

**3GPP TSG CN Plenary
Meeting #10, Bangkok, Thailand
6th – 8th December 2000**

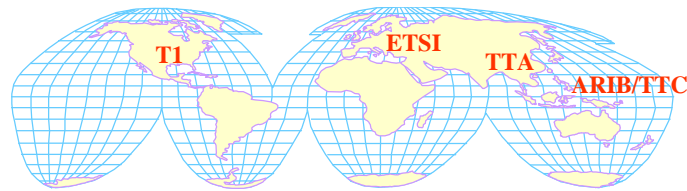
Tdoc NP-000631

Source: TSG CN WG 4
Title: CN4 Rel-4 ad hoc meeting report
Agenda item: 6.4.1
Document for: Information

Introduction:

This document includes CN4 Rel-4 ad hoc meeting report.
It is forwarded to TSG CN Plenary meeting #10 for information only.

TDoc #	Tdoc Title
N4-000904	CN4 Rel-4 ad hoc meeting report



Third Generation Partnership Project

Meeting REPORT v3.0.0

3GPP TSG-CN4 Ad Hoc

Stockholm, SWEDEN
10th – 12th October 2000



Hosted by ERICSSON, SWEDEN

Chairman: Yun-Chao Hu, Ericsson.
Vice-Chairman: Teemu Mäkinen, Nokia
MCC Support: Kimmo Kymäläinen, ETSI MCC.

Table of contents

1	Opening of the meeting	3
2	Approval of Agenda	3
3	Document Allocation	3
4	Meeting Reports	3
	Seattle meeting report.....	3
	Status Report, TSG SA#09 and CN#09.....	3
	CN#9 meeting report.....	3
5	Liaison Statements	3
6	Work Item Management	4
7	R4 (Release 2000).....	4
7.1	Session/Transport Separation.....	4
7.2	Bearer Independent CS Core Network.....	5
7.3	Enhanced Security.....	9
7.4	Network Optimisation.....	9
7.5	Location Services	10
7.6	CAMEL/Optimal Routing.....	10
8	AOB	11
8.1	USSD	11
8.2	CAMEL Phase 3	11
9	Output of CN4# ad hoc Meeting	12
9.1	Work Items	12
9.2	Liaison Statements	12
9.3	Change Requests.....	12
10	Close of meeting.....	12
	Annex A : Participants.....	13
	Annex B: List of Temporary Documents.....	14
	Annex C: Access to 3GPP documents	15
	3GPP email lists:.....	15
	Email archives:.....	15
	Meeting calendar:	15
	Documents on the server:	15
	ANNEX D:Document history.....	16

1 Opening of the meeting

Mr. Yun-Chao Hu, CN4 chairman, gave a welcome introduction. Additional support was provided Mr. Kimmo Kymäläinen (CN4 Secretary, MCC). .

2 Approval of Agenda

The agenda was approved (N4-00801).

3 Document Allocation

The document allocation was approved (N4-00802). The chairman reminded the delegates that **contributions have to be bringing out 5 workdays before meeting** in the future.

4 Meeting Reports

Seattle meeting report

The Seattle meeting report (N4-00803) was noted. No comments received by any delegates. Document will be approved in the next CN4 WG meeting.

Status Report, TSG SA#09 and CN#09

The chairman presented the Status Report from the Hawaii CN#09 and SA#09 meetings (N4-00804). Source was changed to CN chairman. Document noted.

CN#9 meeting report

The draft version 1.0.0 of CN#09 was presented only for info by MCC. The document was noted (N4-00805).

5 Liaison Statements

Document: N4-00808
Title: LS on CAMEL control of Optimal Routing
Source: CN2
Presented: Ian Park, Vodafone
Discussion: No discussion

Decision: Noted

Document: N4-00809
Title: LS on Positive Authentication Reporting
Source: CN
Presented: CN4 chairman

Discussion: No discussion

Decision: Noted

Document: N4-00838
Title: Positive Authentication Reporting
Source: S3
Presented: Ian Park, Vodafone

Discussion:

- Inter system roaming is not addressed by CN4.
- N4 can develop the required enhancements to support PAR within the existing network capabilities.
- Nokia reminded that only 3GPP2 has interested the subject.

Decision: Noted. LS to S3 (N4-00844)

Document: N4-00839
Title: Protection of GTP Messages using IPSec
Source: S3
Presented: Michael Young, Motorola

Discussion:

- N4 agreed that the GTP-C security is subject to bilateral agreement of the involved operators. This needs to be communicated S3 ad hoc on CN security.
- Motorola volunteered the necessary CR for next CN4 meeting.
- LS to S3. MCC is ensured that LS will be in the S3 ad hoc meeting beginning of November.
- (LS: N4-000845 revised to N4-00847)

Decision: Noted.

6 Work Item Management

Document: N4-00806
Title: 3GPP Working methods 21.900 3.4.0
Source: CN4 chairman
Presented: CN4 chairman

Discussion:

- Document was just for information

Decision: Noted

7 R4 (Release 2000)

7.1 Session/Transport Separation

Document: N4-00810
Title: TR 23.873, Feasibility Study for Transport and Control Separation in the PS CN Domain
Source: Editor 23.873
Presented: Juan-Antonio Ibanez, Ericsson

Discussion:

- The editor explained the two alternatives described in this feasibility document.
- Mp-interface has to study, which one is better, H.248 or GTP-C.
- Version 0.2.0 for November

Decision: Noted

Document: N4-00834
Title: Open Issues related Session/Transport separation
Source: Editor 23.873
Presented: Juan-Antonio Ibanez, Ericsson

Discussion:

- Editor hopes that CN4 people could come to S2 drafting meeting to give their comments on open Issues related Session/Transport separation.
- Lucent: N4 is building up the H.248 expertise.
- Under discussion it was decided to send an LS to SA2. (LS: N4-000836)
- Vodafone: How deeply S2 proposing details of the protocols, H.248 or GTP-C? Assessment on protocol impacts needs to be addressed by N4. CN4 is assumed to have the mandate to do the protocol selection.
- S2 shall not do the protocol selection.
- A proper stage 2 shall avoid reusing the exact names of the protocol operation
- LS: N4-000836 revised to N4-00840

Decision: Noted. *AP for next meeting issue 3)*

7.2 Bearer Independent CS Core Network

Document: N4-00813
Title: Bearer Independent CS CN – Stage2
Source: Editor 23.205
Presented: Elena Garcia-Mendive, Ericsson

Discussion:

- Nortel Networks (*for all Ericsson contributions: N4-00813 – N4-00823*): Call flows are agreed as basics material for inclusion within the draft TS 23.205. However due to late submission of the contributions enhancements, modifications and/or additions are expected for the next meeting.

Decision: Noted – with specific editing changes

Document: N4-00814
Title: Call Establishment
Source: Ericsson
Presented: Pekka Larmala, Ericsson

Discussion:

- Optionality of the TrFO/TFO needs to be incorporated.
- Notes in the sequence charts to express the optionally within the ordering

Decision: Agreed

Document: N4-00815
Title: Call Clearing
Source: Ericsson
Presented: Pekka Larmala, Ericsson

Discussion:

- Clarification on the independence of the access and network side call clearing needs to be described.
- Only network initiated and UE initiated call-clearing procedures required. The same procedure can be applied in the GMSC for MT cases.
- Terminal Ids to be stated explicitly in the MSCs

Decision: Agreed

Document: N4-00816
Title: Handover
Source: Ericsson
Presented: Heinz-Peter Keutmann, Ericsson

Discussion:

- 8.3 descriptions would be need below the pictures.
- Sections 8.1 – 8.3 included – clarification text on context diagrams

Decision: Agreed

Document: N4-00817
Title: Interactions with other services
Source: Ericsson
Presented: Heinz-Peter Keutmann, Ericsson

Discussion:

- Figure 13.3 needs to adjust the Bearer Establishment and add the HLR interrogation.
- SS have to be listed the order of specification number.

Decision: Agreed

Document: N4-00818
Title: Interactions with CAMEL
Source: Ericsson
Presented: Pekka Larmala, Ericsson

Discussion:

- No discussion.

Decision: Agreed

Document: N4-00819
Title: Interactions with DTMF
Source: Ericsson
Presented: Pekka Larmala, Ericsson

Discussion:

- No discussion.

Decision: Agreed

Document: N4-00820
Title: Interactions with OR
Source: Ericsson
Presented: Pekka Larmala, Ericsson

Discussion:
- No discussion.

Decision: Agreed

Document: N4-00821
Title: General (G)MSC-MGW Procedures
Source: Ericsson
Presented: Alf Heidermark, Ericsson

Discussion:

- MGC shall be replaced by (G)MSC
- MG shall be replaced by MGW
- Chapter 15, the text: "Note: MGW also covers the concept virtual MGW" is removed, because it's more stage 3 issue
- Textual clarification on terms needs be added.
- Editorial cleanup by Ian Park, Vodafone

Decision: Agreed

Document: N4-00822
Title: BICC Specific Call Flows
Source: Ericsson
Presented:

Discussion:

Decision: Withdraw

Document: N4-00823
Title: Media Gateway Controller – Media Gateway interface – Stage 3
Source: Ericsson
Presented: Alf Heidermark, Ericsson

Discussion:

- TS number from MCC ?
- Repporteurs: Laura Pomponi, CSELT and Ian Park, Vodafone
- Version 0.1.0 November 2000
- Motorola; There should be only one stage 3 specification., if H.248 will be the protocol between (G) MSC and MGW.
- Nortel Network; Chapter 4.7. text "The concept of virtual media gateway shall be supported" should be removed.
- Vodafone bring in; "The concept of virtual media gateway may be supported".
- Ericsson, Motorola, Vodafone and Nortel clarified the text in section 4.7. (The decision in Tdoc. N4-00842)

Decision: Agreed.

Document: N4-00837
Title: Report, BICSCN Stage 2 Ad Hoc Group
Source: BICSCN, Stage 2 Ad Hoc Group
Presented: Chairman

Discussion:

The following was agreed at the Ad Hoc Meeting:

- Stage 2 documentation required
 - o No SIP-T & BICC specific message names in the MSC, therefore protocol specific issues not required in stage 2
 - o MSC based on ISUP (Application transport Mechanism (APM)?) message names as much as possible
 - o Eventual extension to the ISUP messages and ISUP parameters need to be clearly described
 - o Conditions for a message to be sent shall be specified
 - o Stage 2 MSC should address Forward and Backward Bearer set up scenarios
- Stage 3 documentation required
 - o Preferable using direct referencing to existing specifications (e.g. BICC, SIP-T, SDP)
 - o If needed, mobile protocol extensions need to be documented (e.g. TR) and submitted to relevant bodies: ITU-T, IETF, SDOs, etc.
 - o H.248 Packaging needs to be documented (i.e. TS)
 - o Mapping of stage 2 message names to protocols needed
- France Telecom asked if the protocol selection needs to be made?
 - o CN4 chairman answered that the decision will not be made in Working Group level.
- WI scenarios need to be taken into account if no selection will be made.

Decision: Agreed.

Document: N4-00833
Title: SIP-T call flows
Source: Nortel Networks
Presented: Kevin Gorey, Nortel Networks

Discussion:

- No discussion

Decision: Noted

Document: N4-00842
Title: Proposed correction to 3G TR 29.cde "Media Gateway Controller – Media Gateway Interface Stage 3" regarding Virtual Media Gateway support.
Source: Nortel Networks, Ericsson, Vodafone, Motorola
Presented: Kevin Gorey, Nortel Networks

Discussion:

- This contribution removes section 4.7 of the 3G TR 29.cde version 0.0.1.

Decision: Agreed

Document: N4-00843
Title: Additions to stage 2
Source: Nortel Networks
Presented: Kevin Gorey, Nortel Networks

Discussion:

- Text modifications in sections 6 & 7 and sections 8, 13 & 14 were accepted with small modifications.

Decision: Agreed

7.3 Enhanced Security

Document: N4-00602
Title: CR 29.002-168 on Security Header modification
Source: Siemens
Presented: Ulrich Wiehe, Siemens

Discussion:

- Postponed since SA3 did not yet drafted their stage 2 requirements on this.
- Siemens is asked to volunteer to bring the message to S3 that a proper communication is required to handle this requirement in our specifications.

Decision: Postponed

7.4 Network Optimisation

Document: N4-00824
Title: Consideration of the combined MAP based on separated node
Source: NTT DoCoMo, NTT Commware
Presented: Mitamura Kazuo, NTT Commware

Discussion:

- DoCoMo raised that the Combined MAP operation for MM WI has been rejected by the CN Plenary based on informal information on the status in SA2. The analysis performed on the benefits of Combined MAP operations was challenged by the issue of active PDP sessions and CS calls. The contributed analysis was focused on the MS idle mode. This idle mode analysis was not challenged.
- Question has been raised on the SSN values to be used in the SS7 messages from and to the "physical implementation of the MSC/VLR and SGSN". Response to this is that the "physical implementation of the MSC/VLR and SGSN" needs to support 2 SSN values (i.e. VLR/SGSN) for mobility management.
- Drop-back scenarios of the protocol mechanism needs to be supported in case the HLR does not support the Combined MAP operation.
- The arguments raised in the contribution 0824 associate too much with the Integrated Service Node (ISN) which was rejected by SA2.
- Based on the proposed physical implementation of MSC/VLR and SGSN implementation the proposal was rejected. However, CN4 recognised the request from CN to study network optimisation (without the ISN).
- The CN4 chairman stated that if interested companies want to challenge the decision of the CN Plenary they should bring this up directly at the CN Plenary.

Decision: Rejected

7.5 Location Services

Document: N4-00807
Title: The air interface protocol supporting LCS R00 for PS-domain
Source: Fujitsu
Presented: Shinichiro Aikawa, Fujitsu

Discussion:

- Nokia; The protocol decision should make collaborate with CN1. There are no right MS specialists in CN4.
- It was agreed to send a LS to N1 to leave it up to them but if the SS protocol is chosen than N4 will take their responsibility. (LS: N4-000846)
- LS: N4-000841 revised to N4-00846

Decision: Noted

Document: N4-00811
Title: LCS support in PS domain for Release 2000
Source: NTC
Presented: Miyaki Soejima, NTC

Discussion:

- No discussion

Decision: Noted

Document: N4-00812
Title: Addition of PS description for LCS to R4 29.002-189
Source: NTC
Presented: Miyaki Soejima, NTC

Discussion:

- AC version upgrades to be justified
- DoCoMo; LCS uses MAP in CN signalling? Is this agreed?
 - o Nokia; Yes, already in 23.071

Decision: Noted

7.6 CAMEL/Optimal Routing

Document: N4-00835
Title: Techniques for determining the routing of a Basically Optimally Routed call
Source: Vodafone
Presented: Ian Park, Vodafone

Discussion:

- CN4 agrees to standardise this in 23.079
- CN4 agrees to have more than one methods standardised
- Proposal to support the standardisation that the VMSC could be mandated implement the GMSC functionality.
- Deadline for objections on 6th November 2000. CR preparation by Vodafone.

Decision: Noted

8 AOB

8.1 USSD

Documents: N4-00827, N4-00828, N4-00829, N4-00830,
Title: Corrections and clarifications for USSD procedures on the HLR - gsmSCF interface
Source: Siemens
Presented: Ulrich Wiehe, Siemens

Discussion:

- It was decided that these CRs needs to be presented for information at this meeting and will be submitted for approval at the next CN4 WG meeting in Paris.
- Vodafone; why there are no corrections in R96?
 - o Siemens; R97 is the first Release have gsmSCF.

Decision: Noted

Documents: N4-00831, N4-00832
Title: USSD corrections for Follow Me
Source: Siemens
Presented: Ulrich Wiehe, Siemens

Discussion:

- It was decided that these CRs needs to be presented for information at this meeting and will be submitted for approval at the next CN4 WG meeting in Paris.

Decision: Noted

8.2 CAMEL Phase 3

Documents: N4-00825, N4-00826
Title: Corrections of ISD data structure for CAME phase 3
Source: Siemens, Nokia
Presented: Ulrich Wiehe, Siemens

Discussion:

- It was decided that these CRs needs to be presented for information at this meeting and will be submitted for approval at the next CN4 WG meeting in Paris.
- Categorization might be an issue at the next meeting?

Decision: Noted

9 Output of CN4# ad hoc Meeting

9.1 Work Items

None.

9.2 Liaison Statements

The following Liaison Statements were agreed to be send by N4 ad hoc:

DOC N3-00	Subject	To	Cc	Attachment	Sent
N4-000840	LS on issues related to Session/Transport separation	S2			14/10/00
N4-000844	LS on positive authentication reporting	S3	S1 S2		14/10/00
N4-000846	LS on access protocol supporting LCS for PS Domain	N1		N4-000807	14/10/00
N4-000847	LS on IP Security	S3			14/10/00

9.3 Change Requests

None.

10 Close of meeting

The CN4 chairman closed the meeting on Thursday 12th October at 12:30.

Annex A : Participants

Name	Organisation	Tel	e-mail
HU Yun-Chao	Ericsson Radio Systems N4 Chairman	+46 8 508 781 53	Yun-Chao.Hu@era.ericsson.se
MÄKINEN Teemu	Nokia N4 Vice Chairman	+358 40 5077283	Teemu.Makinen@Nokia.com
KYMÄLÄINEN Kimmo	ETSI MCC N4 Secretary	+33 67 44 08 365	Kimmo.kymalainen@etsi.fr
BRUCH Diemo	Alcatel SEL	+49 711 821 47594	D.Bruch@alcatel.de
PARK, Ian	Vodafone	+44 1635 673 527	ian.park@vf.vodafone.co.uk
IBANEZ Juan-Antonio	Ericsson 'Split architecture' feasibility study Convenor (S2)	+49 2407 575 7259	Juan-Antonio.Ibanez@eed.ericsson.se
WIEHE, Ulrich	Siemens	+49 6621 169 139	Ulrich.wiehe@icn.siemens.de
POMPONI, Laura	CSELT	+39 011 228 7576	laura.pomponi@cse.lt
François DRONNE	France Télécom	+ 33 1 45 29 62 74	francois.dronne@francetelecom.fr
AIKAWA Shinichiro	Fujitsu	+81 44 754 4196	aikawa@ss.ts.fujitsu.co.jp
MITAMURA KAZUO	NTT Communicationware	+81 42 211 2708	mitamura.kazuo@se.nttcom.co.jp
SOEJIMA Miyuki	NTC	+81 44 900 7313	miyuki@mob.ntc.co.jp
Igarashi Takeshi	NTT Software	+81 45 317 7018	rassy@po.ntts.co.jp
RAHM, Martin	Nokia	+358 40 7796141	martin.rahm@nokia.com
MOUTON Virginie	Nokia	+358 50 568 99 33	Virginie.Mouton@nokia.com
Mäkeläinen Klaus	Sonera Oy	+358 2040 63246	Klaus.makelainen@sonera.com
TOTH, Stefan	Ericsson	+46 31 344 6046	stefan.toth@erv.ericsson.se
KEUTMANN, Heinz- Peter	Ericsson	+49 24 07 57 51 32	Heinz-Peter.Keutmann@eed.ericsson.se
LARMALA, Pekka	Ericsson	+49 24 07 57 55 67 0	Pekka.Larmala@eed.ericsson.se
GARCIA-MENDIVE, Elena	Ericsson	+49 24 07 57 52 05	Elena.Garcia-Mendive@eed.ericsson.se
ANGELO, Ciriaco	Ericsson	+39 081 5147573	Ciriaco.Angelo@tei.ericsson.se
MENARD, John	Lucent Technologies	+1 630 979 6376	jmenard@lucent.com
SAWADA Masahiro	DoCoMo	+81 468 40 3970	masahiro@nw.yrp.nttdocomo.co.jp
TAMURA Toshiyuki	NEC	+81 471-85-6901	tamurato@nsf.ncos.nec.co.jp
HEIDERMARK, Alf	Ericsson	+46 8 727 3894	Alf.Heidermark@uab.ericsson.se

Annex B: List of Temporary Documents

Tdoc n° 3GPP	List of Temporary Documents	Source	Status
N4-000801	Agenda	N4 Chairman	Agreed
N4-000802	Tdoc allocation to agenda items	N4 Chairman	Agreed
N4-000803	Seattle meeting report	MCC	Noted
N4-000804	Status Report, TSG SA#09 and CN#09	N4 Chairman	Noted
N4-000805	CN#9 meeting report	N4 Chairman	Noted
N4-000806	3GPP Working methods 21.900 3.4.0	N4 Chairman	Noted
N4-000807	The air interface protocol supporting LCS R00 for PS-domain	Fujitsu	Noted
N4-000808	LS on CAMEL control of Optimal Routeing	CN2	Noted
N4-000809	LS on Positive Authentication Reporting	CN	Noted
N4-000810	TR 23.873, Feasibility Study for Transport and Control Separation in the PS CN Domain	Editor TR 23.873	Noted
N4-000811	LCS support in PS domain for Release 2000	NTC	Noted
N4-000812	Addition of PS description for LCS to R4 29.002-189	NTC	Noted
N4-000813	Bearer Independent CS CN – Stage2	Editor 23.205	Agreed
N4-000814	Call Establishment	Ericsson L.M.	Agreed
N4-000815	Call Clearing	Ericsson L.M.	Agreed
N4-000816	Handover	Ericsson L.M.	Agreed
N4-000817	Interactions with other services	Ericsson L.M.	Agreed
N4-000818	Interactions with CAMEL	Ericsson L.M.	Agreed
N4-000819	Interactions with DTMF	Ericsson L.M.	Agreed
N4-000820	Interactions with OR	Ericsson L.M.	Agreed
N4-000821	General (G)MSC-MGW Procedures	Ericsson L.M.	Agreed
N4-000822	BICC Specific Call Flows	Ericsson L.M.	Withdraw
N4-000823	Media Gateway Controller – Media Gateway interface – Stage 3	Ericsson L.M.	Agreed
N4-000824	Consideration of the combined MAP based on separated node	NTT DoCoMo, NTT COMARE	Rejected
N4-000825	Corrections of ISD data structure for CAME phase 3	Nokia / Siemens	Noted
N4-000826	Corrections of ISD data structure for CAME phase 3	Nokia / Siemens	Noted
N4-000827	Corrections and clarifications for USSD procedures on the HLR - gsmSCF interface	Siemens	Noted
N4-000828	Corrections and clarifications for USSD procedures on the HLR - gsmSCF interface	Siemens	Noted
N4-000829	Corrections and clarifications for USSD procedures on the HLR - gsmSCF interface	Siemens	Noted
N4-000830	Corrections and clarifications for USSD procedures on the HLR - gsmSCF interface	Siemens	Noted
N4-000831	USSD corrections for Follow Me	Siemens	Noted
N4-000832	USSD corrections for Follow Me	Siemens	Noted
N4-000833	Bearer Independent CS Core Network	Nortel	Noted
N4-000834	Open issues related Session/Transport separation	CN4 Chairman	Noted
N4-000835	Techniques for determining the routeing of a basically optimally routed call	Vodafone	Noted
N4-000836	LS to S2 , Issue of identifying responsibility for protocol selection	CN4	Revised in Tdoc. 00840
N4-000837	Report, BICSCN Stage 2 Ad Hoc Group	BICSCN, Stage 2 Ad Hoc Group	Agreed
N4-000838	LS Positive Authentication Reporting	S3	Noted
N4-000839	Protection of GTP Messages using IPSec	S3	Noted
N4-000840	LS to S2 , Issue of identifying responsibility for selection of the protocol over the MP interface	CN4 Ad Hoc	Agreed
N4-000841	LS on air interface protocol selection for LCS R00 PS-domain	CN4 Ad Hoc	Revised in Tdoc. 00846
N4-000842	Proposed correction to 3G TR 29.cde "Media Gateway Controller – Media Gateway Interface - Stage 3" regarding Virtual Media Gateway support	Nortel Networks, Vodafone, Ericsson, Motorola	Agreed
N4-000843	Additional text for inclusion in 3G TS 23.205 "Bearer Independent CS CN – Stage 2" specifying the status of message sequence charts	Nortel Networks	Agreed
N4-000844	LS to S3 Positive Authentication Reporting	CN4 Ad Hoc	Agreed
N4-000845	LS to S3 Protection of GTP Messages using IPSec	CN4 Ad Hoc	Revised in Tdoc. 00847
N4-000846	LS to CN1 – LS on air interface protocol selection for LCS R00 PS-domain	CN4 Ad Hoc	Agreed
N4-000847	LS to S3 Protection of GTP Messages using IPSec		Agreed

Annex C: Access to 3GPP documents

This document briefly outlines some of the more important locations of information that all TSG_CN WG4 members should be aware of.

3GPP email lists:

To receive information about CN3 issues, all delegates and other interested parties MUST register for email list **3GPP_TSG_CN_WG4**. This can be done by sending an email to LISTSERV@LIST.3GPP.ORG with the following single line of text in the body of the message:

subscribe 3GPP_TSG_CN_WG4 YourFirstName YourLastName

There are many other 3GPP email lists that may also be of interest. Go to <http://www.3gpp.org/e-mail.htm> for further information.

If at any time you would like to confirm which lists you are currently a member of, just send a message to LISTSERV@LIST.3GPP.ORG with the following single line of text in the body of the message:

QUERY *

Email archives:

All 3GPP lists have an associated archive of every email sent via that list. Information on how to access the archive is sent to you when you subscribe to the list. This means that if you have temporary email problems, or have just joined the group, you can check to see if you have missed any messages. The easiest way to search the archive is first to request a list of all messages sent to the particular group you are interested in. For example, to get a list of messages sent via the **3GPP_TSG_CN_WG4** list between 1st Jan 1999 and the current date, send the following command to LISTSERV@LIST.3GPP.ORG:

search * in 3GPP_TSG_CN_WG4 since Jan 1999

As well as a list of emails sent, you receive instructions about how to retrieve the emails.

Some 3GPP archives are also available via a new user-friendly WWW interface. For CN4, go to:

http://list.3gpp.org/archives/3gpp_tsg_cn_wg4.html

Meeting calendar:

The central location for all information relating to the 3GPP meeting calendar and the corresponding meeting invitations can be found at: <http://www.3gpp.org/Meetings.htm>

Documents on the server:

All documents submitted to CN4 meetings will be made available on the 3GPP document server in a directory (related to the number of the meeting) under: ftp://ftp.3gpp.org/TSG_CN/WG4_protocollars/ e.g. the documents for CN4 meeting #4 can be found at:

ftp://ftp.3gpp.org/TSG_CN/WG4_protocollars/tsgN4_04/Docs/

ANNEX D: Document history

Document History	
24th October 2000	<p>DRAFT v.1.0.0 dispatched to the TSG_CN mail exploder for comments.</p> <p>Comments to be addressed to:</p> <p style="text-align: center;">Mr. Kimmo Kymäläinen, 3GPP TSG-CN4 MCC Support MCC - ETSI Secrétariat Tel :+33 (0)4 92 94 42 38 e-mail: kimmo.kymalainen@etsi.fr</p> <p>A deadline of 2 weeks was given to the CN delegates for e-mail comments on the draft report.</p> <p style="text-align: center;">E-mail comments back by 6th November 2000</p>
6th Nov 2000	Draft report v2.0.0 placed on the FTP serve
12th Nov 2000	Draft report v2.0.1 placed on the FTP serve
29th Nov 2000	Version 2.0.1 approved at CN4#05 Meeting in Paris – Made version 3.0.0 and sent out for info. Placed to server as the official meeting report.
