3GPP TSG CN Plenary Meeting #14 **NP-010560**
Kyoto, Japan, 12th –14th December 2001 **[N3-010615]**

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Title: **CN3 Status Report to CN Plenary**

Agenda item: **6.3.1**

Document for: **INFORMATION**

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1. General

1.1 Last Meetings

Two CN3 meetings have taken place since the last TSG-CN plenary:

CN3#19 15th - 19th October 2001 Brighton, U.K., hosted by BT, Hutchinson 3G, Lucent, Orange, and Vodafone.

CN3#20 26th – 30th November 2001 Cancun, Mexico, hosted by the North American Friends of 3GPP

These meetings included joint sessions with CN1 on TS 23.218 and TS 24.228.

The detailed CN3 meeting reports are contained in **NP-010561** (CN3#19) and **NP-010562** (CN3#20). This status report summarises the results from these meetings and presents the current status of work in CN3.

1.2 Administrative Work

CN3 has reviewed and provided comments to the 3GPP work plan. These comments have been sent to MCC.

CN3 has reviewed the list of specifications for which it is responsible. Some remarks have been reported back to MCC, and have been incorporated into the master specifications database.

Dependencies to IETF and ITU-T specs have been identified. These information will be incorporated into the Work Plan and also on the IETF tracking document on the 3GPP Web side.

2. Work Items R99 and earlier

2.1 Circuit Switched Bearers in UMTS

As requested by CN#13, CN3 has removed all text related to the Shared Interworking Function in UMTS. These CRs for R99 and Rel-4 are contained in document **NP-010571**.

2.2 GPRS

Initiated by a liaison statement from T2 requesting CN3 to provide a solution to transfer the user identity (e.g., MSISDN or IP address) from GGSN to an application server (e.g., WAP Gateway or MMS Relay / Server), CN3 started investigating this issue and provided a first solution approved at CN#13. Now CN3 provides again a couple of Change Requests improving the solution. The improvements are related to the

- Presentation of the parameters IMSI MCC-MNC and GGSN MCC-MNC (no padding of characters between MCC and MNC)
- Presentation of the IMSI parameter (no padding of characters in the GTP IE)
- Parameter MSISDN is now optional and no longer mandatory
- Introduction of a new procedure to update information during a session
- Introduction of a new procedure to delete the PDP context triggered by the AAA Server.

The CRs for R97, R98, R99 and Rel-4 are included in documents **NP-010572** and **NP-010672**.

3. Rel-4 Work Items

3.1 Bearer independent circuit switched Core Network

One change request against TS 29.414 was agreed by CN3 that corrects the inconsistency regarding RTP clock frequency. Another change request aligns TS 29.414 and 29.415 with the stage 2 specification TS 23.205, especially it was clarified that the specifications do not preclude the implementation of a combined MGW and MSC server. Another change request to TS 29.415 implements the use of the correct version of the Iu UP protocol.

All of the CRs are contained in document **NP-010573**.

3.2 Circuit Switched Bearers in UMTS

The SDU size value for the transparent circuit switched Bearer Services for 33.6 kbit/s was still missing and could now be defined in co-operation with 3GPP T1 that took over this task from GSM Association. CRs defining a value of 672 bit are contained in document **NP-010574**.

4. Rel-5 Work Items

4.1 Interworking between the IM Subsystem and IP networks

Following SA2's guidance CN3 has decided to reduce the scope of the work needed for this Work Item. In order to avoid duplicated work, CN3 concentrates on 3GPP PLMN relevant issues. So, CN3 will concentrate on interworking between IETF SIP and 3GPP profile of SIP. In particular, CN3 will not investigate SIP – H.323 interworking scenarios because this takes place outside the PLMN and will be specified by other standardisation bodies. Furthermore, CN3 will not consider interworking between IP V4 and IP V6, except if there is some impact on the 3GPP profile of SIP.

The interworking between the 3GPP profile of SIP and standard IETF SIP was discussed within a joined session of CN1 and CN3. The need of an interworking function was identified one meeting later. It has become evident that we have to distinguish between address translation between Ipv4 and Ipv6 in an NAT-PT (network address & protocol translation) component and the implications of this translation to SIP. Also, the IPv6 – IPv4 address translation for User and Control Plane can take place in different components that may reside in different networks. The decision on the location of this interworking function is in SA2's responsibility. A Liaison Statement was sent by the joint session with CN1 to SA2 (for further details refer to CN1's report).

The transcoding interworking has to be considered regarding the interworking in the User Plane. Here, special guidance by SA4 is expected. This request was already initiated by a Liaison Statement by SA2. However, CN3 has not received any information so far.

Because of these outstanding information, it is difficult to estimate a completion date for this Work Item.

The Work Item Description sheet was changed according to the decisions and is presented in document **NP-010568**. Also the specification TS 29.162 was updated accordingly and a new version 0.4.0 has been uploaded to the 3GPP FTP server 'Draft specifications' area. The work is not yet mature enough in order to provide a version 1.0.0 for information to CN#14.

4.2 Interworking between the IM Subsystem and CS networks

Long and intensive discussions took place regarding the scope of the Work Item. Some companies wanted to specify this interworking in detail in 3GPP and later on when related specifications are available in IETF or ITU-T to replace the text by references to those specifications. Some other companies expressed concerns related to this approach and

required to concentrate on 3GPP specific interworking issues (like additional interworking requirements due to the 3GPP profile of SIP) and to use references to related ongoing work in the ITU-T where appropriate. The later approach was endorsed by CN3 in order to avoid duplicated work and inconsistent specifications.

This means for the interworking with CS networks that CN3 will refer to recommendations by ITU-T SG11 even they are not completed at finalisation date of 3GPP Release 5.

In the joint session with CN1 the question was raised up concerning the handling of the call flows needed to specify the interworking scenarios. The call flows in TS 29.163 are based on the call flows in TS 24.228 and it might be difficult to keep these call flows consistent. It was decided to include all of the call flows into TS 24.228.

So, the TS 29.163 specifying the interworking between the IM CN Subsystem and CS networks becomes more and less a skeleton describing the architecture and referring to other specifications that describe the details.

TS 29.163 was also updated accordingly and a version 1.0.0 is presented to CN#14 for information in document **NP-010565**.

The Work Item Description sheet was also changed accordingly and is presented in document **NP-010569**.

4.3 End-to-end QoS

The work on end-to-end Quality of Service is characterised by the following points:-

- SA2 has reduced the number of scenarios needed for 3GPP Rel-5. This impacts CN3's work. Related changes have been incorporated in 29.207 and 29.208.
- The Go interface is currently specified to be IP flow based in 23.207. This means that the decision sent by the PCF is IP flow based. The PDP context may be used to serve many IP flows meaning that the GGSN shall combine the IP flow based policy information from the PCF decision to form policy information per PDP context. This may lead to various problems; e g correct matching etc. CN3 proposes to specify the Go interface to be PDP context based. This architectural decision by SA2 is requested (LS sent to SA2). In a joint session with SA2 it was decided to stick the current working assumption that Go is IP flow based (and not PDP context based). Pre-condition for this decision was another decision that one PDP context is allowed per media flow.
- CN3 has discussed the COPS scenarios that the Go interface should be based on. Possible candidates are a new COPS-UMTS or use of existing COPS with UMTS extensions (either based on outsourcing with private objects or COPS-PR with new PIBs). It was decided to use COPS-PR for the outsourcing model using a new 3GPP Go PIB. This will reduce the specification and implementation effort. A proposal of a UMTS Go PIB was presented in last CN3 meeting. This needs further considerations.
- The work split between CN1 and CN3 was clarified: TS 24.228 shows the relationship between SIP/SDP session level and the bearer level (RSVP and GPRS) in flows showing both SIP/SDP session level and the bearer level in end-to-end flows, while CN3's specification TS 23.208 “End-to-end QoS signalling flows” adds detailed flows involving the network interfaces Gn, Go and Gi, and also further describes the end-to-end flows showing RSVP and GPRS bearer level flows in detail but not the SIP/SDP session level.

The decisions made together with SA2 and with CN3 recently, enable CN3 to provide contributions to TS 29.207. Some progress could also be made regarding TS 29.208. However, both of the specifications are not mature enough to present a version 1.0.0 to CN#14 for information. However, these specifications have been uploaded to the 3GPP FTP server 'Draft specifications' area.

Blocking points are currently dependencies to other groups: There are decisions outstanding concerning the location of authorization, the interworking of 3GPP UE with non-3GPP UEs, the information which the authorization is based on in the PCF and concerning the scenarios covered by TS 24.228 that have to be detailed in TS 29.208.

4.4 Service Change and UDI fall back for CS Multimedia

CN3 is proposing a refined version of the already agreed Work Item, Service Change and UDI Fallback for CS Multimedia in document **NP-010570**. Completion date was already agreed to be CN#15. Proposed CRs in CN3 were discussed and improved during the Cancun meeting (CN3#20) and postponed to CN3#21 (January 2002). The WI rapporteur informed CN3 that the CRs in CN1 were also discussed and postponed to the January meetings and that CN4 has generally agreed with the proposed concept using OoBTC procedures using BICC codec negotiation.

4.5 Technical Enhancements and Improvements

As requested by TSG GERAN CN3 provides a set of Change Requests to update the terminology regarding the use of the terms „GSM", „UMTS", „2G" and „3G". These terms are replaced by the terms „A/Gb mode" or „Iu mode", respectively. This is not only an editorial exercise, because the introduction of the GERAN Iu mode raised up some questions that could not be clarified in CN3. So, in some specifications the consideration of GERAN IU mode has to be marked as „for further study". The set of CRs is provided in document **NP-010604**. The open issues will be summarized in a Liaison Statement that will go into e-mail approval after the CN3 meeting due to lack of time during the meeting.

During the meeting a Liaison Statement by TSG GERAN WG1 was received asking CN3 what circuit switched data services are applicable if there is an Iu-cs interface between radio access and core network. CN3 responded that only those service are applicable for the Iu mode that are listed in TS 22.002 as applicable for UTRAN.

5. Output Documents

5.1 Change Request

CN Doc #	CN3 Doc #	Spec	Tdoc Title	CR #	Rev	CAT	Rel	Vers	WI
NP-010572	N3-010465	09.61	Correction to Calling-station-id	A021	1	F	R97	6.5.0	GPRS
NP-010572	N3-010464	09.61	Correction to Calling-station-id	A022	1	A	R98	7.4.0	GPRS
NP-010572	N3-010450	09.61	Correction to 3GPP specific attribute: 3GPP-IMSI	A023	1	F	R97	6.5.0	GPRS
NP-010572	N3-010449	09.61	Correction to 3GPP specific attribute: 3GPP-IMSI	A024	1	A	R98	7.4.0	GPRS
NP-010572	N3-010437	09.61	Correction to 3GPP specific attributes containing MCC-MNC IMSI	A025		F	R97	6.5.0	GPRS
NP-010572	N3-010438	09.61	Correction to 3GPP specific attributes containing MCC-MNC IMSI	A026		A	R98	7.4.0	GPRS
NP-010672	N3-010474	09.61	Standard method for updating information between GPRS and external PDN using RADIUS	A027		F	R97	6.5.0	GPRS
NP-010672	N3-010473	09.61	Standard method for updating information between GPRS and external PDN using RADIUS	A028		A	R98	7.4.0	GPRS
NP-010672	N3-010477	09.61	Standard method for interworking between GPRS and external PDN using RADIUS	A029		A	R98	7.4.0	GPRS
NP-010672	N3-010478	09.61	Standard method for interworking between GPRS and external PDN using RADIUS	A030		F	R97	6.5.0	GPRS
NP-010672	N3-010471	29.061	Standard method for updating information between GPRS and external PDN using RADIUS	023	2	A	Rel-4	4.2.0	GPRS

CN Doc #	CN3 Doc #	Spec	Tdoc Title	CR #	Rev	CAT	Rel	Vers	WI
NP-010672	N3-010475	29.061	Standard method for interworking between GPRS and external PDN using RADIUS	024	2	A	Rel-4	4.2.0	GPRS
NP-010572	N3-010463	29.061	Correction to Calling-station-id	027	1	A	R99	3.7.0	GPRS
NP-010572	N3-010462	29.061	Correction to Calling-station-id	028	1	A	Rel-4	4.2.0	GPRS
NP-010572	N3-010448	29.061	Correction to 3GPP specific attribute: 3GPP-IMSI	029	1	A	R99	3.7.0	GPRS
NP-010572	N3-010447	29.061	Correction to 3GPP specific attribute: 3GPP-IMSI	030	1	A	Rel-4	4.2.0	GPRS
NP-010572	N3-010439	29.061	Correction to 3GPP specific attributes containing MCC-MNC IMSI	031		A	R99	3.7.0	GPRS
NP-010572	N3-010440	29.061	Correction to 3GPP specific attributes containing MCC-MNC IMSI	032		A	Rel-4	4.2.0	GPRS
NP-010672	N3-010476	29.061	Standard method for interworking between GPRS and external PDN using RADIUS	033		A	R99	3.7.0	GPRS
NP-010672	N3-010472	29.061	Standard method for updating information between GPRS and external PDN using RADIUS	034		A	R99	3.7.0	GPRS
NP-010571	N3-010401	29.007	Removal of SIWF	042		F	R99	3.8.0	CS Bearer
NP-010571	N3-010402	29.007	Removal of SIWF	043		A	Rel-4	4.2.0	CS Bearer
NP-010574	N3-010404	29.007	SDU size for transparent data at 33.6 kbit/s	045		F	Rel-4	4.2.0	CS Bearer
NP-010574	N3-010409	27.001	SDU size for transparent data at 33.6 kbit/s	069		F	Rel-4	4.5.0	CS Bearer
NP-010574	N3-010410	23.910	SDU size for transparent data at 33.6 kbit/s	031		F	Rel-4	4.3.0	CS Bearer
NP-010573	N3-010424	29.414	Correction of inconsistency regarding RTP clock frequency	004		F	Rel-4	4.2.0	CSSPLIT
NP-010573	N3-010579	29.414	Correction to scope clause	005	1	F	Rel-4	4.2.0	CSSPLIT
NP-010573	N3-010580	29.415	Correction to scope clause	002	1	F	Rel-4	4.1.0	CSSPLIT
NP-010573	N3-010562	29.415	Reference to Iu UP	004	1	F	Rel-4	4.1.0	CSSPLIT
NP-010604	N3-010590	27.001	Terminology clarifications as requested by TSG GERAN	070	3	D	Rel-5	4.5.0	TEI_5
NP-010604	N3-010591	27.002	Terminology clarifications as requested by TSG GERAN	008	3	D	Rel-5	4.0.0	TEI_5
NP-010604	N3-010592	27.003	Terminology clarifications as requested by TSG GERAN	009	3	D	Rel-5	4.1.0	TEI_5
NP-010604	N3-010593	23.910	Terminology clarifications as requested by TSG GERAN	032	2	D	Rel-5	4.3.0	TEI_5
NP-010604	N3-010596	24.022	Terminology clarifications as requested by TSG GERAN	006	3	D	Rel-5	4.0.0	TEI_5
NP-010604	N3-010597	29.007	Terminology clarifications as requested by TSG GERAN	044	3	D	Rel-5	4.2.0	TEI_5
NP-010604	N3-010594	27.060	Terminology clarifications as requested by TSG GERAN	016	2	D	Rel-5	4.0.0	TEI_5
NP-010604	N3-010598	29.061	Terminology clarifications as requested by TSG GERAN	035	2	D	Rel-5	4.2.0	TEI_5
NP-010604	N3-010581	44.021	Terminology clarifications as requested by TSG GERAN	001	1	D	Rel-5	4.0.0	TEI_5
NP-010604	N3-010582	48.020	Terminology clarifications as requested by TSG GERAN	001	1	D	Rel-5	4.0.0	TEI_5

5.2 Liaison Statements

The Liaison Statements are contained in **NP-010563**.

Tdoc #	Tdoc Title	LS to	LS cc	Attachment
N3-010446	SIP Signalling and CODEC Issues	GERAN, SA2, SA4	CN1	N3-010390
N3-010481	PDP context based Go Interface	SA2	none	none
N3-010483	Signalling Transparency [Re. OSV-01043 and S2-012321]	GERAN, SA2	CN1	N3-010387, N3-01088
N3-010589	Response to LS on data rates for CS data services in UTRAN	GERAN WG1	RAN3, SA1	N3-010583
N3-010610	QoS Mapping for IMS to and CC:	SA4	SA2, RAN2	N3-010530
N3-010602	Addition of the H.324 M codec to TS 26.103	SA4		

5.3 Work Items

The Work Item Description sheets are contained in the following documents:

Tdoc #	Tdoc Title
NP-010568	Interworking between IM CN subsystem and IP networks
NP-010569	Interworking between IM CN subsystem and CS networks
NP-010570	Service Change and UDI fall back for CS Multimedia

5.4 TRs and TSs

Tdoc #	Number	Owner	Rel	Title	Rapporteur	Company
NP-010565	29.163	CN3	Rel-5	Interworking between the IM CN subsystem and CS networks	Dave Sanders	Vodafone

6. Next Meetings

Next CN3 meetings are scheduled as follows:

Meeting	Date	Location, Host
TSG-CN3#21	28th Jan - 1st Feb 2002	Sophia Antipolis, France, ETSI
TSG-CN3#22	8th - 12th April 2002	North America, USA

7. Acknowledgements

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