3GPP TSG CN Plenary Meeting #12 **Tdoc NP-010280**
Stockholm, Sweden, 13th - 15th June 2001

Source: CN4 Chairman

Title: 3GPP TSG CN4 Status Report

Agenda item: 6.4.1

Document for: INFORMATION

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1 Introduction

The CN4#08 meeting has been held 14th – 18th of May 2001, in Rio Grande (Puerto Rico) kindly hosted by the North American Friends of 3GPP. Yun-Chao Hu (Ericsson) & Ian Park (Vodafone), who replaced Yun-Chao during a morning session, chaired the CN4 meeting. In addition, Kimmo Kymalainen (MCC) assisted the meeting. The meeting reviewed **289** documents and produced **101** CRs, **7** Liaison Statements, and **1** revised Work Item. In addition the meeting agreed on **6** input contributions to progress their Release 5 Work Items. The meeting was attended by **38** participants representing **29** companies.

The CN4#08 Meeting Report has been distributed to the CN4 Email List 3GPP_TSG_CN_WG4@list.etsi.fr on the 29th of May 2001 and will be submitted to the next CN4#09 meeting for approval. The CN4#08 meeting report is provided as Tdoc NP-010281. Two Liaison Statement, Tdoc NP-010237 and Tdoc NP-010238 are submitted to the CN Plenary to ask for further guidance from the TSG. The remainder of the CN4 outgoing Liaison Statements is provided as Tdoc NP-010282.

A CN4 Teleconference has been held on the 6th – 7th of June 2001 to finalise the MAP Application Security. This Teleconference was necessary to be conducted since the 3GPP SA3 meeting has been held after the CN4#08 meeting. It had also the mandate to process the input contributions and approve potential CRs for submission to the CN Plenary and LS as long as they remain within the 'Terms of Reference' (i.e. Release 4 Network Domain Security). The Teleconference processed **9** contributions and produced **2** CRs.

The meeting report of the Teleconference is documented as Tdoc NP-010349. This report has been distributed to the CN4 Email list 3GPP_TSG_CN_WG4@list.etsi.fr on the 7th of June 2001 and will be submitted to the next CN4#09 meeting for approval. The teleconference was attended by 6 participants representing 4 companies.

During the CN4#08 meeting, a CN4 chairman election has been held on Tuesday, 15th of May at 14:00. Two nominations have been received prior to the election, Mr. Peter Schmitt (ETSI, Siemens) and Mr. Ian Park (ETSI, Vodafone). Mr. Ian Park was elected in the first round as the new CN4 Chairman-elect.

On Thursday, 17th of May 2001 a CN4 Vice-Chairmen election has been held. Two nominations have been received prior to the election, Mr. Toshiyuki Tamura (TTC, NEC) and Mr. Peter Schmitt (ETSI, Siemens). Both nominees have been elected by acclimation as CN4 Vice-Chairmen. Therefore, the new **CN4 leadership** consists of the following delegates:

- **Mr. Ian Park (chairman)**
- **Mr. Toshiyuki Tamura (vice-chairman)**
- **Mr. Peter Schmitt (vice-chairman)**

2 Questions for Advice and Decisions

None.

3 Change Requests - Release 99

3GPP TSG CN WG4 produced 103 Change Requests that are submitted for ratification. An overview of the CR packages is been provided in Table 1.

Table 1 Agreed CN4 CRs submitted for Ratification

NP-010283	*7.2*	*Camel Phase 3*
NP-010294	*7.3*	*Security Enhancements*
NP-010287	*7.13*	*GTP Enhancements*
NP-010288	*7.14*	*Handover*
NP-010289	*7.14*	*Handover*
NP-010289	*7.14*	*Handover*
NP-010290	*7.16*	*Location Services*
NP-010291	*7.16*	*Location Services*
NP-010296	*7.18*	*Multicall*
NP-010286	*7.22*	*TEI*
NP-010298	*7.22*	*TEI*
NP-010299	*7.22*	*TEI*
NP-010284	*8.3*	*Bearer Independent CS Architecture*
NP-010297	*8.6*	*Transcoder Free Operation*
NP-010292	*8.8*	*Location Service Enhancements*
NP-010259	*8.10*	*Security Enhancements*
NP-010295	*8.10*	*Security Enhancements*
NP-010348	*8.10*	*CR 29.002 on MAP Security*
NP-010285	*8.13*	*SS7 Signaling Transport in Core Network*
NP-010293	*9.7*	*Location Service Enhancements*
NP-010300	*9.13*	*TEI*

3.1 Release 99

3.1.1 CAMEL Phase 3

The "Supported CAMEL Phases" within TS 23.008 has been corrected to be marked as temporary data so that the HLR data can be modified when the subscriber roams into a new VLR area. Furthermore, a new "CAMEL_Invocation" parameter has been added to the SDL diagrams within TS 23.018 to indicate that for CAMEL Phase 3 only a second "Send Info For Outgoing Call" (SIFOC) when the call was at least subject to O-CSI, D-CSI or N-CSI. The CAMEL Phase 3 CRs are documented in NP-010283. **Note that the CRs to 23.018 are linked to TS 23.078 CRs.**

3.1.2 Security Enhancements

An obvious mistake in the ASN.1 description of Authentication Failure Report has been corrected. The incorrect reference to "failureReport" has been corrected into "authenticationFailureReport". The Security Enhancement CR is documented in NP-010294.

3.1.3 GTP Enhancements

A number of minor corrections have been made to the GTP specification (TS 29.060):

- The GSGN Address is added to the Error Indication message. This addition has been already agreed at TSG CN#07, but this was never implemented.
- The handling of the following messages, i.e. Versions not Supported, Supported Extension Headers and Error Indication messages are described, which was missing in the current text.
- The unused "version not supported" cause value has been removed from the specification.
- Inconsistency between the Table and Text descriptions has been corrected for the Create PDP Context Response message.
- The SGSN Context Acknowledge message shall be treated as a Response message. This clarity has been added in the specification.
- A misalignment between the stage 2 and stage 3 specifications between SRNS Relocation procedure has been corrected.

The GTP Enhancements CRs are documented in Tdoc NP-010287.

3.1.4 Handover

A number of CRs have been made to correct the GSM-UMTS interworking. The MSC-A needs to be aware what the selected/allowed UMTS/GSM security algorithms of MSC-B. This has been corrected in the stage 3 specification of BSSMAP and MAP.

Two CRs are separated from the original package as documented in the withdrawn Tdoc ***NP-010289*** due to incorrect ASN.1 description. Nokia submitted two CRs (i.e. ***NP-010247***) directly to the TSG CN to correct this mistake. The CN4 approved CRs are documented in Tdoc ***NP-010345***.

The GSM channel type and GSM chosen channel and/or speech version indications are needed for correct handling of Support for Dual Services and enquiry calls in the context of Call Hold after UMTS to GSM intersystem handover. This has been corrected in the stage 2 and stage 3 descriptions.

Alignment between the TS 25.413 and TS 29.002 regarding the RNC-Id has been corrected. The RNC-Id has been modified to reflect a length of 8 octets as defined in TS 25.413.

The Handover documents are described in Tdoc NP-010288, NP-010345 and NP-010346. **Note that the CRs associated to the correction on the selected UMTS/GSM security algorithms are linked to CRs on TS 23.009. Note that based on the CN4 email discussion NP-010345 needs to be withdrawn in favour to the Nokia CRs.**

3.1.5 Location Services

The possible shapes of a response to the location request have been aligned between the stage 2 (TS 03.71) and the stage 3 specification TS 09.02. This CR goes back to Release 98 and is documented in Tdoc NP-010290.

A number of CRs has been agreed for LCS Release 99. One issue related to the interaction between BSM to UMTS inter-MSC handover and LCS. In this context a mapping between RANAP and BSSMAP messages needs to be added to the TS 29.010. The CRs modifies section 4.9, 4.9.1, 4.9.2 and 4.9.3. **However, the introduction of section 4.9.2 "Aborted Location Acquisition" requires a CR to TS 25.413.**

The supported GAD shapes has been aligned between the stage 2 (TS 23.071) and stage 3 (TS 24.030, 24.080 & 29.002) descriptions and needs to be indicated in the messaging between the Ue and the Core Network. This alignment was requested by SA2.

The Location Services CRs have been documented in Tdoc NP-010291.

3.1.6 Multi Call

A MultiCall Indicator has been added to the notifySS arguments. This has been already agreed at a previous TSG, however the change was never implemented.

During an intra-MSC UMTS – GSM Handover the MSC-B shall inform MSC-A what RAB it has kept and the radio resource list (i.e. RAB Id and its associated GSM Channel Type) in case of multiple bearers were used.

These CRs are documented in Tdoc NP-010296.

3.1.7 Technical Enhancements and Improvements (TEI)

TS 03.22 describe the behaviour of the MS in case of Idle mode and Group Receive mode. This functionality is not associated to numbering, addressing or identities. Therefore, TS 03.22 is incorrectly referenced in the TS 03.03 specification.

These CRs (from the Release 98 and onwards) are documented in Tdoc NP-010286.

The GSN and RNC IP addresses are coded into different ways.

Currently R99 specification states 'If the GGSN receives an Update PDP Context Response with a Cause value other than 'Request accepted', it shall abort the update of the PDP context'. This is not possible since the GGSN is not aware if the SGSN has the End User Address, which is a mandatory parameter of the PDP context IE. Therefore in this case the GGSN should delete the PDP context.

Some CAMEL related information are missing in the tables describing the data stored for a non GPRS access and a GPRS access networks. Also some incorrect references has been corrected.

A previous CR on the interworking cases of MS that supports and do not support long-forwarded numbers is not implemented. This has been corrected

The CRs are documented in Tdoc NP-010298.

The "No suitable Cells in Location Area" has been added as a cause value to the messages Location Update Reject and Routing Area Reject. This correction was required to handle the UE in Idle Mode as part of partial Roaming. **This correction requires CRs to TS 22.011, 23.122 and 24.008.**

In the context of a Super Charged network it is possible that the previous Network Entity will not be informed that the user has been roamed outside his VLR/SGSN area. However, a number of services (e.g. CAMEL, Charging, Location Services and Lawful Interception) require such indication. This has been corrected within the stage 2 and stage 3 descriptions.

Release 99 network mandates the usage of the priority level within the Call Proceeding message when the network supports priority levels. Therefore, it was assumed that the MS could determine the support of priority level by the core network. Since the MS needs to interwork to Core Networks prior to Release 99, this assumption is incorrect.

The CRs are documented in Tdoc NP-010299.

3.2 Release 4

3.2.1 Bearer Independent CS Architecture (WI CSSPLIT)

A number of minor corrections have been made to the stage 2 description (TS 23.205 & 23.153)

- Clarity between the direction of the of the originating call and the direction of the propagation of the Release message
- Alignment between some procedure names within TS 23.205, 29.232 and Q.1950.
- Clarify the voice processing activity related to call handover and relocations.
- The relationship between the inband FP UP negotiation and the out-of-band TRFO negotiation has been clarified within the TRFO stage 2 description. **Note that this CR is linked to CRs on TS 25.413 and TS 25.415.**

A number of minor corrections have been made to the stage 3 description (TS 29.232)

- As indicated at the previous TSG CN#11 Text Encoding has been added to the 3GPP H.248 packages on the Mc interface
- Clarity has been provided to the 3GUP Package, including the usage of the UP version property. **Note that one of the CRs is linked to CRs on TS 25.413 and TS 25.415.**
- The MGW tasks for the transparent relaying of frames and mapping of the frame data between the UP interfaces.
- The interworking between a 3GPP application of H.248 within an ATM and an IP environment has been clarified.

The CRs are documented in Tdoc NP-010284.

3.2.2 Transcoder Free Operations

A new Codec type "UMTS_AMR2" has been agreed by SA4 and consequently introduced into the stage 2 description of the TrFO Stage 2 documentation.

The CR is documented in Tdoc NP-010297. **Note that there might be impacts to 24.008 regarding the default AMR Codec Type.**

3.2.3 Location Service Enhancements

The MS needs to be able to request OTDOA assistance data from the Core Network. This has been corrected to align the stage 2 (i.e. TS 23.271) and stage 3 descriptions. **Note that the CR is linked to an impact to the TS 25.413.**

Furthermore, the network needs to have the capability to notify the Location Client with the location estimate when the MS becomes reachable again. This has been agreed for the stage 2 description and as a consequence a correction has been made for the stage 3 description. **Note that the CR is indeed linked to a CR to TS 23.271.**

Both CRs are included into Tdoc NP-010347.

3.2.4 Security Enhancements

The stage 2 specification, TS 33.102 adds diagnostic information such as access type and an indication of authentication reattempt to the Authentication Failure Report message. As a consequence a stage 3 correction has been made to the MAP specification. The CR is provided as Tdoc NP-010295 and **it is linked to a CR on TS 33.102.**

SA3 has decided to include only the MAP Application Security to the Release 4 package. As a result two CRs are provided to align the stage 3 MAP specification with the stage 2 description in TS 33.200. One CRs describes the security parameters while the other CR addresses the security granularity profiles. These CRs are documented in Tdoc NP-010348 and **it is linked to the new specification TS 33.200.**

CN4 has also agreed to a CR that removes the MAP Application Security when the TSG SA Plenary does not endorse the draft TS 33.200. In this case Tdoc NP-010259 shall prevail over Tdoc NP-010348 otherwise it shall be withdrawn. Indeed the CR is provided as Tdoc NP-010259**.**

3.2.5 SS7 Signalling Transport in Core Network

The interworking between a 3GPP application of H.248 within an ATM and an IP environment has been clarified. The CR is provided as Tdoc NP-010285.

3.3 Release 5

3.3.1 Location Service Enhancements

A new Sub System Number (SSN) value has been identified for the interface between the RNC and the S-MLC. This CR is documented in Tdoc NP-010293. **Please note that the issue needs to be addressed in an LS sent directly to the TSG CN Plenary from the involved RAN WG3.**

3.3.2 Technical Enhancements and Improvements (TEI)

The interaction between Multi Call and Multi Party Call needs completion. During the conversion of the MPTY "auxiliary states" into a formal procedure, MultiCall during MPTY was left as FFS. This document incorporates the interaction between Multi Call and Multi Party Call.

The CRs are described in NP-010300.

4 Draft Technical Specifications and Reports

3GPP TSG CN WG4 produced **2** draft Specifications and Reports that are submitted for information. An overview of the specifications and reports is been provided in Table 2. Please note that CN4 is still working on these drafts.

Table 2 Ongoing CN4 draft specification and report submitted for information

NP-010303	*9.1*	3GPP TS 29.228 **Version 0.1.0** - IP Multimedia (IM) Subsystem Cx Interface; Signalling flows and message contents
NP-010302	*9.13*	3GPP TR 29.903 **Version 0.1.0** - Feasibility Study on SS7 Signalling transport in the core network with SUA

5 Work Organisation

NP-010301	*9.13*	Feasibility study on SS7 signalling transportation in the core network with SCCP-User Adaptation (SUA)

The Work Item on the Feasibility study on SS7 signalling transportation in the core network with SCCP-User Adaptation (SUA) has been revised to match the agreed time schedule.

6 CN4 Calendar

6.1 Year 2001

3GPP N4 Meeting	Date	Place	Host
N4#06 Joint meeting CN3/CN4	15-19 January 2001 16-17 January 2001	Beijing, China	Ericsson China, Ericsson Sweden
N4 Release 4 Ad Hoc	13.15 February 2001	Madrid, Spain	Ericsson
N4#07 Joint meeting CN3/CN4	26 February -2 March 2001 1 March 2000	Sophia Antipolis, France	ETSI

N4#08	14-18 May 2001	Puerto Rico, USA	The North American Friends of 3GPP
N4 Teleconference on MAP Security	6-7 June 2001	(	Ericsson (Conference Bridge)
N4#09	**09-13 July 2001**	**Dresden, Germany**	**Mannesmann**
N4#10	**15-19 October 2001**	**Brighton, UK**	**Vodafone, BT**
N4#11	**26-30 November 2001**	**USA**	**The North American Friends of 3GPP**

6.2 Year 2002

3GPP N4 Meeting	Date	Place	Host
N4#12	**14-18 January 2002**		
N4#13	**8-12 April 2002**		
N4#14	**13-17 May 2002**		
N4#15	**29 July – 2 Aug 2002**		
N4#16	**23-27 September 2002**		
N4#17	**11-15 November 2002**		

Hosts are required for the majority of the meetings in Year 2002. If your company would like to host one of the meetings, please contact your CN4 Chairman or any of the other CN (WG) Chairmen

7 Acknowledgements

I would like to thank Kimmo Kymalainen for his excellent support to the N4 community and myself specifically. I found that his spirit was always high even at very odd hours. His interesting stuff on the PC made the late hours more bearable. I would also recommend our CN4 colleagues to keep Kimmo out of dusky eating establishments since we have noticed that he can not behave in these establishments.

I would like to thank all the participants for their hard work and sometimes patience. In total it has been very much the efforts of the CN4 participants that completed the major output of CN4 and I am sure that they will continue to do so. I would like to thank also all the editors who had challenging time constraints to provide the documents.

And at last but not least I would like to thank all the hosts for their excellent arrangements for our meetings and I hope that we can still rely on the volunteership of the hosts for future meetings. Without the co-operation of the hosts the 3GPP CN4 meetings would be less effective and efficient in performing their tasks to deliver the specifications according to time schedule.

I am stepping down as chairman of CN4. I wish the new leaders of CN4 all the luck they can have to finish the IP Multimedia challenges. I would also wish all the CN4 colleagues all the best in their standardisation activity.