3GPP TSG CN Plenary Meeting #14   **NP-010569**
Kyoto, Japan. 12th - 14th December 2001.

Source: **CN3**

Title: **WID - Interworking between IM CN subsystem and IP networks**

For Document see next page:-

<p style="text-align: center;">**<u>Work Item Description</u>**</p>

Title: Interworking between IM CN subsystem and IP networks.

1 3GPP Work Area

	Radio Access
X	Core Network
	Services

2 Linked work items

?? SIP call control for the IM subsystem (N1)
?? Mapping of overall end to end QoS in each new interface
?? End-to-end (re-)negotiation of QoS parameters (S2)
?? Support of IP multimedia services (S1)
?? An architecture for Call control and roaming to support IP-based multimedia services in UMTS (S2)

3 Justification

IP based multimedia services are a required feature of UMTS Release 5, which will include IP telephony and real time service support with end to end QoS negotiation.

The Release 5 architecture shall interwork with other wider IP networks through the GGSN and Gi reference point. This work item will define the solutions required to implement user plane and control plane interworking over this reference point. The interworking requirement may be especially true for IP based networks that do not support potential user plane aspects which are specific for the mobile networks (e.g. those selected for radio resource optimisation reasons).

4 Objective

The objective of this work item is to address the issue of interworking between the IM CN subsystem and external IP networks.

Significant goals are to define the functionality required within the GGSN and CSCF to enable this service interworking, and to establish the protocols over the Gi and Mm reference points.

The work item will address the issue of control plane interworking, between standard SIP (as defined in IETF) and SIP with 3GPP extensions, which is being developed in CN1 (in TSs 24.228/24.229). This will , enable the IM CN subsystem to communicate with external IP networks that use IP multimedia session control protocols.

The work item will address the issue of user plane interworking, for example, between the AMR codec used in the IM CN subsystem and other codec types used within external IP networks. This may be required when interworking with SIP based external IP networks.

In case of user plane interworking, the areas addressed should encompass the transport protocol and the signaling issues for negotiation and mapping of bearer capabilities and QoS information.

5 Service Aspects

None identified.

6 MMI-Aspects

None identified.

7 Charging Aspects

None identified.

8 Security Aspects

None identified.

9 Impacts

Affects:	USIM	ME	AN	CN	Others
Yes				X	
No	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
TS 29.162	"Interworking between IM CN subsystem and IP Networks"	CN3	CN1 SA4	CN#14 (Dec 01)	CN#15 (Mar 02)	Specifying Control Plane interworking between SIP with 3GPP extensions and standard SIP. Specifying User Plane interworking between 3GPP IMS default codecs and other codec types used within fixed IP networks.

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments
29.061		Interworking between the PLMN supporting GPRS and PDNs	CN#15 (Mar 02)	
24.228		Signalling flows for the IP multimedia call control based on SIP and SDP		
24.229		IP Multimedia Call Control Protocol based on SIP and SDP		Note - TS has not been presented at CN plenary, and is not currently under change control.

11 Work item rapporteurs

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12 Work item leadership

CN3

13 Supporting Companies

BT, Motorola, Siemens, Nortel Networks, Lucent Technologies

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

N/A

14b The WI is a Building Block: parent Feature

N/A

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

?? End to end UMTS reservation and (re-)negotiation of QoS parameters
?? Call control and roaming to support IP based multimedia services in UMTS
?? Mapping of overall end to end QoS in each new interface