3GPP TSG CN Plenary Meeting #16 **NP-020294**
5th - 7th June 2002. Marco Island, USA.

Source: **CN1 Chairman**

Title: **CN1 Status report**

Agenda item: **6.1.1**

Document for: **INFORMATION**

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1 Executive summary

This time there has been two regular CN1 meetings and one SIP ad hoc meeting since the previous TSGN plenary meeting. The meeting reports from CN1 #23 in Ft. Lauderdale, USA, CN1 #24 in Budapest, Hungary and CN1 SIP ad hoc in Madrid, Spain can be found in documents NP-020211-213. As before, phone conferences have been organised to work on the hot topics between the meetings.

Rel-5 IMS work has progressed at usual very high speed. In some issues like (re-) negotiation of session related resources and transfer of 3GPP related information there has been very late change causing some open items which were earlier considered as completed to take a step back to due to change of working assumption based on IETF discussion.

The CN1 open items list document has been maintained by CN1 chairman with the help of the delegates who are interested in IMS. The document in NP-020209 is based on informal review which was arranged after CN1 #24 right after the meeting was closed. Nothing has been removed since that version but more details have been added. The plenary meeting is asked to consider not just the total number of open items but also the main trend in how the open items have been covered in CN1. This shows rather good progress even though more rocks have been added to the load on the way.

The documents for approval are presented by work item under each release. Category A mirror CRs have been grouped together with the corresponding category F CR.

For the first time we have now IMS CRs for approval in this meeting and the number of IMS related CRs that CN1 has treated is very high. All effort has been made to keep these separate so that there should be no CRs using another CR as reference. However, some links between different CRs do exist, such as corresponding changes to 24.228 call flows and 24.229 procedural requirements.

IMS specifications TS 24.228 and 24.229 are proposed for functional freezing to close the door for any new features but to allow the agreed and documented open items to be covered with CRs in later CN1 meetings.

There is one work item description for approval on MBMS. An early version of this was seen in the previous plenary meeting but it was forwarded back to working group for further elaboration. This time we see a CN-wide WID with more detailed analysis of the impact of the WI.

2 Information to be noted

2.1 Meeting schedule for year 2002

There are no changes to the meeting schedule for 2002 since the previous TSGN plenary meeting.

Date	Meeting
14.-18. Jan. 2002	CN1 #21 SIP ad hoc Rel-5 IMS only (Phoenix, USA)
28 Jan.-1 Feb 2002	CN1 #22 (Sophia Antipolis, France)
19 – 22 Feb 2002	CN1 #22bis any outstanding Rel-5 Work Items (Oulu, Finland)
6.-8. Mar. 2002	CN #15 (Korea)
8.-12. Apr. 2002	CN1 #23 Ft. Lauderdale, USA
23.-25. Apr. 2002	CN1 SIP ad hoc meeting, Madrid, Spain
13.-17. May 2002	CN1 #24 Budapest, Hungary
5.-7. Jun. 2002	CN #16 (Marco Island, USA)
29. Jul. – 2. Aug. 2002	CN1 #25 (Finland)
4.-6- Sep. 2002	CN #17 (France)
23.-27. Sep. 2002	CN1 #26
11.-15. Nov. 2002	CN1 #27
4.-6. Dec. 2002	CN #18 (New Orleans, USA)

2.2 Liaison statements for information

All agreed outgoing liaison statements from CN1 to the other groups have been sent after each meeting. The liaisons from CN1 in NP-020214 and NP-020215 are provided for information for TSGN plenary.

2.3 Comments on the 3GPP work plan

Due to the record number of contributions we treated in CN1 #24 there was no possibility to review the work plan during the meeting. Therefore it was agreed that the chairman makes a proposal on the work plan changes and collects comments from the group via email. This was done with the following results:

- IMS stage 3 documents in CN1 in ID 1278 and ID 1998 were raised to 90 % complete. Due to open items we can not claim that they are 100 % yet. Or is 1278 (24.229 already 95 % complete?
- SIP extensions for integrity protection in ID 11014 is complete
- The state of readiness of CN1 IMS stage 3 is reflected in Gm interface, ID 11020, which is also 90 % complete

- 2 % was chosen as low non-zero figure to indicate that the discussion on Rel-6 presence service has started
- All drafts which have become RFCs have been marked 100 % complete in the reference version of the work plan already. No changes to the maturity level of the remaining IETF drafts have been made.
- ID 2522, manyfolks draft is now 100 %. RFC number ?
- ID 11019 (ISC interface) and 14002 (Mg interface) are 100 % complete
- ID 2524 privacy draft and 2525 call auth draft are now 100 %. RFC numbers?
- ID 11001 (Refer), 11002 (DHCP) and 11003 (Replaces) are all in IESG last call and therefore assumed to be 90 % complete.
- ID 11015 compression signalling is in WG last call, proposed to be 85 % complete.
- ID 11016 Mw interface reflects the stability of 24.229 and is therefore 90 % complete.

The review was based on work plan version from the 9th of April 2002.

3 Issues for action/decision by CN plenary

3.1 Liaison statements to TSGN plenary

No liaison statements have been sent from CN1 to TSGN #16 but there is one in NP-020155 which is for information for TSGN plenary. This LS to GSM association is about registration of domain name **IMSI.3gppnetwork.org** for IMS usage.

3.2 Controversial issues

3.2.1 Network sharing

Proposed work item on network sharing was seen in CN1 #24. This WID is not forwarded to TSGN #16 for approval since the work amount in CN1 under this WI was seen to be small enough to justify doing it under TEI-5 as the intention is to get the first part of the WI done for Rel-5 already.

The real obstacle in the way of approving the related CRs is that four different proposals on how to implement the CN1 part of network sharing are being discussed. A set of contributions from Ericsson was seen during CN1 #24 but they could not be agreed since there was no consensus on the overall principle. It was also seen that the question is mainly SA2 and RAN related and CN1 is playing only a minor role. No LS was sent since it was known at the time of CN1 meeting that the discussion in the other groups is already ongoing and CN1 was not able to make any proposals to arrive to a decision.

CN1 expects to wait for SA2 and RAN to solve the main principle first and assume that CN1 part of the change will be reasonably straightforward after that.

3.2.2 Support of EDGE in pre-R99 networks

Support of EDGE in pre-R99 networks was discussed in CN1 #24 based on discussion document by Nortel. The main discussion points were whether such a network configuration would be allowed and how would the difference between baseline R97 and R97 network supporting EDGE be documented.

The UE behaviour was also discussed with the agreement that EDGE capable UE should not consider the DL indication of SGSN revision level to decide whether the serving network supports EDGE or not. Explicit EDGE capability indication in cell options IE should be looked at instead.

At least Nokia was concerned that such a possibility, if allowed in the network, must not cause any new requirements to full R99 compliant UE implementation because it would effectively mean a non-essential change of existing feature in frozen release.

Related liaison statement was sent to GERAN and SA1 in N1-021477 and CN1 expects to proceed in the issue based on the replies that are received.

4 Documents for approval

4.1 R98 and older work items

There are no CRs related to pre-R99 work items.

4.2 Release 99 work items

4.2.1 GPRS (GSM-UMTS interworking and MM for UMTS)

The available space in Packet Resource Request message for RLC/MAC in GPRS would only allow encoding of two supported frequency bands in the MS Radio Access Capability IE. The CRs in NP-020217 are proposed for approval to overcome this limitation. It should be noted that it is already possible for a R99 mobile to support more than two bands so this CR on frozen release does not add new functionality but allows an already existing configuration alternative to work properly.

NP-020218 contains two sets of changes to 23.009 and one change to 24.007. The usage of BSSAP or RANAP for the special case of cancellation of a subsequent inter-MSC handover/ relocation and the handling of the service handover parameters at non-anchor MSC are defined in 23.009.

24.007 CRs in the same document correct a long standing inconsistency between 24.007 and 04.18 / 44.018 which was caused by extension of GSM RR message type octet for R99 without making the corresponding changes to 24.007 maintained by CN1. The proposed CRs have been seen and revised by GERAN and CN1 #24 reviewed the proposed revision and agreed that it was an improvement over the original CN1 proposal.

NP-020219 contains a set of R99 CRs on 24.008. CS domain specific SI correction is a straightforward correction of encoding of the octets within the IE. The change on roaming restrictions is needed to allow GPRS class A mobiles to be designed and the QoS IE related change allows the interoperability of R97 and R99 implementations.

4.2.2 Security

The R99 CRs and mirror CRs in NP-020216 removes a contradiction from the specification. The intention is that a CS domain partial reject in MM layer from the network does also automatically invalidate the possibly existing connection to PS domain CN entity.

4.2.3 TEI

It has been found out that there is a R97 ME implementation which does not handle the extended R99 QoS IE correctly. Based on the agreement in the previous (TSG #14) plenary meetings the problem and the workaround solution has been documented in NP-020222. The reason for making a phase 2 change at this stage is that up to now the phase 2 version of the document has covered all releases. The intention is to keep the same principle but to align

with the principle which has already been adopted in TSG-T with release independent UE test specifications by always keeping the latest frozen version up to date.

24.007 CRs in the same document contain correction to the specification to avoid the same requirement being overlooked by some implementor again and corrections of references.

CRs in NP-020223 put back the definition of reserved values in repeat indicator. It was found out to be removed by mistake from R99 onwards. Coding rules of type 4 IEs are defined in 24.007 and there is a change to that text in other CRs to this meeting. Since the same text is duplicated in 24.008 something needs to be done to avoid conflict between 24.007 and 24.008 and CN1 prefers to delete the duplicate definition from 24.008 even though this change alone would not meet the criteria for an essential correction for a frozen release. Also the wrong references have been corrected in one R99 CR.

The authentication related CR in NP-020223 is needed because it was obvious that there was more than one way to understand UE requirements to treat two different criterias for the network failing the authentication.

4.3 Release 4 work items

4.3.1 TrFO

The change in NP-020220 which corrects the UE UMTS codecs encoding in Supported Codecs List is applicable from Rel-4 onwards.

The R99 CR is CN1 reaction to the SA4 definition of UMTS_AMR2 codec in R99 and it does not have any mirror CRs since this change is not needed for later releases where the Supported Codec List provides explicit means to negotiate the UMTS codecs. The reason why it appears in this group is that this is a consequence of a change which was originally made due to Rel-4 work item.

All of these CRs are needed because of UMTS_AMR2 codec and the TSGN should also consider the most appropriate way of liaising any decisions to TSG-SA plenary.

4.3.2 CSSPLIT

NP-020221 is needed to allow DTMF in bearer independend CS network.

4.3.3 TEI-4

NP-020224 contains several CRs which correct the references to other documents.

4.4 Release 5 work items

4.4.1 IMS CRs on existing CN1 specifications

The number of IMS CRs for approval is very high and these are grouped by specification in groups of ten CRs unless there has been a common denominator for a set of CRs, such as the introduction of P-headers or removal of editor's notes.

IMS CRs on 24.008 are provided in NP-020225.

IMS CRs on 23.218 are provided in NP-020226.

IMS CRs on 24.228 are provided in NP-020227 – 229.

IMS CRs on 24.229 are provided in NP-020230 – 240.

4.4.2 Service change and fallback for UDI/RDI multimedia calls

The changes that are needed in 24.008 because of work item SCUDIF are contained in single CR in NP-020241.

4.4.3 TEI-5

All 24.008 changes under work item TEI-5 have been collected in document NP-020242.

The other TEI-5 CRs on 23.009 and 23.121 are in NP-020243.

4.4.4 IMS Technical Specifications for approval

All three CN1 IMS TSs, 23.218, 24.228 and 24.229, were approved for the first time in TSGN #15 and they were put under CR control. 23.218 was also functionally frozen to indicate that it contained the functionality agreed for Rel-5.

This time also 24.228 and 24.229 are proposed for functional freeze with permission to complete the remaining open items which have been documented in separate contribution CN1 IMS open items list.

4.4.5 Dependency to IETF drafts

The CN1 IMS specifications have got strong dependency of IETF draft specifications. As these drafts are very volatile and may even cease to exist completely, all such references must

be removed before publishing the 3GPP specification as standard. Four alternative paths could be foreseen already in TSGN #15 and that time the last alternative allowing more time to complete the work was chosen for all IETF dependencies.

In the positive case an IETF draft matures to RFC standard which is stable and can be referenced from 3GPP specification. In this case both the technical contents and the references in 3GPP specification need to be updated to reflect the differences, if any, between the latest referenced draft and the draft version which becomes RFC.

If an integral part of the protocol which can not be easily removed from 3GPP specification fails to become RFC in time, the latest draft version of it can be annexed to the 3GPP specification. This would freeze the reference to an immature draft.

A more minor dependency can be removed from the 3GPP specification if it is acceptable to remove the functionality related with this IETF SIP protocol extension.

If none of these can be done, then more time needs to be allowed to wait for one of the other options becoming possible.

It was assumed before TSGN #16 that some more IETF drafts would become RFCs right before, or even during the TSGN meeting. Therefore the rapporteurs and CN1 chairman are prepared to draft the necessary CRs to replace references to IETF drafts with references to corresponding RFCs if we receive information on the approval of new RFCs during this TSGN plenary meeting.

4.5 Release 6 work items

Very little time has been spent in CN1 on Rel-6 items so far. The main reason is not any more lack of stability of service requirements and the architecture, at least in case of presence, but lack of meeting time in CN1 meetings.

4.5.1 Presence

The discussion on presence has started in CN1 even though we can not show any text in technical specifications.

The scope of the work item description has been clarified and the principle how to document presence in CN1 has been discussed and agreed. It has been agreed to collect presence related requirements to a new single document which at least in the beginning will be written in the format of a TR. This is our way to avoid creating Rel-6 versions of the IMS stage 3 specifications and large number of mirror CRs of Rel-5 corrections which we will still need.

The outline of this TR was seen in CN1 #24 and Keith Drage from Lucent volunteered to become the rapporteur of that TR. Later on CN1 will need to decide whether to convert this specification into a TS or to convert the substance of it into a set of CRs on the other specifications. But the first thing now is to write the technical contents in that TR.

4.5.2 MBMS

Multimedia Broadcast Multicast Service is a new WI which was proposed already in TSGN #15 but this time the WID contains more technical details as requested in the last TSGN plenary. The WID is provided for approval in NP-020244.

5 Acknowledgements

The progress in CN1 has been very rapid particularly in IMS area. All this could not have been achieved without the help from the rapporteurs who did substantial extra work to provide the WG internal versions of IMS specifications after every WG meeting, the hosts who have yet again organised very good meeting logistics, the delegates who have been able to submit new proposals meeting after meeting.
I would also like to extend my personal thanks to Kevan Hobbis who chaired the CN1 SIP ad hoc meeting in Madrid allowing me to clear my inbox at the office.