3GPP TSG_CN Tdoc NP-000219
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Source:	**CN3 Officials**
Title:	**Draft accommodated Terms of Reference and Dependencies to Other Groups**
Agenda item:	**5.1**
Document for:	**for discussion and approval**

1. Terms of Reference

The TSG-N has decided to structure the work into ~~three~~ five Working Groups:
- WG1: MM/CC/SM.
- WG2: ~~MAP/~~CAMEL
- WG3: Interworking with external networks
- WG4: MAP
- WG5: OSA

~~The UMTS core network shall be based on an evolution of GSM core network for both circuit switched and packet switched services. TSG-N has assigned the following terms of reference to WG3:~~
~~• evolving GSM interworking function to UMTS interworking to external networks (assigned to WG3 only)~~
~~• evolving GPRS layer 3 protocols (SM, GMM) to UMTS packet services (assigned to WG1, WG2 and WG3 (only related to interworking issues)).~~

~~WG3 has taken this as an input and has refined the given general terms of reference to clarify their scope of work as follows:~~
Generally, ~~the assigned terms of reference imply for~~ WG3 is responsible for the specification of bearer capabilities for circuit and packet switched (data) services, and the necessary interworking functions towards both, the UE (user equipment) in the ~~UMTS~~ PLMN and the TE (terminal equipment) in the external network. This work is related to the 3rd Generation of PLMNs in the scope of 3GPP as well as to the maintenance of the concerning GSM specifications (2nd Generation)

Specifically, this work includes the following responsibilities:
- ~~circuit switched~~CS domain (towards the UE ~~<--> 3G-MSC/IWF~~)
    - layer 1 transport protocols (mainly rate adaptation in GSM or requirements on layer 1 in 3G)
    - layer 2 transport protocols (mainly RLP)
    - signalling issues (i.e., negotiation and mapping of bearer capabilities and QoS information in the sense of specifying parameters, parameter values and combinations of them, needed to specify services and to enable the 3G-MSC/IWF to select appropriate services towards the fixed network)
- ~~circuit switched~~CS domain (~~within 3G-MSC/IWF~~towards the fixed network)
    - mapping of signalling information

- mapping of user data, status & control information
- mapping and negotiation of QoS
- circuit switched (3G-MSC <--> fixed network TE)
  - transport protocols
  - signalling issues (service setup, negotiation of QoS)
  - evolution of bearers at the interworking point with other types of networks
- CS domain (within the PLMN)
  - user plane protocols between MGWs (Nb)
  - control of the user plane protocols (Nb)
  - control of Media Gateways (Mc)

- packet switchedPS domain
  - Gi interface
  - R reference point (TE – MT) related to the PDP context de/activation (scope of 27.060)
  - network interface data to be transported by the GTP
  - packet data protocols (PDPs) (e.g. IP, PPP)
  - services that use PDPs (; e.g., IP, PPP, X.25, OSPMobile IP, DHCP)
  - mapping and negotiationstudy and proposal of QoS negotiation and reservation mechanisms
  - definition of external and 3G internal QoS mechanisms
  - mapping of QoS parameters
  - Services (e.g. multimedia) interworking with other protocols
  - Study of security interworking with external networks (a big topic with corporate customers)

- IM domain
  - Interworking between different Multimedia-protocols
  - contribute to the Interface between CSCF and UE (Gm) related to interworking to external networks
  - contribute to the Interface between CSCF and Internet (Mm) related to interworking to external networks

- Data Services
  - end-to-end interworking for packet and circuit switched data services
  - CS facsimile (service provision)
  - Multimedia (transport and interworking aspects as well as inband signalling)
  - Text telephony (transport and interworking aspects (V.18))

Interworking with the following external networks or domains has to be considered:
- PSTN
- N- and B-ISDN
- PDN (IP & X.25)InternetIP networks
- IM Multi-media Domain

Interworking between the UTMS core network and other core networks of the IMT-2000 family is out of the scope of WG3.

2. Dependencies with other groups

2.1 TSG internal dependencies

TSG-N WG3 sees dependencies with the following groups:

- TSG-N WG1: Whereas WG1 is responsible for the radio interface layer 3 procedures and protocols, WG3 see their responsibility in defining parameters and combinations of parameter values needed to specify services and to enable the IWF to select an appropriate service towards the fixed network.
- TSG-N ~~WG2~~WG4: Whereas ~~WG2~~ WG4 is responsible for specifying core network internal ~~MAP~~MM/CC/SM procedures and operations, WG3 have the responsibility for defining information elements ~~the~~ that requires to be transferred by means of the needed ~~MAP~~ procedures.
- TSG-R WG3: This WG provides transmissions means via the Iu reference point, TSG-N WG3 see their responsibility in providing layer 1 (rate adaptation) and layer 2 protocols for data transmission between the UE and the core network.
- TSG-SA WG2: This WG provides an overall architecture of the UMTS system. TSG-N WG3 is responsible for providing details on interworking with external networks based on the concepts provided by TSG-S WG2. TSG-S WG2 give guidance in questions related to the architecture.
- TSG-SA WG1: This WG provides requirements on services. Solutions provided by TSG-N WG3 have to fulfil these requirements. TSG-S WG1 give guidance in questions related to the service requirements.
- TSG-T WG2: This WG is responsible for the specification of terminal services and applications. The close co-operation is needed when protocols between UE and the Core Network are specified. Applications designed by TSG-T WG2 may have impact on network architecture or interworking with external networks.

2.2 External dependencies

External dependencies exist with ITU-T and IETF. TSG-N WG3 will not directly liase with these organisations. A liaison shall only take place via the individual members.

3. Specifications

WG3 is responsible for the ~~The~~ following GSM and 3G technical specifications and reports ~~that should be in the prime responsibility of WG3 are listed in order to give more precise information on the scope of work of WG3~~:

3.1 Packet switched
        TS 09.61 Interworking between the PLMN and PDNs
        TS 29.061 Interworking between the PLMN and PDNs
        TS 07.60 MS Supporting GPRS
                ~~(Terminal related aspects such as AT commands will be moved to 07.07)~~
        TS 27.060 MS Supporting GPRS

3.2 Circuit switched
        TS 03.10 GSM PLMN Interconnection Types
        TR~~TS~~ 23.910 GSM Data Services in UMTS
        TR 03.43 Support of Videotex
        TR 03.44 Support of Teletex in a GSM PLMN
        TS 03.45 Transparent Fax
        TS 03.46 NonTransparent Fax
        TS 23.146 Real Time NonTransparent Fax in UMTS

TS 03.54 Shared Interworking Function
TS 23.054 Shared Interworking Function
TS 03.70 Routing of calls to/from Public Data Networks
TS 04.21 Rate Adaptation on the MS-BSS Interface
TS 04.22 Radio Link Protocol
TS 24.022 Radio Link Protocol
TS 07.01 General Terminal Adaptation Functions
TS 27.001 General Terminal Adaptation Functions
TS 07.02 Asynchronous Terminal Adaptation Functions
TS 27.002 Asynchronous Terminal Adaptation Functions
TS 07.03 Synchronous Terminal Adaptation Functions
TS 27.003 Synchronous Terminal Adaptation Functions
TS 08.20 Rate Adaptation on the BSS-MSC Interface
TS 09.04 Interworking between the PLMN and CSPDN
TS 09.05 Interworking between the PLMN and PSPDN (PAD Access)
TS 09.06 Interworking between the PLMN and ISDN/PSPDN (Packet Access)
TS 09.07 Interworking between the PLMN and ISDN/PSTN
TS 29.007 Interworking between the PLMN and ISDN/PSTN