3GPP TSG-CN Meeting #22

10th - 12th December. Maui, Hawaii.

NP-030559

Source:	**Chairman CN3** (norbert.klehn@siemens.com)
Title:	**CN3 Status Report to CN Plenary**
Agenda item:	**6.3.1**
Document for:	**INFORMATION**

1. General

1.1 Last Meetings

One CN3 meeting has taken place since the last TSG-CN plenary:

- CN3#30: 27th – 31st October 2003, Bangkok, Thailand, hosted by Japanese Friends of 3GPP, including a joint session with SA1, SA2, CN1 and CN4 on "PoC and emergency calls in IMS" on 27/10/03.

The detailed CN3#30 meeting report is contained in **NP-030560**.

This status report **[NP-030559]** summarises the results from that meeting and presents the current status of work in CN3.

1.2 Administrative Work

CN3 has reviewed the 3GPP work plan and has provided related comments to MCC.

CN3 has also reviewed the list of specifications that under it's responsibility and identified that new rapporteurs are needed for some specifications. Companies are invited to nominate suitable candidates.

2. Work Items Rel-4 and earlier

2.1 Circuit Switched Data Services

2.1.1 Inter-network Accounting

CN#21 Plenary meeting requested CN3 to provide a solution to bring service related information, in particular regarding the BS30 service, from the VMSC to the GMSC for mobile terminated calls based on a request in document NP-030431 to allow charging in the GMSC and to get the possibility for inter-network accounting, especially for video telephony (multimedia).

CN3 is not presently able to provide a solution that is unanimously agreed. The situation is described in a separate Liaison Statement to CN#22 **NP-030455** / (or tdoc N3-030830 contained in **NP-030561**). The document contains two solutions, one short-term and the other more long-term. CN#22 is asked to give guidance on how CN3 should proceed.

2.1.2 CS Bearer Services

There is a CR to TS 27.001 for R99 contained in **NP-030562** (N3-030799) that corrects the tree diagrams to align them with the text.

2.2 GPRS

2.2.1 DHCPv6

CRs in document **NP-030563** (N3-030767 – 769 and N3-030701) change the references for DHCPv6 in TS 29.061 and TS 27.060 since the specification of DHCPv6 has now become RFC 3315.

3. Work Items Rel-5

3.1 Service Change and UDI fall back for CS multimedia (SCUDIF)

CN3 has agreed 2 CRs against TS 23.172, one for the correction of the HLR interrogation (N3-030771) and another one for the implementation of CAMEL interactions with SCUDIF calls (N3-030766). The CRs are contained in **NP-030564**.

3.2 End-to-end Quality of Service: Go interface

CN3 have agreed CRs for the Go interface against TS 29.207 and TS 29.208 that are contained in document **NP-030565**:

- to clarify the use of the Source addresses in packet classifiers (N3-030770)
- to implement a call flow for the session modification without adding or removing media lines (N3-030809)
- to clarify that the approval of QoS Commit can be part of the authorization decision (N3-030810).

Furthermore, CN3 have discussed an issue which occurs when a previously bidirectional media component becomes unidirectional. This event triggers both a closing of gates and a network-enforced modification of the PDP context. CN3 agreed that only the network-enforced modification of the PDP context shall be triggered, and intends to modify their specifications accordingly. CN3 has sent an LS (N3-030811 in **NP-030561**) to CN1, as this issue is related to the way media are put on hold in the IMS.

3.3 Circuit Switched Data Services

3.3.1 Usage of RLP version

The CR in **NP-030566** (N3-030805) clarifies the terminology used for the RLP relating to the distinctions of "substreams" and "physical links". This CR is for Rel-5 only.

3.4 GPRS

3.4.1 RADIUS protocol at GGSN

A single user may have a number of PDP sessions active simultaneously. In order for the AAA Server to disconnect all sessions, a separate disconnect message is currently needed for each PDP session. A related CR is presented in **NP-030567** (N3-030776) for Rel-5 only.

3.4.2 DHCPv6

GPRS procedures assume that a PDP context has a unique IP address/prefix. According to RFC 3315, a DHCPv6 server may assign several IPv6 addresses to a single Identity Association. The CR in **NP-030567** (N3-030777) explicitely specifies a unique IPv6 address for a PDP context.

3.5 HSDPA

The implementation of HSDPA has impacts on the parameters used for the Radius protocol and the Go interface. Related CRs for Rel-5 are provided in **NP-030568** (N3-030774 and N3-030694).

4. Work Items Rel-6

4.1 Interworking between the IM Subsystem and IP networks

Surprisingly, there were no contributions for this work item. SA2 has decided based on CN3's TR 29.962 which solution should be followed for the interworking between IMS SIP and SIP networks not supporting the needed SIP extensions. Now, the related changes for stage 3 specifications are necessary. We will check the impact on CN3's specification at the next CN3 meeting.

Furthermore, we still expect contributions regarding IPv4/IPv6 interworking because the related stage 2 work has now been done.

When discussing the work plan, CN3 agreed that the work for this work item cannot be completed before June 2004.

4.2 Interworking between the IM Subsystem and CS networks

CN3 has agreed several CRs against TS 29.163 that are contained in document **NP-030569**:

- to align with ITU-T Q.1912.5 regarding the SIP error codes (N3-030778)
- to add some trigger events and a SIP response code for the T7 times expiry to the description of the autonomous release at the I-MGCF (N3-030788)
- to improve the mapping from SIP final error responses to ISUP release causes (N3-030779)
- to include the description of an error case to table 12 on mapping BICC/ISUP CLI parameters to SIP header fields to align with ITU-T Q.1912.5 (N3-030812)
- to implement some editorial improvements and corrections (N3-030692, N3-030823, N3-030813)
- to clarify that no transcoding is required at the IM-MGW, if the same AMR mode is used on the termination towards the IMS and the CS network (N3-030782)
- to detail the autonomous release at the O-MGCF, copying a table from ITU-T Q.1912.sip (N3-030787)
- to improve the mapping of REL cause codes to SIP error responses (N3-030784)
- to improve the timers for the conversion of overlap to enbloc signalling (N3-030781)
- to correct the reference to ITU-T Q.735 for the handling of the closed user group supplementary service (N3-030814)
- to specify the interworking of the hold resume supplementary service for the case that the request originates at the CS network side (N3-030815).

Some of the CRs listed above, provide an alignment of TS 29.163 with ITU-T Q.1912.5 as CN3 have been mandated by CN plenary to keep these specifications aligned as far as possible.
Another mandate is to replace parts of TS 29.163 by references to ITU-T Q.1912.5. This topic was discussed in CN3 since ITU-T Q.1912.5 is now in the ITU-T alternative approval process and is expected to be approved in the coming months. Some companies expressed concerns that intentional differences between these specifications might get lost, and that TS 29.163 might become unstable and difficult to read. It was felt that an agreement on actual text was difficult to achieve without having actual proposals for CRs on the table. Furthermore, this will only make sense when ITU-T Q.1912.5 is finally approved. In the meantime, CN3 will continue to maintain a list of differences between ITU-T Q.1912.5 and TS 29.163.

4.3 Mn Interface

CN3 has agreed some CRs against TS 29.163 regarding the Mn interface that are contained in document **NP-030570**:

- to improve the description of the failure handling Mn procedures at the O-MGCF (N3-030790)

- to correct the handling of the reserve value parameter within Mn procedures at call setup, taking into account that this H.249 parameter applies both for the local and remote descriptor (N3-030829)
- to specify that the "Detect DTMF" and "Report DTMF" Mc procedures shall also be used for terminations towards the IMS (N3-030793)
- to improve the description of the Mn signalling interactions for DTMF (N3-030817)
- to implement some editorial improvements and corrections (N3-030741)
- to correct the Mn procedures for IM-MGW initiated call release (N3-030831).

4.4 End-to-end Quality of Service, Gq interface

CN3 presently maintains its working assumption to use Diameter as protocol on the Gq interface. However, we were not able to make a final decision due to a number of open issues that require actions from other groups. Concerns about the security implications of Diameter have been raised, especially if application functions and Diameter proxies in an untrusted domain shall be supported. End-to-end security would probably be required in this case. A related LS (N3-030830 in **NP-030561**) was sent to SA2 and SA3, asking SA2 if such a requirement exits, and SA3 about the proper security handling of such a scenario as well as the maturity of related IETF drafts on end-to-end security for Diameter.

Some additional concerns were also raised against Diameter, but they were not seen as blocking points by CN3:

- The stage 2 specification is not yet stable, but CN3 felt that this would affect the Gq application on top of Diameter to be defined by CN3, rather than the basic transport functionality of the protocol itself.
- It is not yet entirely clear how backward compatibility can be provided for Diameter applications. CN4 is currently investigating this problem for their Diameter interfaces, and a solution is expected within CN4 in the near future.

TS 29.209 will contain the stage 3 specification of the Gq interface. Contributions on Gq messages and Gq attributes using Diameter, and on the use of Gq messages have been presented in CN3. However, it has become evident that further discussions are needed in order to come to an agreement. CN3 have agreed that these contributions shall be further discussed and developed before being presented to Plenary for approval. The time between the CN3 meetings has to be used in a more efficient manner in order to meet the completion deadlines of the work item. The use of email discussions will be encouraged.

The work on Gq interface also impacts the Go interface specifications, i.e. TS 29.007 and 29.008. For instance, the Gq interface has to be introduced, some terms need a generalisation (e.g. replacing SIP/SDP signalling with Application Function Signalling). So, CN3 has agreed the following CRs:

- CR against TS 29.207 introducing the Gq interface and replacing SIP/SDP signalling with Application Function Signalling (N3-030832)
- CR against TS 29.207 proposing the use of the term "Session Description Information" (SDI) instead of SDP on the Gq interface (N3-030833)
- CR against TS 29.207 covering impacts of allowing multiple tokens to be exchanged over the Gq interface (N3-030836)
- CR against TS 29.208 to update the signalling flows (N3-030834)
- CR against TS 29.208 covering Gq impacts on the QoS mapping tables (N3-030835)

The stage 3 work goes on in parallel with stage 2 work. The CRs listed above are agreed in CN3, but the CRs consider only parts of the overall solution. CN3 decided that Gq related CRs against TS 29.207 and TS 29.208, even if agreed by CN3, should not yet been sent to the plenary for approval in order to avoid inconsistent specifications and in order to wait for more stable stage 2 work.

4.5 MBMS, Gmb interface

CN3 is responsible for the standardisation of the Gmb interface for MBMS (Multimedia Broadcast and Multicast Service). All contributions for MBMS have been withdrawn due to pending discussions in SA2. The working assumption from the last CN3 meeting to use Diameter for Gmb is still valid.

4.3 WLAN

CN3 is responsible for a stage 3 description for the Wi interface that is required in scenario 3 of the WLAN architecture. The question whether to use the existing TS 29.061 or to create a new separate TS could not be answered because of ongoing discussions in SA2.

5. Output Documents

5.1 Change Request

CN tdoc #	CN3 tdoc #	Title	Spec	CR #	Rev	Cat	Rel	Work Item
NP-030562	N3-030799	Incomplete tree diagrams	27.001	104	1	F	R99	CS Data
NP-030563	N3-030701	Updated reference for DHCPv6	27.060	088		F	Rel-5	GPRS
NP-030563	N3-030767	Updated reference for DHCPv6	29.061	096	1	F	R99	GPRS
NP-030563	N3-030768	Updated reference for DHCPv6	29.061	097	1	A	Rel-4	GPRS
NP-030563	N3-030769	Updated reference for DHCPv6	29.061	098	1	A	Rel-5	GPRS
NP-030564	N3-030771	Corrections on HLR interrogation	23.172	019	1	F	Rel-5	SCUDIF
NP-030564	N3-030766	CAMEL interactions with SCUDIF calls	23.172	021	1	F	Rel-5	SCUDIF
NP-030565	N3-030770	Source addresses in packet classifiers	29.207	111	1	F	Rel-5	E2EQoS
NP-030565	N3-030810	Approval of the QoS Commit as a part of the authorization decision for early media	29.208	050	2	F	Rel-5	E2EQoS
NP-030565	N3-030809	Session modification without adding or removing media lines	29.208	051	2	F	Rel-5	E2EQoS
NP-030566	N3-030805	Terminology clarification	24.022	013	1	F	Rel-5	CS Data
NP-030567	N3-030776	Disconnect Request for Multiple PDP Sessions belonging to a single User	29.061	094	2	F	Rel-5	GPRS
NP-030567	N3-030777	Unique IPv6 address for a PDP context	29.061	095	1	F	Rel-5	GPRS
NP-030568	N3-030774	HSDPA impacts to Radius	29.061	099	1	F	Rel-5	HSDPA
NP-030568	N3-030694	HSDPA impacts to Go interface	29.208	048		F	Rel-5	HSDPA
NP-030569	N3-030778	Use of response code 500 instead of 503	29.163	001	1	F	Rel-6	IMS-CCR-IWCS
NP-030569	N3-030788	Autonomous Release at I-MGCF on T7 expiry	29.163	002	1	F	Rel-6	IMS-CCR-IWCS
NP-030569	N3-030779	Clarification of 487 mapping to 127	29.163	003	1	F	Rel-6	IMS-CCR-IWCS
NP-030569	N3-030812	Table 12 modifications	29.163	004	2	F	Rel-6	IMS-CCR-IWCS
NP-030569	N3-030692	Correction of structure	29.163	008		F	Rel-6	IMS-CCR-IWCS
NP-030569	N3-030782	Interworking of user plane	29.163	010	1	F	Rel-6	IMS-CCR-IWCS
NP-030569	N3-030823	Alignment between subclause 7.2.3 and 7.3.3 in TS 29.163	29.163	011	2	F	Rel-6	IMS-CCR-IWCS
NP-030569	N3-030781	Criterion to start Timer Tiw2	29.163	013	1	F	Rel-6	IMS-CCR-IWCS
NP-030569	N3-030787	Alignment of TS 29.163 with the ITU-T recommendation Q.1912.5	29.163	015	1	F	Rel-6	IMS-CCR-IWCS
NP-030569	N3-030784	Mapping of unknown cause code values	29.163	018	1	F	Rel-6	IMS-CCR-IWCS
NP-030569	N3-030813	Addition of References	29.163	021	2	F	Rel-6	IMS-CCR-IWCS
NP-030569	N3-030814	Handling of closed used group supplementary service	29.163	022	3	F	Rel-6	IMS-CCR-IWCS

NP-030569	N3-030815	Interworking of Hold/Resume from the CS Network	29.163	025	1	B	Rel-6	IMS-CCR-IWCS
NP-030570	N3-030790	Failure handling in MGCF	29.163	009	1	F	Rel-6	IMS-CCR-Mn
NP-030570	N3-030829	Corrections to clause 9 of TS 29.163	29.163	012	5	F	Rel-6	IMS-CCR-Mn
NP-030570	N3-030831	IM-MGW initiated release	29.163	014	3	F	Rel-6	IMS-CCR-Mn
NP-030570	N3-030793	Corrections to table 29 and 30 of TS 29.163	29.163	016	1	F	Rel-6	IMS-CCR-Mn
NP-030570	N3-030817	Corrections on Section 9.2.8 Handling of RTP telephony events	29.163	023	2	F	Rel-6	IMS-CCR-Mn
NP-030570	N3-030741	Wrong Mn Procedure in Figure 36	29.163	024		B	Rel-6	IMS-CCR-Mn

5.2 Liaison Statements

The following Liaison Statements are contained in **NP-030561**.

Tdoc #	Tdoc Title	LS to	LS cc	Attachment
N3-030828	LS on Inter-network accounting for BS30 based services such as video telephony	CN, SA	-	N3-030821, N3-030713
N3-030830	LS out to SA2 and SA3 on Security concerns of DIAMETER over Gq interface	SA3, SA2	-	-
N3-030811	LS on SBLP handling of Session modification without adding or removing media lines	CN1	-	N3-030764

5.3 Work Items

CN3 does not provide any new Work Item Description sheet to CN#22.

5.4 Technical Reports and Technical Specifications

CN3 does not provide any new TRs / TSs to CN#22.

6. Next Meetings

Next CN3 meetings are scheduled as follows:

Meeting	Date	Location, Host
TSG-CN3#31	16th – 20th Feb 2004	Atlanta, USA
TSG-CN3#32	10th – 14th May 2004	Zagreb, Croatia
TSG-CN3#33	16th – 20th August 2004	Sophia Antipolis, France
TSG-CN3#34	15th – 19th November 2004	Asia

7. Acknowledgements