

Source: CN
Title: Bearer independent architecture in the PS-domain
Agenda item: 9.1
Document for: APPROVAL

Work Item Description

Title

Media Gateway Control Function (MGCF) – IM Media Gateway (IM-MGW) Mc Interface Bearer independent architecture in the PS-domain

1 3GPP Work Area

	Radio Access
x	Core Network
	Services

2 Linked work items

CN3: Interworking between IM CN subsystem and CS networks

3 Justification

The Media Gateway Control Function (MGCF) uses its interface to the IM Media Gateway (IM-MGW) to control this network entity. The IM Media Gateway provides user plane interworking between the IM and circuit switched ISUP or BICC networks.

The IMS Mc interface differs substantially from the CS Mc interface between the MSC server and the CS-MGW, although both interfaces use the H.248 protocol. While the CS-Mc interface mandates H.248 packages only applicable for BICC networks, these packages are not applicable for the IMS-Mc interface for the terminations on the IMS side. The IMS Mc interface must support the transport of AMR according to IETF RFC 3267, rather than within the IuFP.

4 Objective

The usage of the H.248 protocol on the Media Gateway Control Function (MGCF) – IM Media Gateway (IM-MGW) Mc Interface shall be specified. In particular, the required H.248 packages shall be identified. Required new H.248 packages shall be defined, if suitable packages are not provided by external standardisation bodies within the ~~3GPP Rel.6~~ time frame specified in section 10.

The interaction of IMS-Mc signalling procedures in relation to the SIP, and BICC/ISUP signalling at the MGCF shall be described. The interactions between IMS-Mc signalling procedures and the related user plane procedures at the IM-MGW, i.e. procedures across the Mb interface and the CS channels, shall be described.

5 Service Aspects

User plane interworking for basic voice calls between the IMS and circuit switched networks shall be supported. On the IMS side, AMR shall be supported as voice codec, and inband transport of DTMF shall be supported. On the circuit switched side, G.711 shall be supported as voice codec, and inband and out-of-band transport of DTMF shall be supported. Additional voice codecs may also be supported on both sides.

6 MMI-Aspects

None

7 Charging Aspects

The MGCF may take charging into account when deciding to establish or to close user plane connections using the IMS Mc interface.

8 Security Aspects

None

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 resp. WG	2ndary resp. WG(s)	Presented for information at plenary#	Approved at plenary#	Comments
29.332	Media Gateway Control Function (MGCF) – IM Media Gateway (IM-MGW) Interface; Stage 3	CN4		CN#18 (Dec 02)	CN#19 (Mar 03)	

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments
TS 29.163		The interaction of IMS-Mc signalling procedures in relation to the SIP, and BICC/ISUP signalling at the MGCF shall be described. The interactions between IMS-Mc signalling procedures and the related user plane procedures at the IM-MGW, i.e. procedures across the Mb interface and the CS channels, shall be described	CN#19 (Mar 03)	

- 11 Work item rapporteurs**
Peter Schmitt
- 12 Work item leadership**
CN4
- 13 Supporting Companies**
Ericsson, Vodafone, Lucent, Siemens
- 14 Classification of the WI (if known)**

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

- 14a The WI is a Feature: List of building blocks under this feature
-
- 14b The WI is a Building Block: parent Feature
-
- 14c The WI is a Work Task: parent Building Block

Stage 3 description of IMS interfaces

Note: In the 3GPP work plan, "Mc interface (IM-MGW to MGCF) enhancements" is currently listed as item 112 under this building block with the comment "no work required". This should be revised.