3GPP TSG-CN #14   **Tdoc 3GPP NP-010575**
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Source: **TSG-CN2 chairman**
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Subject: **Status Report for TSG CN WG2**

TSG-CN2 has held two meetings since the last plenary;
- CN2#20 October 15 - 19, Brighton, UK. Hosted by Vodafone et al.
- CN2#21 November 26 – 30, Cancun Mexico. Hosted by American Friends of 3GPP.
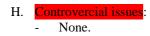
1   CAMEL phase 1 (R96)

Not changed.

2   CAMEL Phase 2 (R97 & R98)

A. A CLI decision box is re-inserted to R98 CAMEL2. This is the only difference between the R97 and R98 CAMEL phase 2.
B. A health warning is added to CAMEL2 about Advice of Charge. Some switches may reject SCP provided e-parameters if the AoC is not supported by the network, or there is no subscription for AoC.

3   CAMEL phase 3 (R99)

The progress by functionality;
A. GPRS inter-working. The most important changes were the following:
    - Encoding & references of certain parameter have been clarified and corrected.
    - Also network initiated chargeable QoS changes shall be reported to the SCP.
    - The SCP control of GPRS AoC has been clarified (If no subscription, or no support in VPLMN).
    - Corrections on CAMEL handling for GPRS relocation and relocation cancel.
B. MO SMS:
    - The SMS reference number is introduced as optional for CAMEL3 in R99 and Rel-4. Mandatory in Rel-5.
C. Call Gapping / SCP load control: No change.
D. Dialled services: No change.
E. CF notification: No change
F. ATM/ATSI:
    - The SCP can differentiate whether CSI was deactivated or deleted from the subscriber's profile.
    - The ATM/ATSI/NSDC is clarified for call barring and call forwarding. The MAP protocol allows to convey information only about one CB or CF type. The group codes such as "AllCallForwarding" shall not be used in AnyTimeModification operation.
G. Miscellaneous:
    - The White Book TCAP is expected for CAP.
    - The Any Time Interrogation of current location SDLs cover now also the UMTS access case.
    - The optimal routing of late call forwarding has been corrected. The VMSC shall not drop the call back to the GMSC after the ISUP answer has been send to backward direction. Also, the GMSC checks if answer has bee received and does not accept MAP-RCH operation in the speech phase of the call. The correction is essential since the GMSC has no mechanism to report the CF to SCP in active call phase, and this fact may result to charging problems in the pre-paid service.
    - It is clarified that when the SCP wants to control use of supplementary services on call basis then the SCP is allowed to change SS parameter only to more restrictive direction. If a SS is not allowed for some reason (e.g. missing subscription) the SCP is not able to allow the service on call basis.
    - The encoding reference of the Called Party Number has been changed.
    - ContinueWithArgument (CWA) handling has been aligned between 23.078 and 29.078.

H. Controvercial issues:
- None.

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)

Most of the CAMEL4 functionality is included in the draft version. Most of them need corrections during the next year. These functionalities are marked as "Completed", although they may not mature enough to be implemented.

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). In January, the CN2 will send the collective CRs to the CN4 for approval (a joint meeting).

The progress by functionality:
A. Optimal Routeing: Completed.
B. Call Party Handling (CPH): Most of it "completed". A lot of work and progress as well.
C. DTMF MidCall: Completed
D. CAMEL support by the IMS:
- A new specification 23.278 1.0.0 (CAMEL4 Stage 2 for IMS) is presented for information in CN#14.
- The 23.278 2.0.0 is presented in CN#15.
- The Si interface protocol (HLR – IM-SSI) has not been selected.
- Practically, all CAMEL stage 2 text has been moved to the 23.278 draft.
E. MT SMS: Completed.
F. Flexible pre-paid warning tones: Stage 2 work in, Stage 3 part not yet approved. Completion expected in January
G. Charging Notification: No progress.
H. Enhancements of dialled services: No progress.
I. Location Information at alerting phase: Completed.
J. GPRS/PS mobility management enhancements: Work almost done, expected completion in January 2002.
K. ODB in HLR-SCP interface: Work practically completed, expected completion in January.
L. Location Information during ongoing call: No progress. Partially complete.
M. GPRS AnyTimeInterrogation: Work practically completed, completion expected in Jan 2002.

6 Other Work Items with impact on CAMEL

None

7 Rel-5 IMS work share between CN1, CN2, CN4 and SA2.

The joint CN2 and CN4 meeting in Cancun proposes that CN4 makes a decision about protocol that conveys CAMEL triggers to IM-SSF (Si interface). The CN2 shall specify the Stage 2 for this protocol. It is identified that we can not wait anymore for a SA2 decision on the issue.

8 CN2 meeting calendar

Meeting calendar for 2002

TITLE	TYPE	DATES	LOCATION	CTRY

3GPPCN2-#22	WG	28Jan – 1 Feb 2002	Sophia Antipolis	France
3GPPCN2 Rel-5 editorial meeting	WG	20 – 21 Feb 2002	TBD	Europe *2
3GPPCN2-#23	WG	8 – 12 April 2002	TBD	USA /Europe *1
3GPPCN2#24	WG	13-17 May 2002	Aachen	Germany
3GPPCN2#25	WG	29July-2 August 2002	TBD	Finland
3GPPCN2#26	WG	23-27September	TBD	USA
3GPPCN2#27	WG	11-15 November	Penang	Malaysia

*1 = Unlike other CN working groups, CN2 wants to meet in Europe since very few if any delegates from outside of Europe.
*2 = No technical changes but editorial clean-up meeting of CN2 specifications before the March 2002 plenary.

9 Other issues to be mentioned

1. The couple of CAMEL4 features in Rel-5 have not progressed due to missing delegates. Cn2 recommends that the CN plenary should consider removal of Dialled services enhancement from CAMEL4. Likewise, the charging notifications feature has not progressed due to same reason. Siemens may want to continue on this functionality. The CN plenary could indicate their opinion to the SA1 that is responsible for CAMEL requirements.
2. T-Mobil has proposed that CAMEL4 could be split into subsets. E.g. in the CS side MT-SMS and call handling capabilities of CAMEL4 could be negotiated separately. Currently, an MSC or SGSN supports full CAMEL4, or no CAMEL4 at all. The SA1 is the main venue to solve this issue.

10 Acknowledgements

CN2 thanks our MCC support person, Andrijana Jurisic. As always, she provided excellent help in our meetings, and between the meetings.

CN2 also thanks the hosts of CN2 meeting (Vodafone, BT, Lucent, Hutchinson 3G, Orange UK in Brighton, and American Friends of 3GPP in Cancun) for hosting us.

Special thanks to the editors of the CN2 specification and editors of the collective CRs for their hard work.