.3GPP.33.918V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.11.20 TR 33.919 3G Security; Generic authentication architecture (GAA); System description

This 3GPP Technical Report aims to give an overview of the different mechanisms that mobile applications can rely upon for authentication between server and client (i.e., the UE). Additionally, it provides guidelines related to the use of GAA and to the choice of authentication mechanism in a given situation and for a given application.

To this end, the TR puts the different GAA specifications that are related to peer authentication into perspective. It clarifies the logic for having three technical specifications, sketches their content and explains the interrelation between these three TSs and their relation with this TR.

GAA System Description TR 33.919

Interfaces and specifications	GAA SSC 33.221	GAA HTTPS TS 33.222	GAA GBA TS 33.220	

GAA GBA TS 33.220

GAA Ub & Ua TS 24.109	GAA Zh and Zn TS 29.109

Ua	Ub	Zh	Zn

HTTP Digest RFC 2617 (Note)	HTTP Digest AKA RFC 3310	IMS Cx Diameter message definitions TS 29.229

HTTP	Diameter Base Protocol RFC 3588
TCP	SCTP
IP	

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NOTE – The GAA supports potentialy many protocols on the Ua interface. One example is the HTTP digest.

Figure 10.11.20-1 – Relationships between GAA specifications and the protocols used by GAA interfaces

Figure 10.11.20-1 depicts protocols used over GAA interfaces and the relationships between different GAA specifications. New GAA specifications will be added to the figure as they become available. Also, other protocols may be added in the future. In particular, new kinds of Ua interfaces could be added in the future and then other protocols may be added below the Ua interface.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB TR-T12-33.919V7.2.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/3_T12/ARIB-TR-T12/Rel7/33/A33919-720.pdf
CCSA	CCSA-TSD-133 919	7.2.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 133 919	7.2.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGS-0333919v720
ATIS	ATIS.3GPP.33.919V720-2007	7.2.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.11.21 TR 33.920 SIM card based generic bootstrapping architecture (GBA); Early implementation feature

The present document describes which change requests are to be implemented in addition to the Release 6 specifications TS 33.220, TS 29.109, and TS 24.109 to enable the usage of 2G GBA.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB TR-T12-33.920V7.3.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/3_T12/ARIB-TR-T12/Rel7/33/A33920-730.pdf
CCSA	CCSA-TSD-133 920	7.3.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 133 920	7.3.0	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGS-0333920v730
ATIS	ATIS.3GPP.33.920V730-2007	7.3.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.11.22   TR 33.978 Security aspects of early IP multimedia subsystem (IMS)

The present document documents an interim security solution for early IMS implementations that are not fully compliant with the IMS security architecture specified in TS 33.203. For security reasons, the provisions in this TR only apply to IMS procedures used over the 3GPP PS domain.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB TR-T12-33.978V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/3_T12/ARIB-TR-T12/Rel7/33/A33978-700.pdf
CCSA	CCSA-TSD-133 978	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 133 978	7.0.0	Published	2007-06-25	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGS-0333978v700
ATIS	ATIS.3GPP.33.978V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.11.23   TR 33.980 Liberty alliance and 3GPP security interworking; Interworking of liberty alliance identity federation framework (ID-FF), Identity web services framework (ID-WSF) and generic authentication architecture (GAA)

The present document provides guidelines on the interworking of the generic authentication architecture (GAA) and the liberty alliance architecture. The document studies the details of possible interworking methods between the security assertion markup language v2.0, SAML v2.0 (or alternatively the liberty alliance identity federation framework, ID-FF), the identity web services framework (ID-WSF), the security assertion markup language (SAML) and a component of GAA called the generic bootstrapping architecture (GBA). This document only applies if liberty alliance and GBA or SAML v2.0 and GBA are used in combination.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB TR-T12-33.980V7.6.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/3_T12/ARIB-TR-T12/Rel7/33/A33980-760.pdf
CCSA	CCSA-TSD-133 980	7.6.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 133 980	7.6.0	Published	2007-10-24	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGS-0333980v760
ATIS	ATIS.3GPP.33.980V 760-2007	7.6.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.12 35-series, Algorithm specifications

10.12.1 TS 35.201 Specification of the 3GPP confidentiality and integrity algorithms; Document 1: *f*8 and *f*9 specifications

This specification gives a detailed specification of the confidentiality algorithm *f*8, and the integrity algorithm *f*9.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-35.201V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/35/A35201-700.pdf
CCSA	CCSA-TSD-135 201	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 135 201	7.0.0	Published	2007-06-22	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0335201v700
ATIS	ATIS.3GPP.35.201V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TS 135 201	7.0.0	Published	2007-06-22	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0335201v700

10.12.2 TS 35.202 Specification of the 3GPP confidentiality and integrity algorithms; Document 2: Kasumi specification

This specification gives a detailed specification of the Algorithm KASUMI. KASUMI is a block cipher that forms the heart of the confidentiality algorithm *f*8, and the integrity algorithm *f*9.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-35.202V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/35/A35202-700.pdf
CCSA	CCSA-TSD-135 202	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 135 202	7.0.0	Published	2007-06-22	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0335202v700
ATIS	ATIS.3GPP.35.202V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-35.202(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-35.202(R7-7.0.0).zip

10.12.3 TS 35.203 3G Security; Specification of the 3GPP confidentiality and integrity algorithms; Document 3: Implementors' test data

This document is the third of four, which between them form the entire specification of the 3GPP confidentiality and integrity algorithms: 3G TS 35.201, 3G TS 35.202, 3G TS 35.203, 3G TS 35.204.

This specification gives detailed test data for implementors of the algorithm set. It provides visibility of the internal state of the algorithm to aid in the realization of the algorithms.

	Document No.	Version	Status	Issued date	Location
TTA	TTAT.3G-35.203(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-35.203(R7-7.0.0).zip

10.12.4 TS 35.204 Specification of the 3GPP confidentiality and integrity algorithms; Document 4: Design conformance test data

This specification gives black-box test data for the algorithm set. The test data has been selected to give a high degree of confidence that the implementation is correct. However, no claim is made that conformance with this test data guarantees a correct implementation.

	Document No.	Version	Status	Issued date	Location
TTA	TTAT.3G-35.204(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-35.204(R7-7.0.0).zip

10.12.5 TS 35.205 3G security; Specification of the MILENAGE algorithm set: An example algorithm set for the 3GPP authentication and key generation functions $f1$, $f1^*$, $f2$, $f3$, $f4$, $f5$ and $f5^*$; Document 1: General

This report is a description of the work undertaken by an ETSI SAGE Task Force on the design of the Milenage algorithm set: an example set of authentication and key generation functions.

The authentication and key generation functions are not standardized. An example set of these algorithms has been produced with the intent that it shall be offered to the UMTS operators, to utilize instead of developing their own. An ETSI SAGE Task Force has carried out this work.

The requirement specification stated that operator personalization of the example set must be possible and that the basic Kernel must be possible to replace.

The example set is based on the block cipher Rijndael, which at the time was one of the AES candidates and the specification describes how the seven algorithms used in 3GPP authentication and key generation are scheduled around this basic Kernel. The specification and associated test data for the example algorithm set is documented in three documents:

– A formal specification of both the modes and the example Kernel TS 35.206;

– A detailed test data document, covering modes and the example Kernel TS 35.207;

– A "black box" test data document TS 35.208.

This report gives an overview of the overall work by the task force.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-135 205	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 135 205	7.0.0	Published	2007-06-22	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0335205v700
ATIS	ATIS.3GPP.35.205V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-35.205(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-35.205(R7-7.0.0).zip

10.12.6 TS 35.206 3G security; Specification of the MILENAGE algorithm set: An example algorithm set for the 3GPP authentication and key generation functions $f1, f1^*, f2, f3, f4, f5$ and $f5^*$; Document 2: Algorithm specification

This document contains an example set of algorithms which may be used as the authentication and key generation functions $f1$, $f1^*$, $f2$, $f3$, $f4$, $f5$ and $f5^*$. (It is not mandatory that the particular algorithms specified in this document are used – all seven functions are operator-specifiable rather than being fully standardized.)

The algorithms specified in this document are examples that may be used by an operator who does not wish to design his own.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-135 206	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 135 206	7.0.0	Published	2007-06-22	http://pda.etsi.org/pda/home.asp?wkr=RTS/TSGS-0335206v700
ATIS	ATIS.3GPP.35.206V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-35.206(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-35.206(R7-7.0.0).zip

10.12.7 TS 35.207 3G security; Specification of the MILENAGE algorithm set: An example algorithm set for the 3GPP authentication and key generation functions $f1$, $f1^*$, $f2$, $f3$, $f4$, $f5$ and $f5^*$; Document 3: Implementors' test data

This document contains an example set of algorithms which may be used as the authentication and key generation functions $f1$, $f1^*$, $f2$, $f3$, $f4$, $f5$ and $f5^*$. (It is not mandatory that the particular algorithms specified in this document are used – all seven functions are operator-specifiable rather than being fully standardized.) This document is one of five, which between them form the entire specification of the example algorithms: 3G TS 35.205, 3G TS 35.206, 3G TS 35.207, 3G TS 35.208, 3G TS 35.209.

	Document No.	Version	Status	Issued date	Location
TTA	TTAT.3G-35.207(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-35.207(R7-7.0.0).zip

10.12.8 TS 35.208 3G security; Specification of the MILENAGE algorithm set: An example algorithm set for the 3GPP authentication and key generation functions $f1$, $f1^*$, $f2$, $f3$, $f4$, $f5$ and $f5^*$; Document 4: Design conformance test data

This document contains an example set of algorithms which may be used as the authentication and key generation functions $f1$, $f1^*$, $f2$, $f3$, $f4$, $f5$ and $f5^*$. (It is not mandatory that the particular algorithms specified in this document are used – all seven functions are operator-specifiable rather than being fully standardized.)

The algorithms specified in this document are examples that may be used by an operator who does not wish to design his own.

For each of the algorithms, the test data sets have been selected such that, provided the entire set of tests is run:

– each input bit of the Rijndael Kernel function will have been in both the '0' and '1' states;

– each input bit of the modes (RAND, K, SQN, AMF) will have been in both the '0' and '1' states;

– every S-Box entry of the Rijndael Kernel function will have been used.

	Document No.	Version	Status	Issued date	Location
TTA	TTAT.3G-35.208(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-35.208(R7-7.0.0).zip

10.12.9 TS 35.215 Specification of the 3GPP confidentiality and integrity algorithms UEA2 & UIA2; Document 1: UEA2 and UIA2 specifications

This document specifies the 3GPP confidentiality and integrity algorithms known as UEA2 and UIA2.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-35.215V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/35/A35215-700.pdf
CCSA	CCSA-TSD-135 215	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 135 215	7.0.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0335215v700
ATIS	ATIS.3GPP.35.215V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-35.215(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-35.215(R7-7.0.0).zip

10.12.10 TS 35.216 Specification of the 3GPP confidentiality and integrity algorithms UEA2 & UIA2; Document 2: SNOW 3G specification

This document specifies the 3GPP confidentiality and integrity algorithms known as UEA2 and UIA2.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB STD-T63-35.216V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/2_T63/ARIB-STD-T63/Rel7/35/A35216-700.pdf
CCSA	CCSA-TSD-135 216	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TS 135 216	7.0.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=DTS/TSGS-0335216v700
ATIS	ATIS.3GPP.35.216V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx
TTA	TTAT.3G-35.216(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-35.216(R7-7.0.0).zip

10.12.11 TS 35.217 Specification of the 3GPP confidentiality and integrity algorithms UEA2 & UIA2; Document 3: Implementors' test data

This document specifies the 3GPP confidentiality and integrity algorithms known as UEA2 and UIA2.

	Document No.	Version	Status	Issued date	Location
TTA	TTAT.3G-35.217(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-35.217(R7-7.0.0).zip

10.12.12 TS 35.218 Specification of the 3GPP confidentiality and integrity algorithms UEA2 & UIA2; Document 4: Design conformance test data

This document specifies the 3GPP confidentiality and integrity algorithms known as UEA2 and UIA2.

	Document No.	Version	Status	Issued date	Location
TTA	TTAT.3G-35.218(R7-7.0.0)	7.0.0	Approved	2008-04-09	http://www.tta.or.kr/standardDB/stnfile/TTAT.3G-35.218(R7-7.0.0).zip

10.12.13 TR 35.909 3G security; Specification of the MILENAGE algorithm set: An example algorithm set for the 3GPP authentication and key generation functions $f1, f1*, f2, f3, f4, f5$ and $f5*$; Document 5: Summary and results of design and evaluation

This report contains a detailed summary of the work performed during the design and evaluation of the 3G authentication functions denoted as the MILENAGE algorithm set.

	Document No.	Version	Status	Issued date	Location
CCSA	CCSA-TSD-135 909	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 135 909	7.0.0	Published	2007-06-25	http://pda.etsi.org/pda/home.asp?wkr=RTR/TSGS-0335909v700
ATIS	ATIS.3GPP.35.909V 700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

10.12.14 TR 35.919 Specification of the 3GPP confidentiality and integrity algorithms UEA2 & UIA2; Document 5: Design and evaluation report

This document specifies the 3GPP confidentiality and integrity algorithms known as UEA2 and UIA2.

	Document No.	Version	Status	Issued date	Location
ARIB	ARIB TR-T12-35.919V7.0.0	6.40	ARIB published	2007-12-12	http://www.arib.or.jp/IMT-2000/V640Dec07/3_T12/ARIB-TR-T12/Rel7/35/A35919-700.pdf
CCSA	CCSA-TSD-135 919	7.0.0	Approved	2007-12-31	http://www.ccsa.org.cn/english/tc/files.php?docpath=/ITU-T/Q.1741/Q.1741-5/
ETSI	TR 135 919	7.0.0	Published	2007-07-23	http://pda.etsi.org/pda/home.asp?wkr=DTR/TSGS-0335919v700
ATIS	ATIS.3GPP.35.919V700-2007	7.0.0	ATIS Specification Approved	2007-11-09	https://www.atis.org/docstore/search.aspx

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