

3GPP TSG CN WG4#04
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Introduction

The N4 agreed Terms of Reference, documented as Tdoc NP-000395, has been presented to the 3GPP CN#08 Plenary, 21st-23rd June 2000 in Dusseldorf, Germany. Unfortunately, the CN Plenary had a number of concerns against the N4 agreed Terms of Reference. Concerns raised are:

- A summary of N4 responsibilities should be added
- Stage 2 of GPRS is not under N4 (not yet at least)
- Should be clarified that the protocols on which N4 works are purely within the CN
- List of specifications under N4 responsibility should be added
- Check for duplication with N1 responsibilities

This document describes the modified Terms of Reference for the 3GPP CN4.

Terms of Reference

3GPP TSG CN WG4 (N4) standardises stage 2 aspects within the Core Network focussing on Supplementary Services, Basic Call Processing, Mobility Management within the Core Network, and Bearer Independent Architecture. N4 also specifies the mobile specific protocol specifications within the mobile core network. A number of protocols within the core network are specified by external bodies such as ITU-T. In this case, N4 will be involved in “profiling” (describing how and which part of these “external protocols” are to be used, describing protocol interworking between 3GPP specified protocols and these external protocols).

3GPP N4’s mandate is to specify the protocols within the core network including specifications describing the protocol requirements.

N4 is responsible for the following core network feature specifications:

- Stage 2 and (jointly with N3) stage 3 descriptions of the Bearer Independent Architecture.
- Stage 2 and stage 3 of Mobility Management within the Core Network;
- Stage 2 and stage 3 of Call Control within the Core Network (e.g. Basic Call Handling);
- Profiling of Call/Transport Control Protocols defined outside 3GPP to be used within the CN (e.g. BICC, H.248, RTP);
- Stage 3 of GPRS;
- Stage 2 and stage 3 of Supplementary Services;
- Stage 2 and stage 3 of Mobile Number Portability; and
- Stage 2 and stage 3 of Subscriber Data Management

N4 is responsible as a “protocol steward” (which involves analyzing it, validating it, extending it if necessary, clarifying how it is used, specifying packages and parameter values) for the following IP related protocols:

- AAA protocols;
- security protocols;
- Sigtran;
- SIP-T
- subscriber data management in HSS and HSS-CSCF protocols to support it.

The above list of standardisation activities is not exhaustive and activities can be deployed within N4 as long as they are in line with the mandate given by the N plenary.

In general, 3GPP N4 interacts with all 3GPP WGs, but with the following specifically:

- **3GPP SA WG2 (S2);**
S2 is responsible for the high-level architecture specifications of the whole network (including the CN). N4 is responsible for the detailed description of parts of this architecture related to CN internal functions and protocols.
- **3GPP CN WG1 (N1),**
N1 is responsible for the call control, mobility management, and session management aspects across the radio interface. These aspects have impacts on the N4 specifications, such as stage 2 Call Control, Supplementary Services, Handover, etc. On these aspects N4 will collaborate closely with N1.
- **3GPP CN WG2 (N2),**
N2 is responsible for the stage 2 and stage 3 specifications for CAMEL. These specifications have impacts on the N4 specifications, such as stage 2 Call Control, Supplementary Services, Subscriber Data Management, MAP etc. On these aspects N4 will collaborate closely with N2; the majority of N2 meetings will be collocated with N4 meetings.
- **3GPP CN WG3 (N3);**
N3 is responsible for the network interworking aspects and user plane protocols (except GTP). N3 is responsible for the parameter values of the Media Control Protocols (MCP) and the Bearer Control protocols. These activities have impacts on the activities within N4 and therefore N4 will closely collaborate with N3 on these aspects.

This list of 3GPP WGs is not exhaustive; N4 will maintain liaison with other 3GPP WGs as needed. Liaison with other Standardisation Bodies (e.g. ITU-T, [IETF](#)) is subject to approval by 3GPP PCG.