Source:	**TSG CN WG4**
Title:	**Work Item Description – IPMM, CSCF-HSS (Cx) interface**
Agenda item:	**8.2**
Document for:	**APPROVAL**

Work Item Description

Title: IP Multimedia CN Subsystem, CSCF-HSS (Cx) interface

1   3GPP Work Area

	Radio Access
X	Core Network
	Services

2   Linked work items

Related WIs are:
1. *Provisioning of IP-based Multimedia services (1273-SA1)*
2. *Call Control and Roaming to support IP-based Multimedia services (1274-SA2)*
3. *CSCF-HSS (Cx) applications and services (SCP) (1282-SA2)*
4. *VHE Enhancements (1376–SA1)*
5. *Evolution of VHE Concepts (1368–SA2)*
6. *Interaction between HSS and gsmSCF features and VHE/OSA (1410-SA2)*
7. *Personal service Environment (PSE), user profiles and user profile management (1381-SA2)*
8. *User Profiles Definition (1383-CN4)*
9. *SIP Call Control protocol for the IM Subsystem (1278-CN1)*

3   Justification

The IP Multimedia (IM) Subsystem identified new Core Network entities and interfaces for the purpose of supporting multimedia sessions and services. TSG CN WG4 has claimed responsibility for the specification of the Cx interface, between the Home Subscriber Server (HSS) and the Call/Session Control Function (CSCF).

The Home Subscriber Server (HSS) is the master database for a given user containing the subscription-related information to support the network entities actually handling calls/sessions.

The HSS consists of the following functionality:
– User control functions required by the IM CN subsystem.
– The subset of the HLR functionality required by the PS-Domain.
– And the CS part of the HLR, if it is desired to enable subscriber access to the CS-Domain or to support roaming to legacy GSM/UMTS CS-Domain networks

The CSCF is essentially a SIP Proxy (as described by RFC 2543) and hosts the execution of SIP media sessions.

4   Objective

The objective of this WI is threefold:

- To specify the data structures and information flows of the Cx interface. The output will be the Technical Specifications containing the Stage 2 and Stage 3 descriptions of procedures relevant to the Cx interface, such as Registration procedures, Session/Call handling procedures, user Authentication/Authorisation procedures, Restoration procedures, Network- or User-initiated subscriber data modifications.

- To perform a comprehensive evaluation of candidate protocols, which provide the identified functionality of the Cx interface, following the requirements from TR 23.821 and TS 23.228. The output should be a recommendation on the most suitable protocol(s) for the Cx interface.

- To describe the subscription data relevant for the provision of IP Multimedia stored in the IM CN Subsystem Network Elements (HSS, CSCF). The output of the Work Item 'User Profile Definition' (see linked WI list) should be input for this part.

5   Service Aspects

3GPP is no longer standardising services, but service capabilities, which has an impact on the contents of the user profile.

6   MMI-Aspects

None

7   Charging Aspects

None

8   Security Aspects

It is assumed that TSG SA WG3 will address the secure transport of messages over the Cx interface.

9   Impacts

Affects:	USIM	ME	AN	CN	Others
Yes				X	
No	X	X	X		X
Don't know					

10   Expected Output and Time scale (to be updated at each plenary)

New specifications						
Spec No.	Title	Prime rsp. WG	2ndary rsp. WG(s)	Presented for information at plenary#	Approved at plenary#	Comments
New TS	CSCF-HSS (Cx) Stage 2	CN4	SA2	CN#11	CN#12	This TS will be finalised by CN#11 to allow the start of stage 3 specification work. The Stage 2 specification could be split in a number of TSs depending on the actual amount of information contained in the original TS
New TS	CSCF-HSS (Cx) Stage 3	CN4	SA2	CN#13	CN#14	The Stage 3 specification could be split in a number of TSs depending on the actual amount of information contained in the original TS
Affected existing specifications						
Spec No.	CR	Subject		Approved at plenary#		Comments
23.008		Organization of subscriber data		CN#11		This specification may need to be extended with the new NEs and the subscription information that they contain, or alternatively subscriber data for the IM domain may be captured elsewhere (decision to be made when stage 2 becomes stable).
-	-	To be determined		CN#11		Other Stage 2 and Stage 3 specifications may be impacted as a result of this Work Item

11   Work item raporteurs

Kevin Gorey, Nortel Networks
Luis López-Soria, Ericsson L.M.

12   Work item leadership

CN4

13   Supporting Companies

BT, Ericsson, Nokia, Motorola, Lucent, Siemens, Nortel Networks, Alcatel, and France Telecom

14   Classification of the WI (if known)

	Feature (go to 14a)
	Building Block (go to 14b)
X	Work Task (go to 14c)

14c   The WI is a Work Task: parent Building Block

~~CSCF – HSS (Cx) applications and Services~~Call Control and roaming to support IP Multi Media in UMTS *(~~1286~~1274-SA2)*