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Subject: Summary Report of the TSG-CN2 for the TSG-CN#12

TSG-CN2 has held two meetings since the last plenary;

- April 3 - 5, Newbury, UK, CPH ad Hoc hosted by *Vodafone*. Report in **NP-010305**.
- May 14 – 18, Puerto Rico, USA, hosted by *American Friends of 3GPP*. Report in **NP-010306**.

1 CAMEL phase 1 (R96)

Not changed.

2 CAMEL Phase 2 (R97 & R98)

- A. A warning note was added to CAMEL2 (**NP-010309**). The Redirecting Number and Redirection Information are not always available in the call forwarding O-BCSM, although they are marked as mandatory parameters. The error in the spec is corrected to CAMEL3.

3 CAMEL phase 3 (R99)

The progress by functionality;

- A. GPRS inter-working was the subject of most work. A number of corrections were made. The most important changes were the following:
 - The usage of the GGSN address was clarified. The SCP shall receive the GGSN address of the *control plane*, not the *user plane* address.
 - The QoS induced ApplyChargingReportGPRS operation shall not cause a state transition in the SGSN.
 - The TCAP dialogue usage & termination was improved by various CRs.
 - The setting of *PDP Type Organization* spare bits was aligned with the GTP protocol. Now it will be possible, if needed, to use the spare bits in future for new purposes.
 - See also the section for the controversial issues.
- B. MO SMS:
 - The TCAP dialogue handling was clarified.
 - See also the section for the controversial issues
- C. Call Gapping / SCP load control: No change.
- D. Dialed services: No change.
- E. CF notification: No change
- F. ATM/ATSI: No change.
- G. Miscellaneous:
 - The length of FurnishChargingInformation (FCI) operation is corrected.
 - Outgoing call barring checks were improved.
 - Service interaction indicator (SII2) handling was clarified.
 - The call diversion treatment indicator handling at the GMSC was improved.
 - The assisting gsmSSF (for user interaction) state transitions were corrected.
- H. **Controversial issues:**
 - The SCP address issue was discussed for long. The CN2 approved the joint Alcatel, Ericsson and T-Mobil CR (**NP-010314**). Siemens, Lucent and Nokia had doubts about the CRs. According to the proposal the SCP / gsmSCF address was added to the CAP level. *The TC user information* could not be used since there was no way of adding the address in a backward compatible manner due to missing ellipsis notation. The contributors want to use the ITU-T specified SCCP and TCAP interfaces within the SGSN. Nokia saw this more of an academic problem. Later on, Siemens provided counter proposal directly to the plenary (**NP-010317**). If the SGSN used the address included in the GPRS-CSI then the load sharing of the SCPs would not work. According to Nokia the SGSN has already a requirement to memorise the SCCP

layer address of the first SCP response. However, this requires the SGSN to use internally non-pure ITU-T interface.

- The CAPv3 ASN has an encoding limit of 24 hours or about 4 Giga byte volume for the GPRS charging. The CN2 meeting agreed a warning note for the service logic designers (**NP-010316**). Later on, Nokia drafted CRs (**NP-010320**) to introduce rollover counters for R99 CAMEL3. The same limitation applies for calls as well, but the longer than 24h PDP contexts will be much more likely than 24h+ calls.
- Ericsson proposed charging reference numbers for MO SMS billing for CAMEL3 (**NP-010315**), and MT SMS billing for CAMEL4. If approved, the related Liaison Statement (**NP-010308**) will be sent to SA5. The concept is analogous to the CAMEL2 call related charging reference number. This was approved in CN2 but may be rejected in plenary. Nokia and Siemens had concerns about the CRs. The CAMEL4 MT SMS CRs should not be implemented if the related CAMEL3 are rejected.

4 3GPP Rel-4

In the 3GPP release 4 there is no new CAMEL phase. The following Rel-4 issues are worth noting:

- A. CAP-over-IP. The CN4 and CN2 have completed the work.
- B. The GPRS barrings may have a minor impact. Not worked out by the CN2 yet.
- C. The 3GPP Rel-4 set of specifications will have a separate copy of R99 CAMEL3. This is similar to the R98 copy of the R97 CAMEL2.

5 CAMEL phase 4 (Rel-5)

The CN2 maintains so called "collective CRs" of other specifications that in most cases fall into remit of the CN4 (29.002, 29.079, 23.018 etc). Once CAMEL4 is stable, the CN2 will send the collective CRs to the responsible working group for approval. Most likely this will take place in the end of the year so that the December 2001 plenary can stamp the (CN4 approved) changes.

The progress by functionality:

- A. Call Party Handling (CPH):
 - CPH work has progressed nicely, partially due to the ad Hoc. The initial versions of the SDL, information flows and ASN have been approved.
 - Charging is the main open (service level) issue. CN2 assumes that the charging will be on leg basis, and waits for SA1 input/confirmation.
 - Vodafone has offered to maintain a list of open CPH issues and principal decisions.
- B. Optimal Routeing: Operation was improved. The improvement was done according to the current stage 1. The more flexible service requirement would be actually easier to implement, therefore CN2 asked SA1 for guidance.
- C. CAMEL control over IPT/VoIP: Very little, if any progress.
- D. MT SMS:
 - Charging reference number was approved conditionally.
 - The triggering criterion was corrected.
- E. DTMF MidCall: No CRs.
- F. Flexible pre-paid warning tones: No CRs.
- G. Forwarded-to number (The SCP is informed to which number call is diverted to): No CRs.
- H. Charging Notification: The first stage 2 CR was approved.
- I. Enhancements of dialled services: The issue was discussed, and we expect the revised CRs for the next meeting.
- J. Called party location at the alerting phase: No CRs
- K. GPRS/PS mobility management enhancements: The CRs were postponed to the next meeting due to time constraints.

The CN2 got new requirements from the SA1:

- L. Location Information during ongoing call: Issue was discussed briefly, revised CRS are expected for the next meeting.
- M. ODB in HLR-SCP interface: The CRs were postponed to the next meeting due to time constraints.

6 Other Work Items with impact on CAMEL

None

7 Rel-5 IPT/VoIP work share between CN1, CN2, CN4 and SA2.

CN2 chairmen's personal view: The CN1/CN4 will define "basic call handling". The CAMEL "hooks" (procedure calls for the CAMEL specific Detection Points) will be there. The CN2 shall define the CAMEL state models and other CAMEL specifics.

8 Other issues to be mentioned

Meeting calendar for remaining year 2001 looks currently as follows:

9 – 13 Jul	Dresden, Germany (Mannesmann)
15 – 19 Oct	Brighton, UK (BT & Vodafone)
26 – 30 Nov	Cancun, Mexico

CN2 had a brief look on the proposed year 2002 meeting calendar. A comment was raised that the meeting locations should have GSM coverage. CN2 chairman's personal view is that the January 2002 meeting should be outside of the Euro zone – I expect hassle and long queues where any cash is handled.

9 Acknowledgements

CN2 gives special thanks to our former MCC support person Per Johan Jorgensen. He has done excellent job in CN2 with good spirit. The chairman and delegates of CN2 enjoyed working with him. Per Johan will continue his work in CN1.

CN2 welcomes our new MCC support person, Andrijana Jurisic. She had an excellent start in CN2 May meeting. Likewise as Per Johan, she has the patience and endurance that the work in CN2 requires.

The CAMEL riders owe also one for the CAMEL spec rapporteurs who have done hard work. Special thanks go to Sumio Miyagawa (Siemens), Rogier Noldus (Ericsson) and Christian Homann (Alcatel).

CN2 also thanks the hosts of CN2 meeting (Vodafone and American Friends of 3GPP) for hosting us.