3GPP TSG CN Plenary Meeting #21 **NP-030375**

17th - 19th September 2003. Frankfurt, Germany.

Source: **CN4 Chairman**

Title: **Status report from CN4 to TSG-CN Plenary Meeting #20**

Agenda item: **6.4.1**

Document for: **INFORMATION**

1 Introduction

CN4 have had one meeting since the last CN plenary meeting: CN4 #20 was held in Sophia Antipolis, France, on 25 - 29 August, kindly hosted by ETSI. We were not able to avoid parallel sessions in this meeting, so the CN4 vice chairmen, Toshiyuki Tamura (NEC) and Peter Wild (Vodafone), shared the fun to chair the set of parallel sessions. Kimmo Kymäläinen (MCC) was there as usual, making sure we did things properly. There were **189** documents tabled at the start of the meeting, and by the time we reached the close of the meeting the count had risen to **338**. We agreed **80** change requests, **7** output liaison statements, **1** new work item description and we agreed to send **1** TS for Information. There were **44** participants representing **21** companies, plus Kimmo for the MCC.

The draft meeting report of CN4 #20 was distributed to the CN4 email list; it is still under review. It is provided in Tdoc NP-030376 for information. The CN4 outgoing liaison statements are provided in Tdoc NP-030377 for information.

2 Management summary

2.1 Release 6

We agreed a new work item description on **Support for subscriber certificates**. The aim of this work item is to create a 3GPP stage 3 technical specification document that specifies how the 3GPP IM Multimedia-Auth-Request/Answer message pair is used in Bootstrapping BSF-HSS interface and Subscriber Certificates NAF-BSF interface and the corresponding application logics in BSF (bootstrapping function), HSS (home subscriber service), and NAF (network access facility). This work item has only 2 supporting companies.

We have discussed the format of data definition for **Generic User Profile.** The requirement was raised that the format of GUP data definition shall be in line with data definition of Cx and Sh. We agreed on the structure of 29.240. TS 29.240 is planed to be presented for information in CN#22 and for approval in CN#23.

During the discussion on **Presence** three open issues are detected were we need guidance on the requirements from SA1 and SA2. We agreed to send a liaison statement to SA1 and SA2 raising the following questions:

1) Relationship between the CAMEL feature and the non-IMS Presence Service
2) Whether the Presence Network Agent (PNA) is defined as a totally separate logical entity in its own physical node.
3) Reference point HSS/HLR – Presence Network Agent (Ph) interface is defined for both MAP and the Sh reference point.

We agreed as a working assumption to introduce a new chapter for **MBMS** related messages into 29.060

On **Subscriber data handling for the IMS** we agreed CRs on PSI definition and on sharing public identities across multiple UEs (Rel-6). We continued the discussions on version control and future extensibility for Cx and Sh protocols and did not conclude on a commonly agreed solution. The issue is postponed to CN4#21. Introduction of the Dh (AS - SLF) interface (Application Server to Subscription Locator Function) into 29.328 is postponed to CN4#21. For Rel-5 several corrections on error handling and XML schema definitions are approved.

We had a discussion on **GTP path failure** recovery. We made the assumption that the echo handling would be mandated in future meeting for REL6. This issue will continue to be discussed in our future meeting.

For **LCS Rel-6** CRs on Introduction of North American Interim Location Based Routing of Emergency Call and on New LCS Service Types were approved. A CR on Positioning Data for UTRAN LCS is approved on e-mail.

For **LCS Rel-5** we corrected the maximum length of "LCS Requestor ID" and "LCS Codeword".

We receive a Liaison statement form SA 5 on **Subscriber and equipment trace.** They asked CN4 to answer a number of questions related interfaces which are under the remit of CN4 as a basis SA5 has described some scenarios and asked CN4 how these scenarios can be covered. We will continue the discussion and provide a response at next meeting because delegates requested more time to analyse the requested functionality.

Wireless LAN interworking TS 29.234 (NP-030400) is agreed to be submitted to plenary for information.
We have made the following assumptions:
-Ws reference point is diameter based.
-Wr reference point can be radius or diameter based (proxy to Access network)
-The translation function should be only in the proxy, no mapping in the server.
-The AAA-Server needs information about the interface from the proxy to the clients to guarantee that the proxy receives all information (AVP) needed to perform a correct mapping.
The question was raised if the D' and Gr' reference points needs to be described. This was seen as an open issue by some companies.

Several editorial corrections to the **MAP specification** have been approved. The SIWF description was removed and references were corrected. Addition of an informative annex describing the various mechanisms for MAP-message segmentation and their applicability was postponed to CN4#21.

2.2 Release 5

Mobile Number Portability continues to be a contentious subject in CN4. At the last plenary we agreed on the CRs for the IN based solution and CN4 was asked to provide also a solution for the SRF based solution on MNP. This was the 4th meeting discussing this topic and again we had two proposed solutions for the SRF based solution on the table and non has real technical drawbacks. *After some discussion we agreed to send two sets of CRs to plenary and ask the plenary to approve 1 set only*. If the plenary is not able to conclude and reverse the CRs back to CN4, CN4 has to vote on a solution at their CN4#21.

SCUDIF, we agreed to perform the interrogation for the two subscriptions for SCUDIF in one step. We discussed the introduction of a new bearer service code for multimedia calls. This was not agreed because the introduction of a new bearer service code for multi media services is currently not required by stage 1 specification and it was not seen as feasible to have a complete set of CRs ready for the plenary. We agreed to avoid any further delay of the feature.

"Early UE" handling. We agreed a set of CRs to align the specification which are under responsibility of CN4 with those of TSG RAN3.

We agreed one correction to **CAMEL phase 4**.

We agreed one set of CRs for Release 5 Location Service to correct the length of "LCS requested ID" and "LCS code word"

We agreed a further set of CRs as promised last time on **MAP specification clean up**. SDLs were corrected (source files provided) and aligned with the text. Redundant material was removed.

We received a Liaison statement from **GSMA** which highlights that in 23.003 domains which are based on MCC and MNC are sometimes based on a 4 digit value and some times on a 3digtit value. GSMA proposed to use only 3 digit MNC and MCC definitions. We accepted to change our specification from Release 5 onwards because of IMS. In addition we agreed to send a liaison statement to GSMA IREG to inform the operators which are currently using pre release 5 domain name definitions in their network and introducing Rel-5 shall take the changed definition into account. These domains are usually used network internal and usually not connected to the internet.

2.3 Release 99/Release 4

GTP, we agreed to correct some References at 29.060 which are leading to non existing or incorrect specification.

TrFO and Codec control, this time we were able to conclude on the topic on Iu UP initialisation during codec modification. We agreed a set of CRs starting with Release 4.

Security, we agreed a CR to correct the SDL on Process MAP Dialog State Machine for Rel4 with mirrors to Rel5 and 6.

2.4 GSM

We have had a set of CRs related to ASCI feature to correct and clarify the encoding of Group ID. We agreed the changes from the first release when ASCI have been introduced (R96). The changes are in 03.03 and 09.02 and their successors.

3 Questions for advice and decision

None

4 Change Requests

CN4 produced 81 Change Requests which are submitted for ratification. An overview of the CR packages is provided in Table 1. Corrective CRs to Release 5 and earlier were agreed as critical corrections, unless there is an indication to the contrary.

Table 1: CRs submitted by CN4 for approval at CN #21 (sorted by agenda item)

Tdoc number	Agenda	Subject	Work item	Release
NP-030378	7.2	Corrections on Security	Security	Rel-4
NP-030380	7.7	Corrections on Transcoder Free Operation Release 4	OoBTC	Rel-4
NP-030381	7.11	Small corrections on technical enhancements and improvements for GPRS Release 4	TEI4	Rel-4
NP-030382	7.11	Small corrections on technical enhancements and improvements for R99	TEI	R99
NP-030379	7.12	ASCI corrections	ASCI	R96
NP-030383	8.1	Corrections on IP-based Multimedia Services Cx/Dx-interface	IMS-CCR	Rel-5
NP-030384	8.1	Corrections on IP-based Multimedia Services Sh-interface	IMS-CCR	Rel-5
NP-030385	8.3	Corrections on Camel Phase 4	Camel4	Rel-5
NP-030386	8.4	Corrections on Location Service Enhancements Release 5	LCS1	Rel-5
NP-030387	8.7	Corrections on Service change and UDI fallback Release 5	SCUDIF	Rel-5
NP-030388	8.8	Small Technical Enhancements and Improvements for Rel-5	TEI5	Rel-5
NP-030389	8.8	Small Technical Enhancements and Improvements for Rel-5	TEI5	Rel-5
NP-030390	8.8	Corrections on Early UE	Late_UE	Rel-5

NP-030391	8.8	Small Technical Enhancements and Improvements for MAP	TEI5	Rel-5
NP-030392	8.9	Corrections on MNP	MNP	Rel-5
NP-030393	8.9	Corrections on MNP	MNP	Rel-5
NP-030394	9.1	Enhancements to the CX and Sh interfaces	IMS2-CCR	Rel-6
NP-030395	9.2	Corrections on Support of Presence Capability	PRESNC	Rel-6
NP-030396	9.18	Small Technical Enhancements and Improvements for GTP specification Rel-6	TEI6	Rel-6
NP-030426	9.18	Small Technical Enhancements and Improvements for Rel-6	TEI6	Rel-6
NP-030427	9.19	Corrections on Location Service Enhancements Release 6	LCS2	Rel-6
NP-030399	9.19	Proposed WID: Support for subscriber certificates, stage 3	SEC1-SC	Rel-6
NP-030400	9.19	3GPP TS 29.234-v1.0.0 3GPP System to WLAN Interworking	WLAN	Rel-6

4.1 Release 5 (and earlier) CRs

Corrective CRs to Release 5 and earlier are **essential corrections**, unless there is an indication to the contrary.

4.1.1 Security (NP-03378)

NP-030378; contains 3 corrective CRs to the MAP specification: one Release 4, with mirror CRs for Release 5 & 6. CR 29.002 582r1 corrects the SDL of the Process Secure_MAP_DSM (sheet 10))

4.1.2 Transcoder Free operation (NP-03380)

NP-030380; this package contains 4 CRs 2 for Release 4 with mirrors to Release 5

CR 23.153 062 Rel 4, Clarification on codec modification; this CR removes some contratictions in the specification by corecting some figures, CR 23.153 063 is the Release 5 mirror.

CR 23.153 066r1 Rel 4, this CR provides clarification that the MGW re-initialises the User Plane if the codec changes. Also the MSC behaviour is clarified according to RAN3 decision. CR 23.153 067r1 is the Release 5 mirror.

4.1.3 GPRS R99 (NP-03382)

NP-030382; CR 29.060 435 This CR corrects an incorrect reference which is only in the R99 version of 29.060, therefor no mirror CRs.

4.1.4 GPRS Release 4 (NP-03381)

NP-030381 contains 3 corrective CRs to the MAP specification: one to Release 4, with mirror CRs for Releases 5 & 6. CR 29.060 432 corrects some reference to a withdrawn specification; CR 29.060 433 and CR 29.060 434 are the mirror CRs

4.1.5 GSM: ASCI (NP-03379)

NP-030379; contains 13 corrective CRs to the 09.02 and 03.03 specification and their successors, These CRs are correcting and clarify the definition and encoding of Group ID, Group call area ID and Group call reference. The corrections are agreed starting with the first release when ASCI is introduced.

CR 03.03 A059 is the R96 CR. CR 03.03 A060; CR 03.03 A061; CR 23.003 070; CR 23.003 071; CR 23.003 072 are mirrors.

CR 09.02 A337 is the R96 CR; CR 09.02 A338; CR 09.02 A339; CR 29.002 661; CR 29.002 662; CR 29.002 663; CR 29.002 664 are mirrors;

4.1.6 IP-based Multimedia Services Cx/Dx interface (NP-03383)

NP-030383; contains 4 corrective CRs.

CR 29.228 051r2 correction on the XML schema (attached file of the specification) of 29.228;

CR 29.228 042r3 Error in S-CSCF Assignment Type; The CR corrects some inconsistency in chapter 8 Error handling procedures

CR 29.228 055r1 Extensibility of the public identity structure in the XML schema (attached file of the specification) of 29.228-540;

CR 29.229 022r1 Correction on the PPR (push-profile request) command code;

4.1.7 IMS Sh interface (NP-03384)

NP-030384; contains 3 corrective CRs.

CR 29.328 032r2 this corrects an inconsistency between the message flow in TS 29.328 §B.1.1 and the procedure description in TS 24.229;

CR 29.328 033r2 Correction of Sh data definition in Annex C and D

CR 29.328 035r2 corrections on the XML schema (attached file of the specification) of 29.328;

4.1.8 Camel Phase 4 (NP-03385)

NP-030385, CR 23.079 025 Correction to interaction between ORLCF (Optimal Routeing of Late Call Forwarding) and forwarding notification; The T-CSI CAMEL Service should be informed after the GMSC has verified that the optimal routeing can apply in the GMSC.

4.1.9 Location Service Enhancements Release 5 (NP-03386)

NP-030386; contains 3 corrective CRs, which are correcting the maximum length of “LCS Requestor ID” and “LCS Codeword” in 29.002 and 24.080.

CR 29.002 656 is the Rel 5 version and CR 29.002 657 is the release 6 mirror. The CR 24.080 029 reflects the changes from 29.002 in the imported definitions.

4.1.10 Service change and UDI fallback (NP-03387)

NP-030387 these set of CRs covers the requirements of SCUDIF on the interfaces under the responsibility of CN4;

CR 23.018 133 SCUDIF HLR Interrogation;

CR 23.079 026r1 Notification of the 2nd BSG in case of Late CF with OR;

CR 29.002 613r3 SCUDIF HLR Interrogation; (enhancements to the MAP send routing information). CR 29.002 614r3 is the Release 6 mirror.

CR 29.002 659r2 Notification of the 2nd Basic Service Group in case of Late CF with OR; CR 29.002 660r2 is the Release 6 mirror.

4.1.11 Small Technical Enhancements and Improvements for Rel-5 (NP-03388)

NP-030388, CR 23.008 122 Adds the definition for list of authorized visited network identifiers;

4.1.12 GSMA (NP-03389)

NP-030389; CR 23.003 074r1 changes to enable the GSMA root DNS architecture;

4.1.13 Early UE handling (NP-03390)

NP-030390; contains 7 corrective CRs, including 2 mirrors

CR 23.012 013r1 Corrections to "Early UE" handling;

CR 23.018 128 Corrections to "Early UE" handling;

CR 29.010 091 Addition of Early UE specific cause code mapping;

CR 29.002 646 This CR aligns the definition of RAN on UESBI format; CR 29.002 647 is the Rel 6 mirror;

CR 29.060 454 This CR changes "Early UE feature" to PUESBINE; CR 29.060 455 is the Rel 6 mirror

4.1.14 MAP specification clean-up for Rel-5 (NP-03391)

NP-030391 contains a set of CRs on MAP specification clean up;

CR 23.012 012 Correction of misaligned signal names between VLR and PVLR; (linked to 29.002 636)

CR 29.002 636 Provision of SDL diagrams and removal of redundant text in chapter 19;

CR 29.002 637 r1 Provision of SDL diagrams and removal of redundant text in chapter 19;

CR 29.002 638 Provision of SDL diagrams and removal of redundant text in chapter 20;

CR 29.002 639 Provision of SDL diagrams and removal of redundant text in chapter 20;

CR 29.002 640 Provision of SDL diagrams and removal of redundant text in chapter 21;

CR 29.002 641 Provision of SDL diagrams and removal of redundant text in chapter 21;

4.1.15 MNP, incorrect charging of prepaid subscriber (NP-03392, NP-03393)

NP-030392 ATI based solution:
CR 23.066 026 Incorrect CAMEL pre-paid charging in MNP networks;
CR 29.002 615r2 Incorrect Charging With MNP; CR 29.002 616 r2 is the Rel6 mirror;
Arguments:
- Since we are requesting dynamic information ATI should be used. Because ATI is used for requesting dynamic information.
- gsmSCF is already capable of sending ATI.

Editorials:
Stage 2 impacts are distributed over MNP (23.066) and CAMEL (23.078) although stage 1 requirement is only on MNP (22.066).
Stage 3 impacts on MAP (29.002)
CR to 23.066 is "kind of" technical correct but needs massive editorial corrections.

NP-030393 SRI based solution:
CR 23.066 024r1 SRF-based solution for correct charging of calls to ported or non-ported subscribers originated by pre-paid subscribers;
CR 29.002 596 SRF-based solution for correct charging of calls to ported or non-ported subscribers originated by pre-paid subscribers; CR 29.002 597 is the Rel6 mirror;
Arguments:
- Since we are requesting kind of routing information (charging is based on routing), SRI seems to be the more logical solution.
- gsmSCF and SRF are already capable of sending/receiving SRI.
- less impact on SRF.

Editorials:
Stage 2 impacts on MNP (23.066) since stage 1 requirement is on MNP (22.066)
Stage 3 impacts on MAP (29.002).

Summary on both:
The MAP procedures are enhanced in both solutions so that the feature capabilities are identical.

4.2 Release 6 CRs

4.2.1 Enhancements to IMS Cx/Dx interface (NP-03394)

NP-030394 contains 2 corrective CRs
CR 23.003 073r2 PSI definition
CR 29.228 052 Sharing public identities across multiple UEs

4.2.1 Presence (NP-03395)

NP-030395;
CR 29.228 041r2 Introduction of Presence Stage 3 (Px) to the Cx interface;

4.2.1 GPRS (NP-03396)

NP-030396 contains 3 corrective CRs

CR 29.060 436r1 Removal of End User Address from Create Subsequent PDP Context Response;

CR 29.060 448 Correction/Clarification of GTP Cause Value

CR 29.060 453r2 Correction/Clarification of SGSN handling of Update PDP Context Response

4.2.1 Small Technical Enhancements and Improvements for Rel-6 (NP-03397)

NP-030426 contains 8 CRs.

CR 29.002 642 Removal of SIWF description;

CR 29.002 643 Deletion of redundant Annex D;

CR 29.002 644 Removal of tables in section 7.6, deletion of an alphabetic list of parameters;

CR 29.002 649 Correction of References;

CR 29.002 648 Correction of wrong AC name in the table in 17.1.6

CR 29.002 671 editorial correction on the description of SS-Barring Category;

CR 29.002 650 Add additional network resource parameter in order to indicate SGSN, GGSN, GMLC, gsmSCF, NPLR and AuC as the erroneous entity to allow that system failure can indicate the node information by use of the network resource parameter where a problem is detected during the MAP signal processing.

CR 23.018 132 Removal of SIWF material;

4.2.1 Location Service Enhancements (NP-03398)

NP-030427;

CR 29.002 645 Introduction of North American Interim Location Based Routing of Emergency Call

CR 29.002 654 New LCS Service Types are introduced to allign 29.002 with 22.071

CR 29.002 674 Positioning Data for UTRAN LCS, this Cr removes the restriction on usage of Positioning just for GERAN access

5 Draft Technical specifications and reports

We have one draft technical specifications for information to present to CN #21

NP-030400; 3GPP TS 29.234 v1.0.0 3GPP System to WLAN Interworking

6 Work organisation

6.1 Work Item descriptions (NP-030399)

Proposed WID: Support for subscriber certificates, stage 3;

6.2 Review of the work plan

We did not have time to review the work plan during CN4 #20; the information relayed to MCC is the CN4 chairman's personal assessment.

7 CN4 meeting calendar

We have a calendar of meetings agreed to the end of 2004.

Table 2: CN4 meeting calendar to the end of 2004

Date	Meeting	Place	Host
27 - 31 Oct 2003	CN4#21	Bangkok, Thailand	Japanese Friends of 3GPP
17 – 21 Nov 2003	CN WG 4 (if needed)	?	?
10 – 12 Dec 2003	CN plenary #22	Hawaii, USA	North American & Japanese Friends of 3GPP
16 – 20 Feb. 2004	CN4#22	TBD	
10 - 12 Mar 2004	CN plenary #23	China ; CN	
10-14 May 2004	CN4#23	TBD	
2 - 4 Jun 2004	CN plenary #24	Korea; KR	
16 – 20 August	CN4#24	Sophia Antipolis, FRANCE	ETSI
8 - 10 Sep 2004	CN plenary #25	US ; US	
15 – 19 Nov 2004	CN4#25	TBD	
08 -10 Dec 2004	CN plenary #26	Athene, GREECE	

7 Acknowledgments

First, I have (and it's a duty which gives me no problem at all) to thank Kimmo Kymäläinen for providing the excellent support during and between the meetings.

Finally, I would like to thank the hosts of our meeting.