3GPP TSG CN Plenary **Tdoc NP-000633**
Meeting #10, Bangkok, Thailand
6th – 8th December 2000

Source: **TSG CN WG 4**

Title: **TrFO/TFO Workshop #04 meeting report**

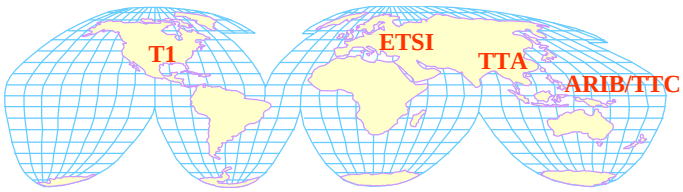
Agenda item: **6.7**

Document for: **Information**

Introduction:

This document includes TrFO/TFO workshop #04 meeting report; Windsor, UK.
It is forwarded to TSG CN Plenary meeting #10 for information only.

TDoc #	Tdoc Title
N4-000905	TrFO/TFO #04 meeting report



Third Generation Partnership Project

Meeting REPORT v3.0.0

3GPP TSG-TrFO Workshop#04

Windsor, UK
17th – 19th October 2000

Hosted by NEC & Fujitsu, JAPAN

TrFO Workshop Convenor: Yun-Chao Hu, Ericsson.

MCC Support: Kimmo Kymäläinen, ETSI MCC.

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1 Opening of the meeting

The 4th TrFO Workshop meeting took place from 17th August – 19th October in Windsor, UK.
The Workshop convenor Mr. Yun-Chao Hu, opened the meeting at 11:00 on Tuesday 17th October.
Mr Toshiyuki Tamura welcomed participants to Windsor. He also reminded that the bigger gift was from NEC the smaller from Fujitsu.

1.1 Approval of Agenda

The agenda was approved (N4-00851).

2 Document Allocation

The document allocation was approved (N4-00852).

3 Meeting Reports

TrFO/TFO WS#03 meeting report

The Seattle meeting report (N4-00803) was approved.

4 Liaison Statements

Document: **N4-00870**
Title: TrFO/TFO Terminology
Source: S2
Presented: Phil Hodges, Ericsson
Discussion:

- The last bullet "Note:" will removed and the terminology will added to Stage 2 document23.153.

Decision: Noted

5 Work Item Management

Document: **N4-00866**
Title: TrFO WI for TSG RAN
Source: Workshop convenor
Presented: -

Discussion:

Decision: Document postponed to joint session

Document: **N4-00867**
Title: TrFO WI for TSG CN
Source: Workshop convenor
Presented: Workshop convenor

Discussion:

Decision: Noted

6 Technical issues

6.1 Session/Transport Separation

Document: **N4-00857**
Title: Proposed Updates To Stage 2 OoBTC Specification 23.153
Source: Ericsson
Presented: Phil Hodges, Ericsson

Discussion:

- T Termination of IU need to be added
- Operator intrusion not to be addresses
- Lawful interception needs more study
- G.711 not appropriate PCM compressed speech
- 23.135 is only for speech services
- Motorola; Stage 2 should not define any protocol like we agreed in Stockholm Ad Hoc
    - "BICC"-text will removed from specification
- PH1 agreed to be moved to section 6, however requirements on LI will be provided in section 4 later
- PH2 5.3 "Interactions with IN and CFNRy SS at call set-up" agreed to be moved to section 6
- PH3 Figure 5.4 and text will removed, agreed but last paragraph of the new section needs to adjusted to reflect Mpty concern by Lucent
- PH4 Agreed
- Missing reference to 23.205 [8]
- Multi Party – description on the termination of Iu needs to be added
- G.711 not appropriate PCM compressed speech
- Mandatory compressed CODECs – Transcoder is described to be inserted in the MSC which is R'99. This document shall be describing also Transcoder at the Edge.
- LS to S2 to inform our opinion that Transcoder at the Edge will be covered by TS 23.153 (stage 2 OoBTC)
    - Phil Hodges (Ericsson), LS Tdoc 0871
- Data CS IWF seems to require also a negation capabilities to be supported
- Stage 2 and stage 3 documentation. Agreed that BICC specific terms will be removed from the stage 2 specification. A specific statement on the possible call control protocols that addresses the Codec Negotiation will be added.
- Comments:
- Editors will draft a version 2.0.2 and this will be reviewed the last day of meeting Thursday 19th
    - Tdoc 0872
- After meeting the new version 2.1.0

Decision: Agreed

Document: **N4-00871**
Title: LS to S2 on Transcoder at the Edge
Source: TrFO Workshop
Presented: Phil Hodges, Ericsson

Discussion:

- Modifications was made

Decision: Revised in Tdoc N4-000874

Document: **N4-00872**
Title: Proposed Updates To Stage 2 OoBTC Specification 23.153
Source: Ericsson
Presented: Phil Hodges, Ericsson

Discussion:

- Next E-mail draft will be 2.0.3. After few days E-mail discussion version will be 2.1.0. Document just include the comments has talked in this meeting.
- Reference 9 have to be updated
- BICC will removed
- Version 2.0.3 will published 25.10.
- If no comments version will be 2.1.0 27.10.2000 12:00 CET

Decision: Agreed

6.2 Ran Capabilities

RAN versions

Document: **N4-00856**
Title: RAN Release Version – TrFO Compliance Issues
Source: Ericsson
Presented: -

Discussion:

Decision: Document postponed to joint session

Rate Control

Document: **N4-00855**
Title: Rate Control Procedures For TrFO & TFO
Source: Ericsson
Presented: -

Discussion:

Decision: Document postponed to joint session

RFCI

Document: **N4-00864**
Title: Supplement to make a decision on How to obtain RFCI information in Core Network
Source: NEC
Presented: Toshiyuki Tamura, NEC

Discussion:

- A) If RFCI is not changed by RNC
  - -> then the RFCI storage will be preferred solution.
- B) If RFCI is changed by RNC
  - -> then the interrogation of RFCI is needed and two alternatives exits:
    - Dedicated real operation on the Iu UP
    - Re-initialisation of Iu UP

Decision: Noted

Document: **N4-00865**
Title: Status report CN_#09 and SA_#09
Source: Workshop convenor
Presented: Workshop convenor

Discussion:

- No discussion

Decision: Noted

6.3 Codec Capabilities

Modifications to TS 26.103

Document: **N4-00859**
Title: Proposed Update to TS 26.103 for removal of ICM
Source: Ericsson
Presented: -

Decision: Withdraw, New Tdoc N4-000869

Document: **N4-00860**
Title: Proposed Update to TS 26.103 for inclusion of TFO bitmap for DTAP codec negotiation
Source: Ericsson
Presented: -

Decision: Withdraw, New Tdoc N4-000869

Document: **N4-00861**
Title: Proposed Update to TS 26.103 for inclusion of ACS Optimisation Flag
Source: Ericsson
Presented: -

Decision: Withdraw, New Tdoc N4-000869

Document: **N4-00862**
Title: Proposed Update to TS 26.103 for inclusion of other systems EFR codec types
Source: Ericsson
Presented: -

Decision: Withdraw, New Tdoc N4-000869

Document: **N4-00869**
Title: Modifications to TS 26.103
Source: Ericsson
Presented: Karl Hellweg, Ericsson

Discussion:

- Title modification in section 6 : should be “Radio access network to Core Networks”
- ITU-T OID reference shall be ETSI

Decision: Agreed

AMR Codec

Document: **N4-00863**
Title: Incompatibility of AMR_FR and AMR_UMTS
Source: Siemens
Presented: -

Discussion: No discussion

Decision: Noted

6.4 CN Capabilities

Document: **N4-00868**
Title: TrFO break – Message Sequence Charts
Source: Siemens
Presented: -

Decision: Revised in Tdoc N4-000873

Document: **N4-00873**
Title: Input for TS 23.153 - TrFO break - Message Sequence Charts
Source: Siemens
Presented: Alexander Vesely, Siemens

Discussion:

- Figure3. Modifications in call set up (17,19,20,21) were brought in. Modifications agreed.
- Figure6&7. Modifications in basic SRNS Relocation and TrFO (3, 17) were brought in. Modifications agreed.
- Section 3. “Enhancements of existing protocols and open issues for TrFO” will attached to the meeting report as **ANNEX D**
- Companies will read the document carefully and contribute to the next meeting if necessary.

Decision: Revised in Tdoc N4-000879

Document: **N4-00879**
Title: Input for TS 23.153 - TrFO break - Message Sequence Charts
Source: Siemens
Presented: -

Decision: Agreed

Document: **N4-00878**
Title: Negotiation on maximal number of modes
Source: Siemens
Presented: Workshop convenor

Discussion:

- No discussion

Decision: Agreed

Document: **N4-00876**
Title: Out of Band Transcoder Control - Stage 2
Source: Ericsson
Presented: Phil Hodges, Ericsson

Discussion:

- Small modifications

Decision: Agreed. New version 23.153-2.0.3

6.5 TFO/TrFO harmonisations

Document: **N4-00854**
Title: Update to Open Issues For TrFO/TFO Harmonisation - N1-000124
Source: Ericsson
Presented: Karl Hellweg, Ericsson

Discussion:

- Ericsson asked if TrFO workshop could check the pages 1 & 2, and agreed it, if possible.
    1) Accepted
    2) Accepted
    3)
        a) In UE aspect TrFO can't make any decision. In MGW point TrFO can agree. LS to TSG T to handle to terminal issue.
            i. LS to TSG-T: N4 000875 revised in N4-000881
        b) Accepted
        c) No recommendations at all
    4)
        a) Should be include as guideline (Should be May) in Stage 2
        b) If the UTRAN accept the RAB assignment, it shall accept all SDU format, otherwise it shall reject the RAB assignment. (Agreed State 2 25.413)
        c) Should be include as guideline (May 2001) in Stage 2. What ACS shall standardize in this case, it's open.

    Principals are agreed

    5) Agreed. One delegation has reservation to make decision in next meeting. (Motorola)
        a) In UE aspect TrFO can't make any decision. In MGW point TrFO can agree. CR to 26.102 is needed to reflect this assignment. LS to S4 is needed.
        b) In UE aspect TrFO can't make any decision. In MGW point TrFO can agree.
        c) In UE aspect TrFO can't make any decision. In MGW point TrFO can agree.
        d) Agreed
    6)
        a) Agreed
        b) Agreed
    7) Agreed

Decision: Revised in Tdoc N4-000877

Document: **N4-00877**
Title: Update to Open Issues For TrFO/TFO Harmonisation
Source: Ericsson
Presented: Karl Hellweg, Ericsson

Discussion: None

Decision: Agreed

Document: **N4-00858**
Title: TrFO & TFO Codec Negotiation Harmonisation
Source: Ericsson
Presented: Karl Hellweg, Ericsson

Discussion:

- Stage 2 does not subscribe the behaviour of Iu.

Decision: Agreed

Document: **N4-00880**
Title: Selection of AMR Configuration for TrFO
Source: Ericsson
Presented: Karl Hellweg, Ericsson

Discussion:

- Document will be sent by E-mail for delegates 25.10.

Decision:

7 Output of TrFO Workshop #05 Meeting

7.1 Work Items

None.

7.2 Liaison Statements

The following Liaison Statements were agreed to be sent:

DOC N3-00	Subject	To	Cc	Attachment	Sent
N4-000874	LS Regarding WI for " Transcoder At The Edge"	S2	N4		20/10/00
N4-000881	Codec Requirements to UMTS UEs / Mandatory Sub flow Combinations for SID and NO_DATA frames for speech calls	T T2 S4			20/10/00

7.3 Change Requests

None.

8 Close of meeting

The CN4 chairman closed the meeting on Thursday 19th October at 16:30.

Annex A : Participants

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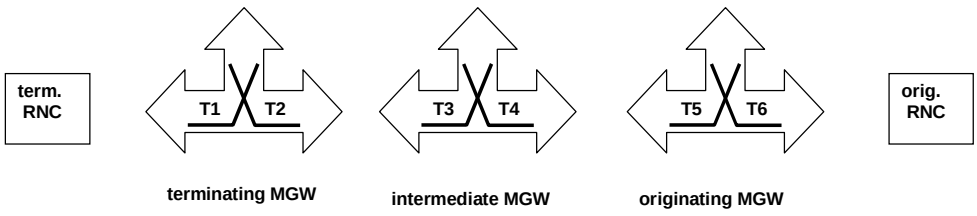
Annex B: List of Temporary Documents

Tdoc nº 3GPP	Title	Source	Status
N4-000851	Agenda	N4 Chairman	Approved
N4-000852	Tdoc allocation to agenda items	N4 Chairman	Approved
N4-000853	Previous meeting report	MCC	Approved
N4-000854	Update to Open Issues For TrFO/TFO Harmonisation - N1-000124	Ericsson	Noted
N4-000855	Rate Control Procedures For TrFO & TFO	Ericsson	In joint session
N4-000856	RAN Release Version – TrFO Compliance Issues	Ericsson	In joint session
N4-000857	Proposed Updates To Stage 2 OoBTC Specification 23.153	Ericsson	Agreed
N4-000858	TrFO & TFO Codec Negotiation Harmonisation	Ericsson	Noted
N4-000859	Proposed Update to TS 26.103 for removal of ICM	Ericsson	Withdraw
N4-000860	Proposed Update to TS 26.103 for inclusion of TFO bitmap for DTAP codec negotiation	Ericsson	Withdraw
N4-000861	Proposed Update to TS 26.103 for inclusion of ACS Optimisation Flag	Ericsson	Withdraw
N4-000862	Proposed Update to TS 26.103 for inclusion of other systems EFR codec types	Ericsson	Withdraw
N4-000863	Incompatiblity of AMR_FR and AMR_UMTS	Siemens	Noted
N4-000864	Supplement to make a decision on How to obtain RFCI information in Core Network	NEC	Noted
N4-000865	REPORT, Status Report of TrFO Workshop to TSG#09	N4 Chairman	Noted
N4-000866	TrFO WI for TSG RAN	N4 Chairman	Postponed to joint session
N4-000867	TrFO Wi for TSG CN	N4 Chairman	Revised to Tdoc 873
N4-000868	TrFO break – Message Sequence Charts (Revised N4-000603)	Siemens	Agreed
N4-000869	Proposed Update to TS 26.103	Ericsson	Agreed
N4-000870	Reply LS, on Terminology of TrFO/TFO and other possible interworking scenarios	S2	Noted
N4-000871	LS to S2 LS Regarding WI for " Transcoder At The Edge"	CN4	Revised to Tdoc. 874
N4-000872	Out of Band Transcoder Control - Stage 2; (3G TS 23.153 version 2.0.2)	Ericsson	Agreed
N4-000873	Input for TS 23.153 - TrFO break - Message Sequence Charts	Siemens	Revised to Tdoc 879
N4-000874	LS to S2 LS Regarding WI for " Transcoder At The Edge"	CN4	Agreed
N4-000875	LS on Codec Requirements to UMTS UEs / Mandatory Subflow Combinations for SID and NO_DATA frames for speech calls	CN4	Revised to Tdoc. 881
N4-000876	Out of Band Transcoder Control - Stage 2; (3G TS 23.153 version 2.0.3)	Ericsson	Agreed
N4-000877	Revision of 854	Chairman	Agreed
N4-000878	Negotiation on maximal number of modes	Siemens	Agreed
N4-000879	Input for TS 23.153 - TrFO break - Message Sequence Charts	Siemens	Agreed
N4-000880	Selection of AMR Configuration for TrFO	Ericsson	Will published by E-mail
N4-000881	LS on Codec Requirements to UMTS UEs / Mandatory Subflow Combinations for SID and NO_DATA frames for speech calls	CN4	Agreed

Annex D: Enhancements of existing protocols and open issues for TrFO

Following table gives a list of Requirements and open issues of the relevant protocol. Open issues are marked with an "?" in the left column. This list is just a try to start to summarise considerations of call setup and relocation scenarios.

IuUP#01	It is required, that the IuUP termination in RNC never re-initialises (failure cases included) its IuUP on its own during the call duration. **It may be re-initialised from a partner TrFO peer node, that is either an RNC or a CN node.** **?** If it cannot be guaranteed that UTRAN never initialises the UP, an inband RFCI Request procedure needed to support the removal of IuUP terminations during a stable call state along the UP path.
IuUP#02	The IuUP termination on the terminating RNC side as well as the one on the "new side" during a SRNS Relocation, will be always initialised with parameters stemming from the originating side (call setup) or from the previously established TrFO relation (relocation).
IuUP#03	In a 3-party conference situation during SRNS Relocation, the "anchor" - IuUP termination shall pass control frames towards both, the "old side" - and the "new side" - Iu UP termination within the same context.
IuUP#04, BICC#01	If UTRAN capabilities are restricted to the support of less than the maximum number of possible codec modes, it should be guaranteed, that the TrFO partners and the MSC-Servers do not reduce the number of allowed modes unnecessarily, they shall rather align on the minimum number of allowed modes.
Iu UP#04 **?**	It shall be allowed to "freeze" the partner partner TrFO peer by sending a SUSPEND control frame to it. This is needed during relocation to avoid interaction with e.g. rate control. "Thawing" will be performed by an RESUME frame.
IuUP#05 **?**	On frame numbering: To make it possible to remove the "TrFO Break equipment" if a stable call state is reached, it is proposed to allow a single frame-number slip after SRNS relocation. The new side termination and the partner TrFO peer could be made (or is) aware of the SRNS Relocation (It was just initialised or received SUSPEND and RESUME control frames)
IuUP#06	In a fixed to mobile call scenario the codec negotiation shall be initiated by the Gateway MSC Server. The IuUP termination at the PSTN-MGW will consequently start to act as the originating node and initialises the IuUP towards the terminating RNC.
MEGACO#01	It seems, that the introduction of a particular H.248 package is necessary for TrFO (as proposed in N4-000823) It is proposed to introduce a "role model" to the respective TrFO specific H.248 contexts and terminations. Find below some figures outlining different roles. **call setup:**  T1: UTRAN side, terminating node

task: should not reply to UP initialisation, but initialise the UP itself.

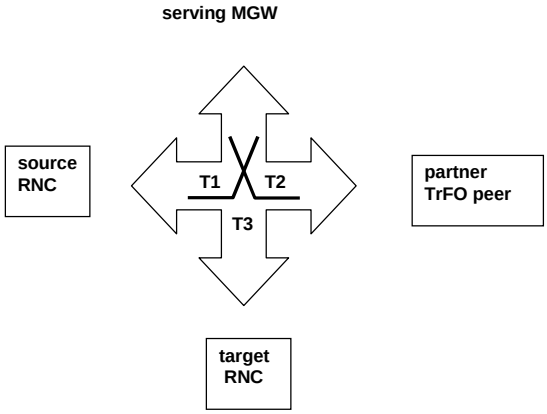
T2: CN side, terminating node

ss RFCI mapping to T1, Acknowledging incoming IuUP initialisation.

T3, T4: transparent (monitoring)

T5, T6: UTRAN/CN side, originating node, transparent

SRNS relocation:



T1: old side, relocation

task: pass control frames to T2 and T3

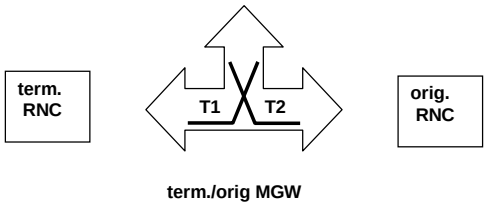
T2: anchor, relocation

task: Suspend/Resume, pass control frames to T1 and T3

T3: new side, relocation

task: initialise UP towards target RNC

mobile to mobile call within the same MGW



T1: UTRAN, terminating side

T2: UTRAN, originating side

etc.

Proposal

It is proposed to introduce a role model to a TrFO specific extension package of H.248 describing the role of each context/termination. The design of the actual codepoints within the package is ffs.

Annex E: Joint TrFO workshop/R3 Iu SWG Meeting #1 Meeting minutes

Agenda item	Agenda item title	Tdoc xxx	Title	Source	Agreements
1	Opening, approval of agenda	001	Agenda	Workshop Convenor	-
2	Document Allocation	002	Tdoc allocation to agenda items	Workshop Convenor	-
		021	Tdoc allocation to agenda items	Workshop Convenor	-
3	Work Item Management	017	TrFO WI for TSG RAN	TSG RAN	Alexander Vesely is assigned as WI Rapporteur for R3. Editors for the R4-TRFO Technical Reports need to be assigned.
4	Liaison Statements	005	LS, Sending of nsi without modification to rab	trfo/tfo joint workshop	It was understood that the NSI needs to be send when RAB parameters are changed and it was understood that it was requested to be able to send also the NSI in cases when only the Codec type are changed
		006	LS, Support of sdu's for trfo	trfo/tfo joint workshop	UE capabilities allows the speech modes then the RAB assignment shall be accepted otherwise rejected by the RNC If because of dynamic reasons not all modes can be supported then the RNC shall accept the RAB assignment and reduce the modes via Rate Control procedures. This might be included also for R'99. This needs to be further discussed in R3. It is common understood that the RNC can not re-initialize the Iu UP and therefore it was agreed that the R3 specifications needs to by updated to make this understanding explicitly within the specifications (R99) so that there is no room for misunderstanding. It was agreed that this will be mandatory to be supported by the RNC and therefore it was required to be included in the Iu UP specifications.
		007	REPLY to Liaison statement on specifying IuUP PDU Type in 3G TS 26.102	TSG-SA WG4	The Iu UP PDU type 0 (i.e. CRC check) will be used for AMR speech calls. It was noted that a specific combination of Iu UP parameters (source statistics descriptor = speech) can identify the AMR call.
5	Technical Issues				
5.1	Obtaining RFCI	010	REPORT, Status Report of TrFO Workshop to TSG#09	TrFO Convenor	-
		009	Supplement to make a decision on How to obtain RFCI information in Core Network	NEC	-
		020	TrFO Break	Alcatel	-

Agenda item	Agenda item title	Tdoc xxx	Title	Source	Agreements
5.1.1	**RFCI Storage**	**004**	Iu UP Protocol handling Solution for TrFO (for information)	Ericsson L.M.	**-**
5.1.2	**RFCI Interrogation**	**003**	TrFO break function – Message Sequence Charts (for information)	Siemens	**-**
5.2	**Open Issues**	**015**	Issues to be decided	TrFO WS Convenor	**It was agreed to have the Storage of RFCI accepted as the solution to be worked out. However concerns from one single delegation requested that IN interaction and handover scenarios needs to be addressed. This issue is already described in the stage 2 document and needs to be addressed by the stage 2**
		008	RAN Release Version – TrFO Compliance Issues	Ericsson	**-**
		011	Call Flows	Siemens	**-**
		012	CR on TrFO and Iu UP Initialisation	Ericsson	**No backward compatibility problems were identified and therefore this was considered as an internal R3 issue.**
		018	CR alternative	Ericsson	**No backward compatibility problems were identified and therefore this was considered as an internal R3 issue.**
		019	Open Issues –List	Ericsson	**No impacts to the R3 std identified. The Iu UP is handling the Codec information transparently and therefore is independent of the type of Codecs.**
		013	AMR-FR and AMR Codec	Siemens	**No impacts to the R3 std identified. The Iu UP is handling the Codec information transparently and therefore is independent of the type of Codecs.**
5.3	**Rate Control**	**016**	Rate Control Procedures For TrFO & TFO	Ericsson	**-**
		014	Report of an Adhoc meeting (2000-10-16 evening, during TrFO WS#4) on *TrFO & Initialisation and Maximum Rate Procedures during Call Setup and SRNS Relocation in case of Mobile to Mobile Call*	Siemens	**"Maximum Rate Control" with "Distributed Rate Decision" accepted** **Enhancement of the Rate Control Procedure by mandating an Acknowledgement was accepted** **Extention of the Acknowledgement with the Rate Control information was accepted**
6	**AOB**				
7	**Output Documents**	**022**	**Agreements within the Joint meeting TrFO Workshop and R3 Iu SWG**	**Chairs**	**The agreed positions will be worked in more detail in the R3 Iu SWG. It is expected that the necessary specifications will be ready for TSG RAN#11.**
8	**Close**				

Annex F: 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_TRFO**. 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_TRFO 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 sent 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 was 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 G: Document history

Document History	
8th November 2000	DRAFT v.1.0.0 dispatched to the TSG_CN mail exploder for comments. Comments to be addressed to: **Mr. Kimmo Kymäläinen, 3GPP TSG-TrFO MCC Support** MCC - ETSI Secrétariat Tel :+33 (0)4 92 94 42 38 e-mail: kimmo.kymalainen@etsi.fr **E-mail comments back by 12th November 2000**
13th Nov 2000	Draft report v2.0.0 placed on the FTP serve
29th Nov 2000	Final v2.0.0 approved at CN4#05 Meeting in Paris – Made version 3.0.0 and placed to server as the official meeting report