

**2<sup>nd</sup> – 4<sup>th</sup> June 2004 Seoul, KOREA**

**Source:** CN4 Chairman  
**Title:** Status report from CN4 to TSG-CN Plenary Meeting #24  
**Agenda item:** 6.1.4  
**Document for:** INFORMATION

## **1 Introduction**

CN4 have had two meetings since the last CN plenary meeting: CN4#22bis was held in Edinburgh, GB, on 14 - 20 April, kindly hosted by the European friends of 3GPP. This meeting was focused on IMS, WLAN and GUP. At the 20<sup>th</sup> April we had a joint meeting with T2 SWG2. CN4#23 was held in Zagreb, Croatia on the 10-14 May, kindly hosted by the European friends of 3GPP. [Kimmo Kymäläinen](#) (MCC) was there as usual, making sure we did things properly. We agreed **48** change requests, **16** output liaison statements, **1** revised work item description. There were **51(23** at the #22bis meeting) participants representing **21(16** at the #22bis meeting) companies, plus Kimmo for the MCC.

The draft meeting report of CN4#23 was distributed to the CN4 [email list](#); it is still under review. The draft meeting report of CN4#23 and the meeting report of CN4#22bis are provided in Tdoc NP-040211 for information. The CN4 outgoing liaison statements are provided in Tdoc NP-040275 for information.

## **2 Management summary**

### **2.1 Release 6**

#### **Generic User Profile**

CN4 has received an LS from T2 asking for a new home for their GUP specifications. CN4 recommends that CN4 shall take over the responsibility for these specifications because the stage2 23.241 and the stage3 specification are very close to CN4.

We had some clarifying discussions on the understanding of the working assumption of the previous CN4 meeting regarding, GCL as a restricted XPath language to be used for data referencing and W3C XML Schema is the recommended choice for GUP data definition.

We discussed two approaches to manage Metadata information. The collection of GUP Components for a certain purpose could be viewed as a metadata type, e.g. information about physical storage location of the GUP Components. One of the approaches was not inline with the current stage 2 therefore CN4 decided to ask SA2 who is responsible for the stage 2 for guidance. The two approaches are:

- Reuse the current set of operations to manage metadata types. For new metadata type a new GUP Component needs to be specified. This approach is in line with the stage 2 document.
- For each type of metadata a new set of dedicated procedures (addXXX, listXXX and deleteXXX) shall be specified.

Liberty Alliance project offered to have a joint meeting with CN4 discussing open issue and requirement of 3GPP to LAP specifications. At the moment there is no issue which needs to be discussed with LAP. CN4 will come back to this offer when there are topics (open issues or controversial) who needs to be discussed between the two organisations.

## **Diameter based protocol Issues**

At the last plenary it was decided that CN4 should do the coordination for Diameter based protocols used on the different reference points within 3GPP. CN4 decided to produce a TS which collects information like used Application ID, AVPs and error result codes at the different reference points. 3GPP TS29.230 is sent for approval to CN plenary. (NP-040232)

We have continued the discussion on Diameter version control. At the start of the meeting two proposals were on the Table:

- For each new version of the protocol a new application Id needs to be requested by IANA.
- Introduction of Version AVP and if necessary a new application Id

When discussing the criteria for requesting a new application Id a third solution pops up.

- Introduction of an extensibility mechanism that allows extensions to be added to the Cx application in future releases in a compatible way without the need of allocating new application Ids.

Delegates have requested more time to study and compare the 3 approaches to find the best way to go.

## **HSS – CSCF (Cx) & SLF - CSCF (Dx) & HSS - SIP AS (Sh) interfaces (NP-040220)**

"Requested Identity Set" is agreed to be optional in user data request (Sh-pull procedure) from AS. We agreed on some clarifications on Public User Identity e.g. when the SIP URI and tel URL should be considered equivalent by referencing RFC 3261.

## **Subscriber Certificates (NP-040231)**

A decision on GAA application type is postponed till we receive a reply from SA3. Stage 2 is not clear on the functionality / requirement behind the GAA application type information provided to the application. Stage 3 on subscriber certificates 3GPP TS 29.109 is seen as more than 50% complete and is sent to CN#24 for information.

## **Wireless LAN interworking (29.234)**

A proposal to allow RADIUS and DIAMETER on Wd reference point was not accepted, because it is in contradiction with Stage 2. Stage 2 needs to be changed first.

Adding MSISDN AVP to Wa/Wd reference point is postponed because SA1 has not yet decided to use MSISDN as subscription ID.

## **Scenario 3**

For Wx reference point a new diameter application Id is requested from IANA.

We agreed that Wm reference point shall be diameter based and started the discussion which procedures need to be supported.

On Wm reference point we have started the discussion on the following topics:

- AAR/AAA command set should be used as basis to perform authorization download.
- STR/STA Session Termination Request/Answer procedure to be used between the PDG and the AAA Server. It should be invoked by the PDG when the user's tunnel associated with the APN has been disconnected.
- ASR/ASA Abort Session Request/Answer should be used to perform the download of the subscriber profile initiated by the 3GPP AAA Server based on the reuse of the Gx commands.

We discussed a proposal to introduce a description related to Routing enforcement on Wa and Wd reference point and to introduce a description on support of Policy enforcement on Wd reference point is postponed delegates asked for more time to check the content and the alignment with stage 2.

A general discussion on Wg reference point is started and it is agreed to add a section for Wg reference point to 29.234.

## **Subscriber and equipment Trace**

We started the discussion on subscriber and equipment trace. It was indicated that CN4 has to specify only the signalling and this should be clearly stated in the Work item description.

## **Mn interface protocol (NP-040223)**

The following procedures descriptions are added to 29.332.

- Reserve IMS connection point
- Configure IMS Resources
- Reserve IMS Connection Point and configure remote resources

The following open issues are identified:

- Procedures related to a termination towards an ISUP network are needed to be specified.
- Definition of Formats and codes; the values used for the parameter in the packages needs to be defined.

We agreed to send the specification to plenary for information

## **GPRS, Charging (NP-040230)**

SA5 has agreed to perform charging as well at the GGSN. The movement towards charging in the "GGSN arena" rather than "charging at the SGSN" leads to a need to ensure that all the relevant information that the SGSN places on the S-CDR is available at the GGSN.

## **MBMS (NP-040221)**

A new information element 'MBMS UE Context' is introduced because the new SGSN has to distinguish the MBMS UE Context from the regular PDP Context.

In TS 23.246 'Temporary Mobile Group Identity' is defined for MBMS notification purpose. Therefore a new information element 'TMGI' was added to the MBMS Registration Response message and MBMS Session Start Request message

## **Automatic Device Detection (NP-040227)**

ADD deals with storage of the actual IMEISV of the UE in MSC/VLR, SGSN, and HLR. The CRs to the relevant specifications were approved (Rel-6).

## **CAMEL phase 4+ (NP-040222)**

We agreed a set of CR to introduce active location retrieval for MT call handling, the CRs are approved under the condition that SA1 agreed on the related stage 1 CR.

## **2.2 Release 5 and earlier**

We have only 1 set of CRs for R99 onwards and only 1 set of CRs for Rel-4 onwards all other CRs starting with Rel-5.

## **HSS – CSCF (Cx) & SLF - CSCF (Dx) & HSS - SIP AS (Sh) interfaces (NP-040215)**

Corrections to 29.228, 29.229 and 29.329 have been approved in the area of "Session Case attribute ambiguity", "Multimedia-Auth-Request (MAR) Command Message Format", "Use of the Vendor ID AVP", and "reference for definition of MSISDN".

The discussion on registered and unregistered part of the user profile and the discussion on PPR/PPA optimization are ongoing and will continue at our next meeting.

## **GPRS (NP-040218)**

The definition of radio priority LCS information element is changed in a way that Rel5 SGSN which supports this IE are backward compatible to Rel4 SGSN.

## **TrFO/codec control (NP-040276)**

When comparing 3GPP TS 23.153 and 3GPP TS 34.108: "Common test environments for User Equipment (UE) conformance testing" could lead to different understandings on possible codec mode sets. We agreed to include in TS 23.153 that the MSC-S may include more than one "Single codec" element indicating the same codec type, but different configurations, in the codec list. To mandate the support of all possible subsets for every supported codec mode configuration at RNC was not agreed. Ericsson mentioned that BICC (OM Flag) provides the possibility to indicate that mode sets can only be strike out completely. If the OM flag is set it is not allowed by a node to strike out a mode out of a mode set.

## **Location services (NP-040213)**

At the last plenary CN4 has got the action item to introduce North American Interim Location Based Routing of Emergency Call from Release 99 onwards. The related CRs were approved.

## **2.3 GSM**

None.

## **3 Questions for advice and decision**

None.

## **4 Work organisation**

### **4.1 Work Item descriptions**

We have no new work item this time only the revised CN wide work item description on WLAN stage 3 in document NP-040224. The WID on WLAN updated and agreed. "USIM enhancements for WLAN Interworking" is added to the list of linked Work items. The reference points to the WLAN Access Gateway are added to the WID. For these reference points CN4 is mentioned as responsible group. As a first assumption these reference points are seen as similar to the reference points to 3GPP WAG. If this is not the case the work on Wg and Wp reference point might be shifted to CN3.

### **4.2 Review of the work plan**

The work plan was updated during the meeting. The updates should be covered in the version of the work plan which is published before CN#24.

## **5 CN4 meeting calendar**

We have agreed on a additional CN4 meeting in June 2004. The complete list of meetings is shown in the tables below till the end of 2004 and proposed dates for 2005.

**Table 1: CN4 meeting calendar to the end of 2004**

<b>Date</b>	<b>Meeting</b>	<b>Place</b>	<b>Host</b>
2 - 4 Jun 2004	CN plenary #24	Korea; KR	Samsung
21-23 June 2004	CN4#23bis	Helsinki,	Nokia

Date	Meeting	Place	Host
16 – 20 August	CN4#24	Sophia Antipolis, FRANCE	ETSI
8 - 10 Sep 2004	CN plenary #25	Palm Springs ; US	North American Friends of 3GPP
15 – 19 Nov 2004	CN4#25	TBD; KR	Samsung
08 -10 Dec 2004	CN plenary #26	Athene, GREECE	European Friends of 3GPP

**Table 2: proposed CN4 meeting calendar for 2005**

Date	Meeting	Place	Host
7-11 Feb 2005	CN4#26	TBD	TBD
09 – 11 March 2005	CN plenary #27	Tokyo; JAPAN	Japanese Friends of 3GPP
09-13 Mai 2005	CN4#27	TBD	TBD
01 – 03 June 2005	CN plenary #28	Tallin; ESTONIA	EF3
22-26 Aug 2005	CN4#28	TBD	TBD
21 – 23 Sept. 2005	CN plenary #29	TBD; US	US Friends of 3GPP
07-11 Nov 2005	CN4#29	TBD	TBD
30 Nov – 2 Dec 2005	CN plenary #30	TBD, MALTA	EF3

## 6 Change Requests

CN4 produced 48 Change Requests which are submitted for ratification. An overview of the CR packages is provided in Table 3. Corrective CRs to Release 5 and earlier were agreed as critical corrections, unless there is an indication to the contrary.

**Table 3: CRs submitted by CN4 for approval at CN #24 (sorted by agenda item)**

Tdoc	Agenda	Type	Tdoc Title	WI	Rel
NP-040213	7.4	CR PACK	CRs to Rel-4 on Work Item Location Service Enhancement	LCS	R99
NP-040214	7.7	CR PACK	Corrections on OoBTC	OoBTC	Rel-4
NP-040215	8.1	CR PACK	CRs to Rel-5 on Work Item IP-based multimedia services Cx-/Dx-interface	IMS-CCR	Rel-5

NP-040216	8.1	CR PACK	CRs to Rel-5 on Work Item IP-based multimedia services Sh-interface	IMS-CCR	Rel-5
NP-040217	8.3	CR PACK	CRs to Rel-5 on Work Camel 4	Camel4	Rel-5
NP-040218	8.8	CR PACK	CRs to Rel-5 on Work Item small Technical Enhancements and Improvements on GTP	TEI5	Rel-5
NP-040219	8.8	CR PACK	CRs to Rel-5 on Work Item small Technical Enhancements and Improvements on TrFO	TEI5	Rel-5
NP-040220	9.1	CR PACK	CRs to Rel-6 on Work Item IP-based multimedia services	IMS2	Rel-6
NP-040221	9.8	CR PACK	CRs to Rel-6 on Work Item Multimedia Broadcast and Multicast Service	MBMS	Rel-6
NP-040222	9.13	CR PACK	CR to Rel-6 on Camel 4 enhancements	EDCamel	Rel-6
NP-040225	9.18	CR PACK	CRs to Rel-6 on Work Item Location Service Enhancements	LCS2	Rel-6
NP-040226	9.21	CR PACK	CR to Rel-6 on Work Item small Technical Enhancements and Improvements	TEI6	Rel-6
NP-040227	9.21	CR PACK	CRs to Rel-6 on Work Item small Technical Enhancements and Improvements on Automatic Device Detection	TEI6	Rel-6
NP-040228	9.21	CR PACK	CRs to Rel-6 on Work Item small Technical Enhancements and Improvements on GTP	TEI6	Rel-6
NP-040229	9.21	CR PACK	CRs to Rel-6 on Work Item small Technical Enhancements and Improvements on MAP	TEI6	Rel-6
NP-040230	9.22	CR PACK	CR to Rel-6 on Charging	CH	Rel-6

## 6.1 Release 5 (and earlier) CRs

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

### 6.1.1 Location service (NP-040213);

Corrections on Location Services R99 onwards

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
29.002	712	1	N4-040517	R99	Introduction of North American Interim Location Based Routing of Emergency Call	F	3.19.0
29.002	713	1	N4-040518	Rel-4	Introduction of North American Interim Location Based Routing of Emergency Call	A	4.14.0
29.002	714	1	N4-040519	Rel-5	Introduction of North American Interim Location Based Routing of Emergency Call	A	5.9.0
29.002	731		N4-040520	Rel-6	Introduction of North American Interim Location Based Routing of Emergency Call	F	6.5.0

### 6.1.2 OoBTC (NP-040214);

Corrections on OoBTC Rel-4

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
23.153	070	1	N4-040718	Rel-4	Correction of Codec Negotiation and supported codec mode configurations	F	4.9.0
23.153	071	1	N4-040719	Rel-5	Correction of Codec Negotiation and supported codec mode configurations	A	5.7.0

### 6.1.3 IMS Cx/Dx Interface (NP-040215);

Corrections on IMS Cx-/Dx-interface

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
29.229	036	1	N4-040439	Rel-5	Update of the charging addresses from HSS	F	5.6.0
29.229	037	1	N4-040441	Rel-6	Update of the charging addresses from HSS	A	6.0.0
29.228	096	2	N4-040442	Rel-5	Update of the charging addresses from HSS	F	5.7.0
29.228	097	2	N4-040443	Rel-6	Update of the charging addresses from HSS	A	6.2.0
29.228	094	1	N4-040455	Rel-5	Content of the User Profile	F	5.7.0
29.228	095	1	N4-040456	Rel-6	Content of the User Profile	A	6.2.0
29.228	098		N4-040528	Rel-5	Correction of SessionCase attribute ambiguity	F	5.7.0
29.228	099		N4-040529	Rel-6	Correction of SessionCase attribute ambiguity	A	6.2.0
29.229	042		N4-040556	Rel-5	Multimedia-Auth-Request (MAR) Command Message Format Corrections	F	5.6.0
29.229	043		N4-040557	Rel-6	Multimedia-Auth-Request (MAR) Command Message Format Corrections	A	6.0.0
29.229	049	2	N4-040705	Rel-5	Use of Vendor-Id by 3GPP	F	5.6.0
29.229	050	2	N4-040706	Rel-6	Use of Vendor-Id by 3GPP	A	6.0.0

### 6.1.4 IMS Sh-interface (NP-040216);

Corrections on IMS Sh-interface

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
29.329	036		N4-040435	Rel-5	Correction to description of Data Reference AVP value 10	F	5.5.0
29.329	037		N4-040436	Rel-6	Correction to description of Data Reference AVP value 10	A	6.0.0
29.329	034	1	N4-040525	Rel-5	Correction of reference for definition of MSISDN	F	5.5.0
29.329	035	1	N4-040526	Rel-6	Correction of reference for definition of MSISDN	A	6.0.0

### 6.1.5 CAMEL phase 4 (NP-040217); Release 5

Corrections on Camel4

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
23.079	080		N4-040588	Rel-5	Enhancement to Route_Permitted procedure to handle Short/ Long FTNs	F	5.4.0

### 6.1.6 GPRS (NP-040218); Release 5

Technical enhancements and improvements on GTP,

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
29.060	492		N4-040514	Rel-5	Change the attribution of Radio Priority LCS from TV to TLV	F	5.9.0
29.060	493		N4-040515	Rel-6	Change the attribution of Radio Priority LCS from TV to TLV	A	6.4.0

### 6.1.7 OoBTC (NP-040219); Release 5

Technical enhancements and improvements on OoBTC for Rel-5

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
23.153	072		N4-040583	Rel-5	Correction to section 6.5 on information flow after UMTS to GSM handover	F	5.7.0

## 6.2 Release 6 CRs

### 6.2.1 IMS2; IP based Multimedia services; (NP-040220)

Corrections on IMS Rel-6

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
23.003	086	4	N4-040472	Rel-6	Clarification of the uses of SIP URIs for Public User ID	F	6.2.0
29.328	085	2	N4-040715	Rel-6	Mapping to Diameter AVP for Requested Identity Set	F	6.1.0

### 6.2.2 MBMS; Multimedia Broadcast and Multicast Service; (NP-040277)

Corrections on Multimedia Broadcast and Multicast Services

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
29.060	497		N4-040559	Rel-6	Another Cause for MBMS Notification Reject Request	B	6.4.0
29.060	495	1	N4-040710	Rel-6	Addition of BM-SC initiated De-registration	B	6.4.0
29.060	486	2	N4-040711	Rel-6	Support of Inter-SGSN RA update for MBMS	B	6.4.0
29.060	496	1	N4-040712	Rel-6	Addition of TMGI	B	6.4.0
23.003	088	1	N4-040713	Rel-6	Addition of TMGI	B	6.2.0



### 6.2.3 TEI6; CAMEL phase 4 enhancements; (NP-040278);

Corrections on Camel 4 enhancements

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
23.008	131	1	N4-040720	Rel-6	Active Location Retrieval for MT call handling	B	6.1.0
29.002	733	2	N4-040753	Rel-6	Retrieval of Current Location during MT call handling	B	6.5.0

### 6.2.4 LCS2; Location Service; (NP-040225); Release 6

Corrections on Location Services

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
29.002	736		N4-040600	Rel-6	Addition of SAI-Present indication to the LCS procedures	F	6.5.0
29.002	734	1	N4-040732	Rel-6	Add Additional V-GMLC parameter in MAP-SRI-INFO-FOR-LCS	F	6.5.0

### 6.2.5 TEI6; ODB, cause mapping; (NP-040226);

Technical Enhancements and Improvements on Rel-6

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
29.010	107		N4-040603	Rel-6	Addition of cause code mapping for BSSAP Clear Request and RANAP lu Release Request	F	6.2.0
23.015	007	2	N4-040737	Rel-6	ODB handling for existing PDP contexts	F	5.0.0
29.010	106	3	N4-040755	Rel-6	Removing of non-existing error indications from Location update mappings	F	6.2.0

### 6.2.6 TEI6; Automatic Device Detection; (NP-040227);

Technical Enhancements and Improvements on Automatic Device Detection

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
23.008	130	4	N4-040580	Rel-6	Add IMEISV to 'data stored in the HLR' due to ADD function	B	6.1.0
29.060	488	2	N4-040582	Rel-6	Automatic Device Detection (ADD) support in Inter-SGSN Routing Area Update procedures	B	6.4.0
23.012	015	6	N4-040735	Rel-6	Addition of ADD feature	B	6.0.0
29.002	718	6	N4-040736	Rel-6	Addition of IMEISV to Update Location Procedure for ADD function	B	6.5.0

### 6.2.7 TEI6; GPRS; (NP-040228);

Technical Enhancements and Improvements on Rel-6 GTP

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
29.060	498	1	N4-040704	Rel-6	Clarification of the Target Identification IE	F	6.4.0

### 6.2.8 TEI6; MAP; (NP-040229);

Technical Enhancements and Improvements on Rel-6 MAP

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
29.002	735		N4-040585	Rel-6	Modify IMEI parameter usage definition in MAP-PSL and MAP-SLR	F	6.5.0
29.002	737		N4-040601	Rel-6	Clarification on the use of MSISDN parameter for Follow Me functionality	F	6.5.0

### 6.2.9 CH; GPRS and Charging; (NP-040230);

Corrections on Charging, allow the possibility to perform charging in the GGSN

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
29.060	478	4	N4-040754	Rel-6	Provision of S-CDR information to the GGSN	C	6.4.0

## 7 Draft Technical specifications and reports

**Stage 3 release 6 technical specifications send for information to plenary:**

NP-040231; Generic Authentication Architecture 3GPP TS 29.109 v1.0.0 for information;

NP-040223; Media Gateway Control Function (MGCF) - IM Media Gateway 3GPP TS 29.332 v1.0.0 for information;

**Stage 3 release 6 technical specification send for information and approval to plenary:**

NP-040232; Diameter applications 3GPP TS 29.230 v1.0.0 for information and approval;

## 8 Acknowledgments

I want to thank the delegates for the hard work and for the active and long discussions. I also want to I have to thank Kimmo Kymäläinen for providing the excellent support during and between the meetings.

Finally, I would like to thank the host of our meetings the European friends for excellent hosting.