3GPP TSG CN Plenary Meeting #19   **NP-030123**
12th - 14th March 2003. Birmingham, U.K.

Source:	**SA2**
Title:	**LS on Protocols over the Mt interface**
Agenda item:	**5.2**
Document for:	**INFORMATION**

3GPP TSG-SA WG2 Meeting #30   **Tdoc S2-030999**
Milan, Italy, 24th-28th February 2003

Response to:	-
Release:	6
Work Item:	IMS2

To:	TSG CN, SA WG1, CN WG1
Cc:	

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Attachments: S2-030915

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1. Overall Description:

SA WG2 has agreed to introduce a new reference point (Mt) between the UE and the Application Server to allow the user to configure service related data. The corresponding CR on 23.002 approved by SA2 is attached for information (S2-030915).

The initial motivation for the Mt reference point was to allow the user e.g. control presence lists, presence authorisation policies, chat rooms (participation policies and other parameters) and conferences (create and delete conferences, and manipulate parameters related to them). However, the usage of the reference point is not restricted to the above-mentioned examples.
During the discussions SA2 had on the level and nature of standardization foreseen for the Mt interface, two views were brought up: Mt only as a HTTP interface for secure Web based management, or Mt to include HTTP Web based management and IETF Data Manipulation and Conference Policy Control Protocols.

2. Actions:

To TSG CN group.

ACTION: SA WG2 kindly asks TSG CN to evaluate and decide on the means for conducting the stage-3 work for the Mt interface.

To SA WG1 group.

ACTION: SA WG2 kindly asks SA WG1 whether it sees a need for standardised solution for group management, control of presence authorisation policies, chat rooms, etc. on the Mt interface.

To CN WG1 group.

ACTION: SA WG2 kindly asks CN WG1 group to comment on the level of standardization needed for the Mt interface in 3GPP from the perspective of the presence and messaging requirements drafts it has produced towards the IETF. CN WG1 is also requested to comment if IETF has conducted any work in relation to presence and messaging that might be of relevance.

3. Date of Next TSG-SA WG2 Meetings:

TSG-SA WG2 Meeting #31	7th – 11th April 2003	Seoul, Korea
TSG-SA WG2 Meeting #32	12th – 16th May 2003	San Diego, US

CR-Form-v7

CHANGE REQUEST

| ⌘ | **23.002** CR **119** | ⌘ **rev** | **1** | ⌘ | Current version: | **5.9.0** | ⌘ |

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ ☐   ME **X**   Radio Access Network ☐   Core Network **X**

Title: ⌘	Management interface		
Source: ⌘	Nokia, Siemens, Ericsson		
Work item code:⌘	IMS2	**Date:** ⌘	24/02/2003

Category: ⌘	**B**	**Release:** ⌘	Rel-6

Use *one* of the following categories:
F (correction)
A (corresponds to a correction in an earlier release)
B (addition of feature),
C (functional modification of feature)
D (editorial modification)
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use *one* of the following releases:
2   (GSM Phase 2)
R96   (Release 1996)
R97   (Release 1997)
R98   (Release 1998)
R99   (Release 1999)
Rel-4   (Release 4)
Rel-5   (Release 5)
Rel-6   (Release 6)

Reason for change: ⌘	During the Presence Service discussions in SA2 the function of subscribing to the presence information of a list of presentites has been discussed and documented in [TS 23.141]. The TS also requires the capability for the presentity to manage presence-related authorization rules, so that only certain watchers can access presentity's presence information. At the same time it has become apparent that developping a general service management architecture to provide all these and some additional functions for other IMS services is highly desirable.
Summary of change:⌘	The basic generic service management architecture is introduced. It is assumed that this architecture may be would be further finetuned as the stage-2 work progresses. As additional editorial changes, the wrong style for Reference [66] was corrected, and the Legend description of Figure 6a was moved to the correct place.
Consequences if ⌘ **not approved:**	

Clauses affected: ⌘				

	Y	**N**		
Other specs ⌘	**X**		Other core specifications ⌘	
affected:		**X**	Test specifications	
		X	O&M Specifications	

Other comments: ⌘	It is expected that SA3 & CN1 specifications will be affected, but which ones will be affected need further work.

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1]   [void]

[1a]   3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2]   3GPP TS 22.016: " International Mobile station Equipment Identities (IMEI)".

[2a]   3GPP TS 22.060: " General Packet radio Service (GPRS); Service description; Stage 1".

[2b]   3GPP TS 22.071: " Location Services (LCS); Service description; Stage 1".

[2c]   3GPP TS 22.078: "Customised Applications for Mobile network Enhanced Logic (CAMEL); Service description, Stage 1".

[3]   3GPP TS 23.003: " Numbering, addressing and identification".

[4]   3GPP TS 22.127: "Open Service Access (OSA)

[5]   3GPP TS 23.008: " Organization of subscriber data".

[6]   3GPP TS 23.009: " Handover procedures".

[7]   3GPP TS 23.012: " Location Management Procedures".

[8]   3GPP TS 23.041: "Technical realization of Cell Broadcast Service (CBS)".

[9]   [void]

[9a]   3GPP TS 23.060: " General Packet Radio Service (GPRS); Service description; Stage 2".

[10]   [void]

[10a]   3GPP TS 43.064: "Digital cellular telecommunication system (Phase 2+); General Packet Radio service (GPRS); Overall description of the GPRS radio interface; Stage 2".

[10b]   3GPP TS 25.305: "Stage 2 Functional Specification of UE Positioning in UTRAN"

[10c]   3GPP TS 23.078: "Customised Applications for Mobile network Enhanced Logic (CAMEL) Phase 3 - Stage 2".

[10d]   3GPP TS 43.059: "Functional Stage 2 Description of Location Services in GERAN"[11] ITU-T Recommendation Q.1214 (05/1995): "Distributed Functional Plane for Intelligent Network CS-1"

[11a]   3GPP TS 23.101: "General UMTS Architecture".

[11b]   3GPP TS 23.110: "UMTS Access Stratum); Services and Functions".

[12]   3GPP TS 24.002: " GSM - UMTS Public Land Mobile Network (PLMN) access reference configuration".

[13]   3GPP TS 48.001: " Base Station System - Mobile-services Switching Centre (BSS - MSC) interface; General aspects".

[14]   3GPP TS 48.002: " Base Station System - Mobile-services Switching Centre (BSS - MSC) interface; Interface principles".

[14a]   3GPP TS 25.410: "UTRAN Iu Interface: general aspects and principles".

[15]   3GPP TS 48.004: " Base Station System - Mobile-services Switching Centre (BSS - MSC) interface Layer 1 specification".

[16]   3GPP TS 48.006: " Signalling transport mechanism specification for the Base Station System - Mobile-services Switching Centre (BSS - MSC) interface".

[17]   3GPP TS 48.008: " Mobile-services Switching Centre - Base Station System (MSC - BSS) interface; Layer 3 specification".

[18]   [void]

[19]   3GPP TS 48.051: " Base Station Controller - Base Transceiver Station (BSC - BTS) interface; General aspects".

[20]   3GPP TS 48.052: " Base Station Controller - Base Transceiver Station (BSC - BTS) interface; Interface principles".

[21]   3GPP TS 48.054: " Base Station Controller - Base Transceiver Station (BSC - BTS) interface; Layer 1 structure of physical circuits".

[22]   3GPP TS 48.056: " Base Station Controller - Base Transceiver Station (BSC - BTS) interface; Layer 2 specification".

[23]   3GPP TS 48.058: " Base Station Controller - Base Transceiver Station (BSC - BTS) interface; Layer 3 specification".

[24]   3GPP TS 48.060: " In-band control of remote transcoders and rate adaptors for full rate traffic channels".

[25]   3GPP TS 48.061: " In-band control of remote transcoders and rate adaptors for half rate traffic channels".

[26]   3GPP TS 29.002: " Mobile Application Part (MAP) specification".

[27]   3GPP TS 22.228: "Service requirements for the IP Multimedia Core Network Subsystem"

[28]   [void]

[29]   [void]

[30]   [void]

[31]   3GPP 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)".

[32]   3GPP 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)".

[33]   3GPP TS 29.011: " Signalling interworking for supplementary services".

[34]   3GPP TS 23.228: "IP Multimedia Subsystem (IMS); Stage 2".

[35]   3GPP TR 41.103: "GSM Release 5 specifications".

[36]   3GPP TR 43.051: "Technical Specification Group GSM/EDGE Radio Access Network; Overall description, Stage 2".

[37]   3GPP TS 23.226: "Global Text Telephony (GTT); Stage 2."

[38]   3GPP TS 26.226: "Cellular Text Telephone Modem; General Description"

[39]   3GPP TS 23.016:"Subscriber data management; Stage 2"

[40]   3GPP TS 23.066: "Support of Mobile Number Portability (MNP); Technical realization; Stage 2"

[41]   3GPP TS 43.068: "Voice Group Call Service (VGCS); Stage 2"

[42]   3GPP TS 43.069: "Voice Broadcast Service (VBS); Stage 2"

[43]   3GPP TS 23.205: "Bearer independent circuit switched core network; Stage 2"

[44]   3GPP TS 48.014: "Base Station System (BSS) – Serving GPRS Support Node (SGSN) interface; Gb interface Layer 1"

[45]   3GPP TS 48.016: "Base Station System (BSS) – Serving GPRS Support Node (SGSN) interface; Network service"

[46]   3GPP TS 48.018: "Base Station System (BSS) – Serving GPRS Support Node (SGSN); BSS GPRS Protocol (BSSGP)"

[47]   3GPP TS 48.031: "Serving Mobile Location Centre – Serving Mobile Location Centre (SMLC –SMLC); SMLCPP specification"

[48]   3GPP TS 29.016: "Serving GPRS Support Node (SGSN) – Visitor Location Register (VLR); Gs interface network service specification"

[49]   3GPP TS 29.018: "Serving GPRS Support Node (SGSN) – Visitor Location Register (VLR); Gs interface Layer 3 specification"

[50]   3GPP TS 49.031: "Network Location Services (LCS); Base Station System Application Part LCS extension (BSSAP-LE)

[51]   3GPP TS 29.060: "GPRS Tunnelling Protocol (GTP) across the Gn and Gp Interface"

[52]   ITU-T Recommendation H.248: "Gateway Control Protocol"

[53]   ITU-T Recommendation E.164: "The International public telecommunication numbering plan"

[54]   ITU-T Recommendation H.323: "Packet-based multimedia communications systems "

[55]   3GPP TS 44.071: " Mobile radio interface layer 3 Location Services (LCS) specification "

[56]   3GPP TS 23.271: "Functional stage 2 description of LCS"

[57]   ITU-T Recommendation I.363-2 :"B-ISDN ATM Adaptation Layer (AAL) type 2 specification"

[58]   ITU-T Recommendation H.245: "Control protocol for multimedia communication"

[59]   IETF RFC768:"User Datagram Protocol"

[60]   IETF RFC1889: "RTP: A Transport Protocol for Real-Time Applications"

[61]   IETF RFC3261: "SIP: Session Initiation Protocol"

[62]   LIF TS 101 "Mobile Location Protocol Specification"(Location Interoperability Forum 2001) [Available at http://www.locationforum.org/public_document_area.htm]

[63]   3GPP TS29.198: "Open Service Access (OSA) Application Programming Interface (API)"

[64]   3GPP TS 33.210: "3G Security; Network Domain Security; IP network layer security"

[65]   3GPP TS 23.236: " Intra Domain Connection of RAN Nodes to Multiple CN Nodes".

[66]   3GPP TS 25.453: "UTRAN Iupc interface PCAP signalling"

[66]   3GPP TS 25.453: "UTRAN Iupc interface PCAP signalling"3 Definitions and abbreviations

In addition to the abbreviations given in the remainder of this clause others are listed in TR 21.905 [1a].

The definitions of the entities of the mobile system are given in the next subclause.

*********************** Second set of changes (technical) ****************

5.5   Configuration of IM CN Subsystem entities

The configuration of IM CN Subsystem entities is presented in figure 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 1 are still supported by these entities even if not shown.
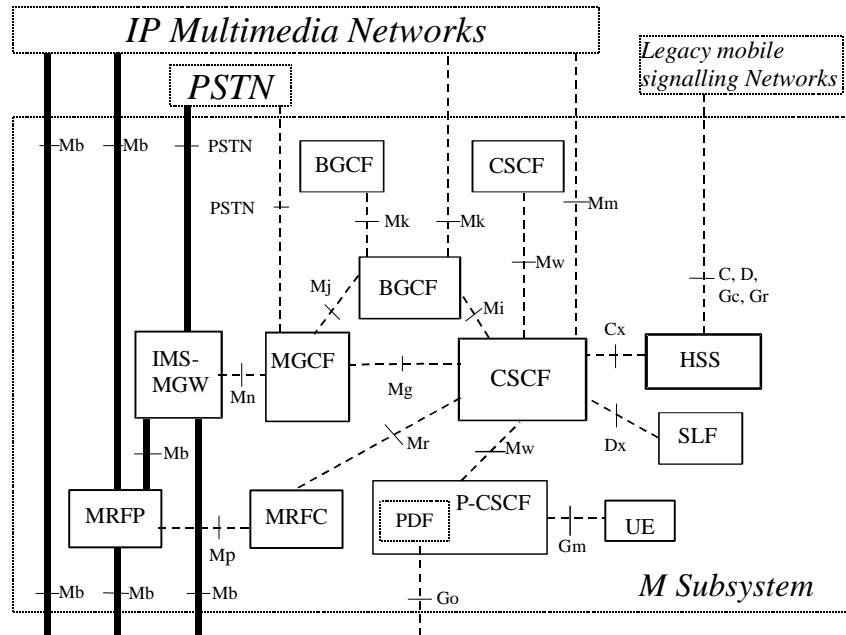
Figure 6: Configuration of IM Subsystem entities

The figure below depicts an overall view of the functional architecture for services.
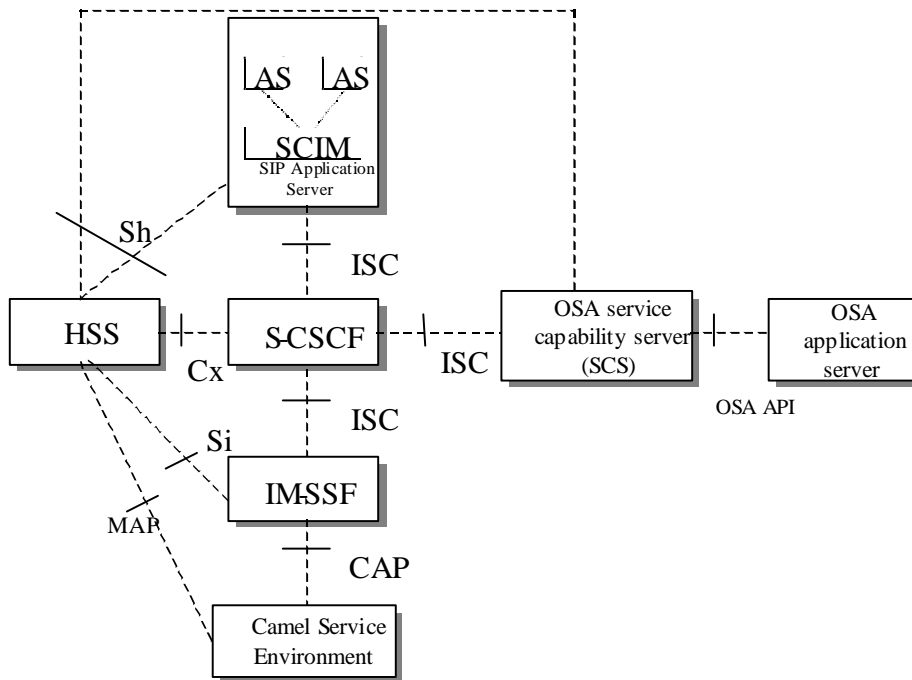
Figure 6a: Functional architecture for the provision of service in the IMS

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.

The figure below depicts an overall view of the functional architecture for enabling the management of the user's service related information via the Mt interface.
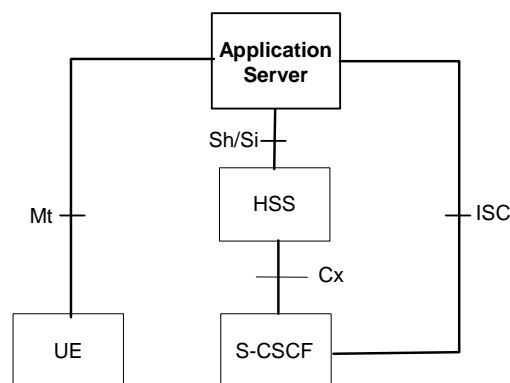

Figure x: Functional architecture for the management of the user's service related information

Note: The Application Server in this figure depicts the SIP Application Server, the IM-SSF, and the OSA-SCS. It is for further study if the Mt interface will have any impacts on Si interface between IM-SSF and HSS.

*************** Third set of changes (technical)***************

6a.7.x   Reference Point UE – AS (Mt Reference Point)

The Mt interface resides between the UE and the Application Server (i.e. the SIP Application Server, OSA-SCS, IM-SSF).

The Mt interface enables the user to manage information related to his services. Such as creation and assignment of Public Service Identities, management of authorization policies that are used e.g. by Presence service, conference policy management, etc.

The AS may need to exhibit security related functions for the Mt interface, the details of these security functions are described in 3G TS 3x.yzw [??].

For the protocol at the Mt reference point HTTP shall be supported.