**3GPP TSG_CN**                                                         **Tdoc NP-000466**
**Plenary Meeting #9, Oahu, Hawaii**
**20<sup>th</sup> – 22<sup>nd</sup> September 2000.**

**Source:**              **TSG_N3**

**Title:**               **Revised proposed work item description for interworking between IM CN subsystem and IP networks**

**Document for:**        **APPROVAL**

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3GPP TSG-CN3                                                            Tdoc N3-000470
Meeting #12, Seattle, USA
28<sup>th</sup> August – 1<sup>st</sup> September 2000

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## Work Item Description

**Title: Interworking between IM CN subsystem and IP networks.**

**1 3GPP Work Area**

|   |               |
|---|---------------|
|   | Radio Access  |
| X | Core Network  |
|   | Services      |

**2 Linked work items**

- 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 2000, which will include IP telephony and real time service support with end to end QoS negotiation.

The Release 2000 architecture interworks with the wider IP networks through the GGSN and Gi reference point. This work item will define the solutions required to implement U 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 U 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 specify bearer capabilities for provision of IP based multimedia services between IM CN subsystem of the UMTS 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 areas addressed should encompass the transport protocol and signalling 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 |
| xx.xxx | Tech Report "Technical Requirements for IM to PS Interworking" | CN3 | CN1  SA4 | CN#12 (May 01) | CN#14 (Dec 01) | |
| | | | | | | |

| Affected existing specifications | | | | |
|---|---|---|---|---|
| Spec No. | CR | Subject | Approved at plenary# | Comments |
| 29.061 | | Interworking between the PLMN supporting GPRS and PDNs | CN#14 (Dec 01) | |
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**11 Work item raporteurs**

Kevin Bye, BT Advanced Communication Engineering, Adastral Park

**12 Work item leadership**

CN3

**13 Supporting Companies**

BT, Motorola, 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

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