3GPP TSG CN Plenary Meeting #18   **NP-020538**
New Orleans, Louisiana, USA, 4th⁻6th December 2002

Source:	**CN4 Chairman**
Title:	**Status Report from CN WG4 to CN #18**
Agenda item:	**6.4.1**
Document for:	**INFORMATION**

1   Introduction

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CN4 have had two meetings since the last CN plenary meeting: CN4 #16 was held in Miami Beach, Florida, USA, on 23 – 27 September, kindly hosted by the North American Friends of 3GPP, and CN4 #17 was held in Bangkok, Thailand, on 11 – 15 November, kindly hosted by the Japanese Friends of 3GPP. Evidently 3GPP has plenty of friends around the world… In the Miami Beach meeting the vice chairmen, Peter Schmitt (Siemens) and Toshiyuki Tamura (NEC), earned their keep, looking after one of the series of parallel sessions; in Bangkok they were able to take it a bit easier, because we managed without parallel sessions. Kimmo Kymäläinen (MCC) provided his usual competent support. The contributors were very active; give or take a few withdrawals, there were **212** documents tabled for CN4 #16, and **251** for CN4 #17. In CN4 #16 we agreed **55** change requests, **9** output liaison statements and **2** work item descriptions; this was supplemented in CN4 #17 by a further **59** CRs (plus **6** more CRs approved by email correspondence after the meeting), **7** liaison statements and **1** work item description. There were **33** participants representing **21** companies in CN4 #16 and **30** participants representing **21** companies in CN4 #17.

The draft meeting reports of CN4 #16 and CN4 #17 were distributed to the CN4 email list (3GPP_TSG_CN_WG4@list.etsi.fr) for approval; the report of CN4 #16 was approved at CN4 #17, and the report of CN4 #17 is still under review. The CN4 #16 & CN4 #17 meeting reports are provided in Tdoc NP-020573 for information. The CN4 outgoing liaison statements are provided in Tdoc NP-020574 for information.

2   Management summary

2.1   Release 6

Network domain security
We have agreed the work item description for the protocol for the Ze interface (used to distribute MAP security keys and policy information from the Key Administration Centre to MAP network entities in the same PLMN); this is presented for approval. Technical contributions for the protocol definition are expected at our next meeting.

Preferred Framing Protocol
Unfortunately, there has been very little progress on this item, because of major differences between two companies on the scope of the work item. We decided in CN4 #17 to start a careful review of the scope of the work item, with the aim of having an agreed scope to use as the basis for technical contributions to CN4 #17 (February 2003).

Location services
CN4 agreed to the principle that the protocols for the Lr (GMLC – GMLC) and Lpp (GMLC – PPR) interfaces should be developed in the OMA Location Group. The CN4 and OMA Location Group chairman will maintain close contact so that CN and SA plenary meetings will have visibility of the progress of the work in OMA. We have agreed the first Release 6 CRs in CN4, to add support in the MAP specification for Location Services enhancements in Release 6. CN are asked to decide when these CRs should be implemented, because they will trigger the creation of TS 29.002 v6.0.0 – another (large!) specification to be maintained…

SS barring for SMS over GPRS
SA1 asked CN1 and CN4 to specify the handling for SS barring of SMS via the SGSN, for Release 99 if possible, subject to constraints of changing specifications and implementations that far back. This can (like Gaul – see Julius Caesar's "Gallic Wars"!) be divided into three parts:

- Invocation of barring of MT SMS – this is handled in the HLR (currently only for delivery via an MSC). To extend the applicability to delivery via an SGSN would be acceptable for Release 5, because the specification work would be straightforward, and the processing in the HLR would be simpler than it is at present – the current handling has to check whether the delivery will be via an MSC or an SGSN before deciding whether the delivery should be barred;

- Invocation of barring of MT SMS – this would be handled in the SGSN. The specification work would be straightforward, though the implementation would be less so. SGSN manufacturers would be reluctant to include this before Release 6;

- Call-independent SS procedures for the control of SS barring using relay of the signalling from the MS through the SGSN to the HLR – this would require major development in both the MS and the SGSN. Neither CN1 nor CN4 would be prepared to accept this before Release 6. Even for Release 6, the benefit is not seen as being enough to justify the effort of specification and development, bearing in mind that most subscribers will have access to the call-independent SS procedures using signalling via the MSC/VLR. For the minority of subscribers who have a GPRS-only subscription, the option of control of the barring services by the service provider would allow the barring of SMS to be set up to meet the subscriber's requirements.

Terminals without E.164 numbers
CN4 received two liaison statements from the European Numbering Forum, asking whether it would be possible to remove the current requirement for each GSM and 3GPP subscription to have at least one E.164 number (MSISDN) associated with it. We pointed out that every subscription which is intended to be able to receive CS calls, or to send or receive short messages, has to have an MSISDN. We asked SA1 to consider whether they see a service requirement for subscriber profiles which cannot send or receive short messages, or receive CS calls; we also asked SA2 to consider the architectural impact of such service profiles. Our understanding is that there would be a substantial amount of work required to update the 3GPP specifications to remove the requirement for each subscription to have at least one MSISDN.

2.2 Release 5

IMS
The IMS specifications under CN4 control are moving towards stability; we have a sizeable collection of corrections on the protocol specifications for the Cx/Dx and Sh interfaces, but most of these were agreed with no contention in CN4. The major open issue is the transfer of information on subscribed media from the HSS to the S-CSCF. We presented a proposal to deal with this in CN #17, but SA2 raised concerns that we were over-specifying, so the CRs were referred back to CN4. We are still waiting for SA2 to reach consensus on their requirements; when we have guidance from SA2 it should be possible to agree the changes to our specifications without a great deal of discussion.

CAMEL phase 4
There have been two significant areas of work on CAMEL phase 4 in CN4: interworking with the Bearer Independent Architecture and CAMEL control of SMS. Both of these have been successfully concluded, and the CRs are presented for approval. In addition we have several other CRs for minor corrections.

GTP
There is no work item for GTP enhancements in Release 5, but we have agreed several CRs to clean up minor deficiencies in the specification, which were not so severe as to justify changes to release 4 or earlier.

Bearer Independent Architecture
We have had an exchange of liaison statements with RAN3 on the handling of IP addressing for IP transport for the Iu-CS interface. This has led to two category B CRs, against TS 23.205 and TS 29.232, to resolve this issue.

Handover/Relocation
We have at last been able to reach agreement on the changes to TS 23.009 and TS 29.002 for a comprehensive solution to the problem of codec control on inter-MSC handover/relocation. I must thank the delegates who have

worked so hard outside of the meetings to produce a set of CRs which is acceptable to all the interested companies (unless someone raise objections at this meeting…).

2.3 Release 4/Release 99

CAMEL phase 3
There is still some low-level activity of corrections on CAMEL phase 3; our colleagues in CN2 are learning to live with minor imperfections in frozen releases!

One change which we decided **not** to make was the specification in 29.002 of the order of processing criteria for dialled services, for the case where one number criterion is the leading substring of another criterion. This will be handled by a "health warning" to service designers in the CAMEL stage 2 specification.

Another "interesting" problem was how the VMSC can indicate in the Resume Call Handling request to the GMSC that the "forwarding" to be optimally routed is redirection as a result of CAMEL processing. The more we considered it, the clearer it became that it would be very difficult to extend the MAP protocol in a compatible way to handle this call case, so we concluded that the only way to deal with this problem is to rule out the possibility of optimal routeing of CAMEL-controlled redirection at the destination VMSC.

IP signalling transport
We agreed two sets of CRs to resolve open issues on TS 29.202. The first is the formal replacement of the normative annex which contains the text of a draft version of the M3UA RFC with a reference to the published version. The second set is the addition of an annex which defines the profile of M3UA to be used for 3GPP; the M3UA RFC includes many options which are not necessary for 3GPP, and experience shows that it is better to take the secateurs to unnecessary options, before they grow into branches which require a chainsaw to remove them!

GTP
GTP for Release 99 is stable, with only one CR presented for approval (besides a further CR which has the footnote "and please get it right this time!"). This is not an indication that GTP for Release 99 has no faults – rather that none of the faults is serious enough to warrant a CR to Release 99!

Bearer Independent Architecture
The Bearer Independent Architecture specifications attracted only one correction, a correction to the formal syntax. After some discussion we decided to accept a divergence from the H.248/MEGACO specification; H.248 requires that the ROOT termination ID is 8 octets long, filled with "FFFFFFFFFFFFFFFF", but all other termination IDs are 4 octets long. In 29.232 all termination IDs, including the ROOT termination ID, are 4 octets long, so the ROOT termination ID is "FFFFFFFF".

TrFO
TrFO for Release 4 is also reasonably stable, with only two sets of corrections (one set requires changes to both stage 2 & stage 3).

2.4 GSM maintenance

GTP
We have two sets of CRs for GTP, going back to Release 97.

The first is to allow the transport of the MCC and MNC of the SGSN to the GGSN, for two reasons: to allow the control of access to content according to the location of the subscriber (which is required by the licence terms for the network operator in some countries), and to support charging based on the location of the subscriber.

The second is the "roll back" to Release 97 of a set of CRs which was approved for Release 99, Release 4 and Release 5 in CN #17. On further consideration, CN4 decided that the problem was severe enough to justify fixing it in Release 97 and Release 98 as well.

3 Questions for advice and decision

CN1 & CN4 received an LS from SA1, asking them to update their specifications to support the invocation and control of the call barring supplementary services for transfer of short messages through an SGSN. The

invocation of barring of SM transfer through an SGSN could be supported as an enhancement for Release 6 (both CN1 & CN4 believe that it is too late to consider this as a correction for Release 5 or earlier); however the **control** of the barring services through an SGSN would require major specification and development work, both in the core network (CN4's responsibility) and in the mobile station and access signalling (CN1's responsibility). The value for a subscriber of being able to control via the SGSN (as distinct from via the MSC/VLR) the barring of SMS is not obvious. CN plenary are asked to decide whether to recommend to SA1 that **control** of the barring services through an SGSN should not be specified, but that **invocation** of barring of SMS via the SGSN should be specified as part of Release 6.

4   Change Requests

CN4 produced 121 Change Requests which are submitted for ratification. An overview of the CR packages is provided in Table 1.

Table 1: CRs submitted by CN4 for approval at CN #18 (sorted by work item)

Tdoc	Agenda item	Subject
NP-020575	7.1	9 CRs on CAMEL phase 3
NP-020576	7.3	6 CRs on GPRS for Release 4 and earlier
NP-020577	7.4	6 CRs on Location Services enhancements for Release 4
NP-020578	7.7	6 CRs on Transcoder Free Operation for Release 4
NP-020579	7.8	2 CRs on Bearer Independent Architecture for Release 4
NP-020580	7.9	6 CRs on Multicall
NP-020581	7.11	5 CRs on TEI for Release 97
NP-020582	7.11	1 CR on TEI for Release 98
NP-020583	7.11	3 CRs on TEI for Release 99
NP-020584	7.11	4 CRs on TEI for Release 4
NP-020585	7.12	4 CRs on IP Signalling transport for Release 4
NP-020586	8.1	3 CRs on IMS: general
NP-020587	8.1	12 CRs on IMS: Cx/Dx interface
NP-020588	8.1	2 CRs on IMS: Cx/Dx interface charging
NP-020589	8.1	2 CRs on IMS: Cx/Dx interface
NP-020590	8.1	2 CRs on IMS: Cx/Dx interface error handling
NP-020591	8.1	2 CRs on IMS: Service Points of Interest
NP-020592	8.1	3 CRs on IMS: Sh interface error handling
NP-020593	8.1	2 CRs on IMS: Sh interface
NP-020594	8.3	8 CRs on CAMEL phase 4
NP-020595	8.4	3 CRs on Location Services enhancements for Release 5
NP-020596	8.8	10 CRs on TEI for Release 5
NP-020597	8.8	2 CRs on TEI for Release 5: ETRAN-IPtrans
NP-020598	8.8	8 CRs on TEI for Release 5: GTP
NP-020599	8.8	5 CRs on TEI for Release 5: MAP
NP-020603	9.9	4 CRs on Location Services enhancements for Release 6

4.1   UMTS Release 4 (and earlier) and GSM CRs

Corrective CRs to Release 4 and earlier are **essential corrections**, unless there is an indication to the contrary.

4.1.1 CAMEL phase 3 (NP-020575)

NP-020575 contains 3 corrective CRs to the Optimal Routeing stage 2 specification: one to Release 99, with mirror CRs for Release 4 & Release 5. It also contains 6 corrective CRs to the MAP specification (2 to Release 99, each with mirror CRs for Release 4 & Release 5).

CR 23.079-022r1 (R99, with Rel-4 mirror in CR 23.079-023 and Rel-5 mirror in CR 23.079-024) corrects the description of the behaviour of the GMSC when it receives a Resume Call Handling request including CAMEL subscription information.

CR 29.002-494r1 (R99, with Rel-4 mirror in CR 29.002-498 and Rel-5 mirror in CR 29.002-499) corrects the requirements for segmentation of the O-CSI and T-CSI when they are carried in MAP signalling.

CR 29.002-506 (R99, with Rel-4 mirror in CR 29.002-507 and Rel-5 mirror in CR 29.002-508) adds a missing ODB category to allow it to be transferred from the HLR to the gsmSCF.

4.1.2 GPRS (NP-020576)

NP-020576 contains 6 corrective CRs to the GTP specification: one to Release 97, with a mirror CR for Release 98; one to Release 99, with mirror CRs for Release 4 & Release 5; and one to Release 99, with no mirror CRs.

CR 09.60-A117 (R97, with R98 mirror in CR 09.60-A118) removes an internal inconsistency in GSM 09.60 in the definition of the PDP address length. The R99, Rel-4 and Rel-5 mirrors for these CRs were approved in CN #17.

CR 29.060-358r1 (R99, with Rel-4 mirror in CR 29.060-359r1 and Rel-5 mirror in CR 29.060-360r1) resolves a problem with the transfer of PDCP sequence numbers on inter-SGSN Routeing Area Update.

CR 29.060-361 (R99, with no mirror CRs) corrects the incomplete implementation of CR 29.060-203r1. **This is a remedy for the incorrect implementation of a previously approved CR**.

4.1.3 Location services (NP-020577)

NP-020577 contains 2 corrective CRs to the MAP specification: one to Release 4, with a mirror CR for Release 5. It also contains 4 corrective CRs to the definition of interworking between MAP and access signalling: 2 to Release 4, each with a mirror CR for Release 5.

CR 29.002-510r1 (Rel-4, with Rel-5 mirror in CR 29.002-511r1) adds a reference number to allow the GMLC to link a request for a deferred location request and the corresponding location report.

CR 29.010-072r1 (Rel-4, with Rel-5 mirror in CR 29.010-073r1) provides a mapping for GPS assistance data between the GERAN access signalling and MAP signalling.

CR 29.010-076 (Rel-4, with Rel-5 mirror in CR 29.010-077) replaces the incorrect error name "User Failure" with "System Failure".

4.1.4 Transcoder-free operation (NP-020578)

NP-020578 contains 4 corrective CRs to the stage 2 specification for Out of Band Transcoder Control: 2 to Release 4, each with a mirror CR for Release 5. It also contains 2 corrective CRs to the protocol specification for the Mc interface: one to Release 4, with a mirror CR for Release 5.

CR 23.153-038r2 (Rel-4, with Rel-5 mirror in CR 23.153-039r2), and the linked CR 29.232-045r2 (Rel-4, with Rel-5 mirror in CR 29.232-046r2), corrects several errors in the codec modification procedures, and aligns them with the procedures defined in ITU-T recommendations.

CR 23.153-048 (Rel-4, with Rel-5 mirror in CR 23.153-049) removes the misalignment with other specifications on the optionality of Global Title addressing for signalling from the MSC to the drift RNC.

4.1.5 Bearer independent architecture (NP-020579)

NP-020579 contains 2 corrective CRs to the protocol specification for the Mc interface: one to Release 4, with a mirror CR for Release 5.

CR 29.232-040r2 (Rel-4, with Rel-5 mirror in CR 29. 232-041r2) fills in some missing ABNF definitions for the Termination identifier.

4.1.6 Multicall (NP-020580)

NP-020580 contains 3 corrective CRs to the MAP specification: one to Release 99, with mirror CRs for Release 4 & Release 5. It also contains 3 corrective CRs to the definition of interworking between MAP and access signalling: one to Release 99, with mirror CRs for Release 4 & Release 5.

CR 29.002-514r2 (R99, with Rel-4 mirror in CR 29.002-515r2 and Rel-5 mirror in CR 29.002-516r2) adds the possibility to send a list of service handover parameters between MSCs, to cover inter-MSC handover of a multicall configuration.

CR 29.010-082r3 (R99, with Rel-4 mirror in CR 29.010-083r3 and Rel-5 mirror in CR 29.010-084r3) defines that service handover parameters for handover of a single call are carried in encapsulated access signalling PDUs rather than in as MAP parameters.

4.1.7 TEI for Release 97 (NP-020581)
NP-020581 contains 5 corrective CRs to the GTP specification: one to Release 97, with mirror CRs for Release 98, Release 99, Release 4 & Release 5.

CR 09.60-A120r3 (R97, with R98 mirror in CR 09.60-A119r2, R99 mirror in CR 29.060-365r2, Rel-4 mirror in CR 29.060-364r2 and Rel-4 mirror in CR 29.060-363r4) defines the transport of the MCC and MNC of the SGSN to the GGSN, to support charging based on the location of the subscriber, and to allow control of access to content based on the location of the subscriber.

4.1.8 TEI for Release 98 (NP-020582)
NP-020582 contains one corrective CR to the MAP specification for Release 98. There are no mirror CRs. There is an error on the cover sheet of NP-020582: the CR number should be 09.02-A329, not 09.02-A324.

CR 09.02-A329 (R98, no mirror CRs) defines an exception to the principle that information elements imported from other protocols into MAP are transported as the value part, without the information element identifier and length. **This is a remedy for the incorrect implementation of a previously approved CR**.

4.1.9 TEI for Release 99 (NP-020583)
NP-020583 contains 3 corrective CRs to the GTP specification: one to Release 99, with mirror CRs for Release 4 & Release 5.

CR 29.060-380r1 (R99, with Rel-4 mirror in CR 29.060-381r1 and Rel-5 mirror in CR 29.060-382r1) removes internal inconsistencies in the requirements for the presence of various information elements in the GTP header.

4.1.10 TEI for Release 4 (NP-020584)
NP-020584 contains 4 corrective CRs to the GTP specification: 2 to Release 4, each with a mirror CR for Release 5.

CR 29.060-374r2 (Rel-4, with Rel-5 mirror in CR 29.060-375r2) defines the transport of charging parameters from the old SGSN to the new SGSN on inter-SGSN routeing area update, to ensure that GPRS traffic can be correctly charged.

CR 29.060-383 (Rel-4, with Rel-5 mirror in CR 29.060-373r2) adds a reference to TS 25.414 for the handling of IP fragmentation on the Iu interface. These CRs are linked to CR 25.414-044 (Rel-4) and CR 25.414-045, which are presented for approval in RAN #18.

4.1.11 IP signalling transport (NP-020585)
NP-020585 contains 4 corrective CRs to the specification for SS7 signalling transport in the core network: 2 to Release 4, each with a mirror CR for Release 5.

CR 29.202-006r2 (Rel-4, with Rel-5 mirror in CR 29. 202-007r2) defines the profile of M3UA (defined in RFC 3332) to be used for the transport of 3GPP protocols.

CR 29.202-008 (Rel-4, with Rel-5 mirror in CR 29. 202-009) replaces the copy of the draft M3UA RFC in a normative annex with a reference to the published RFC.

4.2 Release 5 CRs

4.2.1 IMS: general (NP-020586, NP-020591)
NP-020586 & NP-020591 contain 2 corrective CRs to the Numbering and Addressing stage 2 specification, one corrective CR to the specification of data stored in location registers, one corrective CR to the protocol specification for the Cx/Dx interfaces and one corrective CR to the protocol specification for the Sh interface.

CR 23.003-057 aligns the form of the private user identity with that used in RFC 2486.

CR 23.003-059 replaces the wrong definition of an IMS public identity as an E.164 number with the correct definition as a tel URL.

CR 23.008-061r1 corrects the name "Public Identity" to "Public User Identity", to align with TS 23.003, and replaces the explicit definition of the form with a reference to TS 23.003.

CR 29.228-022, and the linked CR 29.328-014, add a new Service Point of Interest, the RequestURI, to align with TS 23.218

4.2.2 IMS: Cx/Dx interface (NP-020587, NP-020588, NP-020589, NP-020590)
NP-020587, NP-020588, NP-020589 & NP-020590 contain one corrective CR to the specification of data stored in location registers and a total of 17 corrective CRs to the protocol specifications for the Cx/Dx interfaces.

CR 23.008-058 adds the indicator for barring of a public identity to the definition of IMS data stored in the HSS, to align with the behaviour definition in TS 29.228.

CR 29.228-008r2 defines the handling by the HSS for a request to register a temporary public user identity, to align with the requirements in TS 23.228.

CR 29.228-010 removes the upper bounds on the number of instances of various components of the subscriber profile, as a result of guidance from CN1.

CR 29.228-011 corrects a drafting error in TS 29.228. Text which was agreed in CN4 for incorporation in TS 29.228 before it was brought under change control was not correctly incorporated.

CR 29.228-012 corrects the terminology for the description of the Confidentiality Key and the Integrity Key elements of the Authentication Data.

CR 29.228-013r1 defines the handling for the user registration status query where no S-CSCF is assigned to the user.

CR 29.228-014r1 removes the coupling of the XML definition for the Cx interface protocol to the GUP Data Description Framework. The GUP definitions are targeted ar UMTS Release 6.

CR 29.228-015r1 defines the cases when the HSS sends the SERVER_CHANGE deregistration reason to the S-CSCF.

CR 29.228-016r1 defines the handling in the HSS for the user registration status query, according to the type of authorisation.

CR 29.228-017 defines an error cause for the case where an HSS attempts to push profile information to the S-CSCF but the S-CSCF does not recognise the user.

CR 29.228-019r1, and the linked CR 29.229-009r1, correct the duplicate occurrence of the primary charging collection function name.

CR 29.228-020r1, and the linked CR 29.229-010r1, define the error handling in the S-CSCF when the HSS sends more data than the S-CSCF can accept.

CR 29.228-021r1 adds the possibility for the S-CSCF assigned when the user registers to be changed from the S-CSCF which was assigned to establish a session to an unregistered user.

CR 29.229-006 corrects a misalignment with TS 29.228 by adding the User-Name AVP to the SAA command.

CR 29.229-007 corrects an internal inconsistency in the naming of the SIP-Auth-Data-Item AVP.

CR 29.229-008r1 defines the use of the REGISTRATION_AND_CAPABILITIES code point for the User-Authorization-Type AVP.

4.2.3 IMS: Sh interface (NP-020592, NP-020593)

NP-020592 & NP-020593 contain a total of 5 corrective CRs to the protocol specifications for the Sh interface.

CR 29.328-007 removes the upper bounds on the number of instances of various components of the data which can be transferred over the Sh interface, as a result of guidance from CN1.

CR 29.328-008r1 defines the rules which the HSS uses to add, modify or delete data on request from the SIP Application Server.

CR 29.328-009r1 removes the coupling of the XML definition for the Sh interface protocol to the GUP Data Description Framework. The GUP definitions are targeted ar UMTS Release 6.

CR 29.328-013r2, and the linked CR 29.329-006, define the error handling in the HSS when it receives more data than it can accept from the SIP Application Server

4.2.4 CAMEL phase 4 (NP-020594)

NP-020594 contains 8 corrective CRs for CAMEL phase 4: 7 to the MAP specification and one to the protocol specification for the Mc interface.

CR 29.002-474r2 corrects the description of the handling of MT SMS in the SGSN, particularly the CAMEL-related handling of delivery failure.

CR 29.002-490 clarifies the handling of the requestedCAMEL-SubscriptionInfo parameter if the additionalRequestedCAMEL-SubscriptionInfo parameter is received.

CR 29.002-495 adds the possibility to include trigger criteria for the O-CSI parameter in the Resume Call Handling request.

CR 29.002-496 adds mobility management events for the PS domain, to align with the CAMEL stage 2.

CR 29.002-497r1 is an editorial alignment of parameter names according to the principles in TR 30.002.

CR 29.002-513 inserts the missing references to TS 23.078 for parameters which are relevant to CAMEL handling.

CR 29.002-522 adds the possibility for the HLR to indicate that it has determined from its internal data that an MS is not reachable in the PS domain.

CR 29.232-052r2 defines a new package for CAMEL control of flexible warning tones in the Bearer Independent Architecture.

4.2.5 Location services (NP-020595)

NP-020595 contains 3 corrective CRs to various specifications.

CR 23.008-060, and the linked CR 29.002-512, delete the storage in, and transport to and from, the HLR for codeword handling information. The codeword checking is now handled in the GMLC. These CRs are linked to CN 23.271-121, which will be presented for approval in SA #18.

CR 24.080-026r2 deletes the code point for the location method MS assisted OTDOA, which should not be used for an MO location request.

4.2.6 TEI for Release 5 (NP-020596, NP-020597, NP-020598, NP-020599)

NP-020596 contains 9 corrective CRs to various specifications, and one corrective CR to a technical report. NP-020597 contains 2 **category B (addition of a feature) CRs** to the stage 2 & 3 specifications for the bearer independent architecture. NP-020598 contains 7 corrective CRs and one editorial CR to the GTP specification, and NP-020599 contains 5 corrective CRs to the MAP specification.

CR 23.003-055r1 clarifies the use of the RNC-Id in networks which use GERAN Iu mode.

CR 23.003-056r2 is an editorial clean-up by the new rapporteur of TS 23.003!

CR 23.003-058 adds a reference to the ITU-T web page for the listing of mobile country code allocations, to replace the (no longer published) annex to E.212.

CR 23.003-062r1 clarifies the requirement for the VLR to avoid allocating the reserved value zero as an LMSI.

CR 23.018-112r1 provides clarification of the requirements for the presence or absence of information elements in messages which are used in both the Basic Call Handling stage 2 specification and other derived specifications such as CAMEL and Optimal Routeing.

CR 23.079-020r1 resolves the apparent conflict between the outline description of the operation of Optimal Routeing and the presence requirements for information elements in messages which are common to Optimal Routeing and CAMEL.

CR 23.205-031r3, with the linked CR 29.232-042r3 (in NP-020597), define the handling for IP transport over the Iu interface in the Bearer Independent Architecture. **These are category B CRs, linked to CRs to TS 25.413, TS 25.414 and TS 25.415, to resolve an open issue in Release 5, following a decision in RAN3**. The linked CRs to TS 25.413, TS 25.414 and TS 25.415 will be presented for approval in RAN #18.

CR 23.205-035r2 defines the interworking between CAMEL Call Party Handling and the Bearer Independent Architecture.

CR 23.205-036r1 clarifies the termination of the Iu interface components in the Bearer Independent Architecture.

CR 29.002-442r3 defines the handling for the delivery of MT short messages via two serving nodes, and adds the CAMEL-specific handling for the case when the SMS-GMSC is integrated with the destination VMSC.

CR 29.002-475 clarifies that conditional outgoing barring services (e.g. Barring of Outgoing International Calls) apply to the handling in the VLR for submission of MO short messages.

CR 29.002-486 removes the incorrect indication that the procedure to check an IMEI is not used for location updating in an SGSN.

CR 29.002-489r5 defines the signalling between MSCs at inter-MSC handover to support control of the choice of codec. This is linked to CR 23.009-084, which was endorsed by CN4 and will be presented by CN1 for approval.

CR 29.002-521r1 is an editorial clean-up of the References clause of the MAP specification, to remove several obsolete references.

CR 29.010-078 corrects errors in the description of the interworking between the security mode procedure and relocation in a 3G environment.

CR 29.060-333r1 aligns TS 29.060 with TS 23.060 for the requirements for support of IP v6 on various interfaces over which GTP is used.

CR 29.060-348r4 introduces the PCO IE in session management messages used in the MS Initiated PDP Context Deactivation procedure.

CR 29.060-350r1 clarifies the conditions for the the inclusion of the TEID II IE in the SGSN Context Ack message,

CR 29.060-354r1 removes the restriction on the inclusion of the PCO IE in the Create PDP Context Request message

CR 29.060-355 introduces the PCO IE in session management messages used in the Network-Requested PDP Context Activation Procedure.

CR 29.060-356r1 introduces the PCO IE in session management messages used in the GGSN-Initiated PDP Context Modification procedure.

CR 29.060-357r1 introduces the PCO IE in session management messages used in the GGSN-Initiated PDP Context Deactivation Prodecure.

CR 29.060-362r3 clarifies the bit ordering of the Transaction Identifier in the PDP Context Information Element.

CR 30.002-006 aligns the examples of ASN.1 for the MAP specification with the new ASN.1 standard which is now reflected in TS 24.080, TS 29.002 ans TS 29.078.

4.3   Release 6 CRs

4.3.1 Location services (NP-020603)
NP-020603 contains 4 CRs to the MAP specification.

CR 29.002-491r1 adds a format indicator to the LCS client name, to allow flexibility in naming the LCS client.

CR 29.002-517r2 adds the V-GMLC Address to the Update Location request and Update GPRS Location request, to allow communication between GMLCs in the home and visited networks.

CR 29.002-518r3 adds the V-GMLC and H-GMLC addresses to the Send Routing Info for LCS response, to allow communication between GMLCs in the home and visited networks.

CR 29.002-519r2 adds the Privacy Profile Register address to the Send Routing Info for LCS response, to allow communication between the GMLC and the Privacy Profile Register.

5   Draft Technical specifications and reports

We have no draft technical specifications or reports to present.

6   Work organisation

6.1   Work Item descriptions

We have three work item descriptions, which are in NP-020600, NP-020601: & NP-020602:

NP-020600 (N4-021392) is an updated version of the work item description for the protocol for the Mn interface (Media Gateway Controller to IM-Media Gateway), to reflect revised delivery dates for the new specification.

NP-020601 (N4-021488) is an updated version of the work item description for the protocol for the Mp interface (Media Resource Function Controller to Media Resource Function Processor), to reflect the outcome of discussions in CN3 & CN4. The main change is that the responsibility for the new protocol specification, 29.333, is now solely with CN4.

NP-020602 (N4-021258) is a new work item description for the automatic distribution of MAP security keys from the key administration centre to MAP entities in the same PLMN. At present we have only three supporting companies for this work item – we need at least one more before it can be approved in CN.

6.2   Review of the work plan

We have reviewed the progress on activities in CN4 against the work plan (version of 8 November 2002). The updated information in table 2 below was drafted in CN4 #17; it has been sent to the relevant MCC expert for incorporation in the updated work plan. The table does not include information on work plan items which were shown as complete in the status report to CN #15.

Table 2: Updates to the work plan from CN4

Unique ID	Description	Updated status
2028	Enhanced HE control of security (including positive authentication reporting): FS on Network impacts	CN4 is waiting for input from SA3! Given the lack of input, should we abandon this work item?
14001	Mn interface (IM-MGW to MGCF) enhancements	WID approved in CN #17. Expected completion date now June 2003 (CN #20)
14008	Generic User Profile Stage 3	No activity in CN4; we await input from SA2 on the stage 2.
14011	Preferred Framing Protocol for bearer independent CS architecture	Expected completion date now June 2003 (CN #20)
33005	Rel-6 MAP application layer security: STAGE 3 for KEY distribution	First draft expected in CN4 #18 (February 2003). Expected completion date now September 2003 (CN #21)

6.3   Possible merger with CN2

In the joint session with CN2 during CN4 #17, we discussed whether a merger of CN2 and CN4 during 2003 would be appropriate. CN2 believe that their workload during 2003, resolving open issues on CAMEL phase 4 (including CAMEL control of IMS) and maintaining earlier releases of CAMEL will be enough to make a merger of CN2 with CN4 an unrealistic proposition. My successor as CN4 chairman and the CN2 chairman will need to review this about a year from now!

7   CN4 meeting calendar

We have a calendar of meetings agreed to the end of 2003; hosts have come forward for all the meetings. CN4 meetings 18, 19, 20 & 21 will as usual be collocated with CN1, CN2 & CN3. We have reserved dates for two "bis" meetings of CN4 on its own, in April and November; these will be easier to host than the collocated meetings, so there is less need for arrangements to be settled a long way ahead of the meeting. Several companies voiced concerns in CN4 that to reserve the dates would be a self-fulfilling prophecy, so CN4 put on record the principle that the decision to hold a "bis" meeting will require consensus in the preceding CN4 meeting that the "bis" meeting is needed, as well as an offer to host the "bis" meeting.

Table 3: CN4 meeting calendar to the end of 2002

Date	Meeting	Venue	Host
10 - 14 Feb 2003	CN4 #18	Dublin, Eire	European Friends of 3GPP
12 – 14 Mar 2003	CN plenary #19	Birmingham, UK	UK Friends of 3GPP
7 – 11 Apr 2003	CN4 #18bis (tentative)	TBD	TBD
19 - 23 May 2003	CN4 #19	TBD, USA	North American Friends of 3GPP
4 – 6 Jun 2003	CN plenary #20	Hämeenlinna Finland	Nokia
18 - 22 Aug 2003	CN4 #20	Sophia Antipolis, France	ETSI
17 – 19 Sep 2003	CN plenary #21	Berlin, Germany	Siemens
27 - 31 Oct 2003	CN4 #21	TBD, China	Ericsson

17 – 21 Nov 2003	CN4 #21bis (tentative)	TBD	TBD
10 – 12 Dec 2003	CN plenary #22	Hawaii, USA	North American & Japanese Friends of 3GPP

7   Acknowledgments

The two vice-chairmen, Peter Schmitt and Toshiyuki Tamura, have again been busy chairing sessions in CN4 #16, which has allowed us to deal with (almost) all of the documents which were submitted; I am sure that CN4 will be in good hands when I retire from the chairmanship after the meeting in May next year.

The CN4 participants have been prolific in producing documents; referring back to my report to CN #16, I see that I predicted we would break the barrier of 1500 documents by the end of the year, and we did so with plenty to spare.

Finally, I would like to thank the hosts of our meetings. The North American Friends laid on typical Florida weather for us in September (and I managed to ring the bells **twice** at Miami cathedral…), and the Japanese Friends invited us to Bangkok in November – that was even warmer! It's a shame that the weather control wasn't fully developed for the social event in Bangkok – although the audience managed to find shelter, it was hard work for the Thai dancers and musicians, who showed their dedication by providing excellent entertainment in the pouring rain.