3GPP TSG_RAN **Tdoc NP-000493**
Plenary Meeting #9, Oahu, Hawaii
20th – 22nd September 2000

3GPP TrFO&TFO Harmonisation Workshop#2 Tdoc N4-000706
Helsinki, Finland
18th July 2000

Source: **MCC (franco.settimo@etsi.fr)**

Title: **Revised Meeting Report of the TrFO&TFO Harmonisation Workshop#2**

Agenda item:

Document for: **Information**

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1 Opening of the meeting and approval of the agenda - N4-000471

The N4 Chairman, convenor of the workshop, welcomed the group of participants, representing N1, N4, S4, R3. Alain Ohana, former Chairman of S4, declared that from the S4 viewpoint, the activity can be considered concluded, with the delivery of Spec TS 26.103. He also informed the floor that S4 will continue working on TFO but they cannot consider TrFO as their responsibility, since there is no transcoder involved.

2 Allocation of documents to agenda items – N4-000471

Agenda and document allocation to agenda items were approved.

3 Input liaison statements: allocation to agenda items as appropriate – N4-000420, N4-000423

Tdoc 420

LS received from R3 and presented by Siemens. No other change request on the issue should pop up. Alcatel remarked that the issue of "version not supported" is fully covered in the R3 specification. N1 will properly handle the CR.
LS **noted** from the workshop viewpoint.

Tdoc 423

LS on Terminology of TrFO/TFO and possible interworking scenarios, received from S2 and presented by Siemens. TFO - TrFO cascading is necessary for harmonisation, e.g. to maintain connection continuity in case of handover. The level of interworking between the procedures must be assessed by the workshop or by N4. An LS back to S2 with all the questions and concerns raised needs to be drafted. Siemens volunteered (Tdoc N4-000520) with the support of Nortel Networks and other contributors.

4 Technical Issues – N4-000470, 0492 (0475)

Tdoc 470

WI description sheet of Out of Band Transcoder Control for R00, prepared by NEC. Ericsson raised the point that in R99 the terminating MSC, not the MS, selects the codec. MS-to-fixed calls should be included in the description, MS to Edge as well. This work item excludes some kind of compressions, e.g. Voice over IP, even if compressed voice from UMTS terminals to GSM terminals (or to the PSTN) are included in the study.
The question of band saving in TFO was debated, with different views from the floor.
Impact on 25.413, 25.415 are are not identified and therefore deleted.
Supporting companies to the revised work item: Ericsson, Nortel Networks, Siemens.
Revised to 523.

Tdoc 523 (Reviewed by N4, provided here for information)
Revised WI description sheet of Out of Band Transcoder Control for R'00. Concerns raised to the last bullet of the objectives to address the issue that MS to/from wireline calls is inlcuded in the case of Transcoders at the Edge. Further modifications following this principle included. Supporting companies: Nortel Networks withdrawn
Revised to 531

Tdoc 531 (Reviewed by N4, provided here for information)
Revised WI description sheet of Out of Band Transcoder Control for R'00. WI approved.

Tdoc 492

Current state of discussions & TrFO break , presented by Siemens. The User Plane situation does not require showing any servers, was the Siemens response to a comment from Ericsson. Conflict between a seamless behaviour and reinitialization was highlighted by Ericsson. Agreed to discuss first other contributions mentioned in sect. 4 (the proposal), before coming to a conclusion.

4.1 Architectural issues

4.2 TrFO/TFO Harmonization

4.3 Access signalling and BICC Interactions

4.3.1 *UE notifications on selected codecs* – **N4-000452, 0474**

Tdoc 452

Withdrawn

Tdoc 474

The different SDU size for different Codec modes was found a limitation by Ericsson. The issue of different rate control from GSM and UMTS (20 ms/40 ms) was discussed in S4 but no decisions were taken.
This document must be taken by S4 and discussed there as well. Siemens volunteered to draft an LS (N4-000524).

4.4 RAN Capabilities

4.4.1 *Negotiation of new RAN capabilities towards CN* – **N4-000453, 0473, 0462**

Tdoc 453

Presented by Ericsson. It was noted that Solution 1 simplifies the architecture and is the one proposed by Ericsson for Release 2000.

Tdoc 473

Presented by Siemens. An LS to R3 (Tdoc 525) was proposed by Ericsson with the purpose of asking for guidance on the issue of radio access bearer assignment for TrFO.

Tdoc 462

NTT DoCoMo presented the document highlighting that it is a revision of a document formerly submitted to the first workshop in Stockholm. All the issues mentioned in the document, excpet issue#4 (that deals with the TrFO break, can be considered as solved, according to NTT DoCoMo) and issue#7. Issue #4 is covered by another contibution, issue #7 will be discussed later. However, BT observed that, with the exclusion of AMR, issue#3 is also open.

4.5 CN Capabilities

4.5.1 *Call Connection Flow* – **N4-000444, 0476, 0519**

Tdoc 444

A very detailed picture of the TrFO procedure, included in the document, was commented by NEC. Explanations for the presence of three initialisations in the procedure were requested by Ericsson and consequently supplied by NEC. Alcatel noted that most of the discussion between Ericsson and NEC was motivated by different assumptions (in brief, R99 against R00).

Tdoc 519

Presented by Alcatel, who credited a large reuse of NEC pictures from the previous document and supplied clarifications to the described procedure. Removal of the codec triggers the last initialisation, according to Alain Ohana. The additional R00 requirements to support TrFO do not seem clearly identified. It was also noted that the questions/concerns raised mainly by Ericsson were not or not completely responded by the contributor. These questions mentioned an initialisation timer of 150 ms, the lack of consideration of the paging phase on the terminating UE side, and the paging timer. Problems are pointed out with the through-connection for the ring-back tone. Consequently, the Chairman invited the originators of the two documents to discuss by e-mail the two contributions (N4-000444 and N4-000519) and further progress them in the indicated direction.

Tdoc 476

Presented by Siemens. It proposes to include the scenarios outlined in section 2 into appropriate specs (TS 23.153) and use them as the base for further discussing and evaluating TrFO Break principles.

This document showed for the call-setup phase that the Iu UP needs to be terminated within the Core Network but interworking in the framing protocol is still avoided by applying the Iu UP in the Core Network. The other scenarios within this document were not thoroughly reviewed due to lack of time but these were promoting the view that the Iu UP is desirable to be end-to-end (i.e. RNC to RNC) during the conversation phase.

The Chairman summarised two scenarios for the conversation phase, namely: end-to-end Iu framing protocols, termination in the Core Network. Companies were encouraged to complete their solutions and prepare their package by the end of the year 2000. Packages not completed will not be considered acceptable and will go beyond R00.

4.5.2 *Iu Handling* – **N4-000451, 0454, 0493**

Tdoc 454

Ericsson introduced the document. No User Plane for protocol seems to be standardised. It addresses Release 2000 issues and indicates how such issues can be solved without impacting the existing specs. The Chairman reminded that Iu framing protocols in the Core Network are the first priority: this was agreed in the first workshop as the working assumption.

Tdoc 493

Based on the Stockholm TrFO#1 working assumption on the Iu UP protocol in the CN. Mainly an S2 document provided by Alcatel, with several companies supporting the content.
The question came up who is responsible for this protocol decision. The Ericsson delegation stated that N4 should be responsible. Alcatel replied that this question started at TrFO#1 with the NTT DoCoMo Tdoc N4-000114 and the Alcatel Tdoc N4-000121 and was then conveyed by the Workshop to S2 for further treatment; it was pointed out that basic protocol decisions are a S2 matter, like e.g. the decision on the Iu protocol stacks.
The Chairman was astonished about the low S2 participation at the meeting. Alcatel replied that this matter has been settled at S2 with the evolution via Tdocs S2-001001, and S2-001041 which was subject of off-line discussion with Ericsson. This led to Tdoc S2-001176 and N4-000493 where the first two bullet items reflect the input of the Ericsson S2 delegation addressing the same matters as presented in N4-000454 from Ericsson at this Workshop#2. S2-001176 had been presented on the S2 exploder on June 19 and is unwithspoken within S2.
It was agreed to note the document, although the author urged to discover the most appropriate place to locate the contained information. The Chairman preferred to wait for the reaction of S2.

Tdoc 451

Not reviewed due to time constraints. Carried over to Workshop#03. The chairman stated that it is the contributor's responsibility to provide this document to the next workshop.

4.5.3 *RFCI Handling* – **N4-000443**

Tdoc 443

The figure of 100 ms was found excessive by Alcatel, who proposed a more realistic 50 ms. NEC accepted it. However, meeting participants questioned if this figure of 50 ms was too optimistic. The interactions with transcoders in the PSTN is considered a part of the current work, not of the future work, according to Ericsson.

The document illustrated 5 different scenarios to obtain the RFCI informaiton within the Core Network as requested to be analysed by the previous workshop. These scenarios are identified as A-1, A-2, B-1, B-2, and B-3 inlcuding their advantages and disadvantages.

Based on the NEC's analysis the document proposed to accept scenario B-2. Although, the meeting raised that the disadvantages addressed to scenario A-1 are not applicable which was accepted by the contributor, the contributor kept to his original proposal.

4.5.4 Handover – **N4-000455**

Tdoc 455

Not reviewed due to time constraints. Carried over to Workshop#03. The chairmna stated that it is the contributor's responsibility to provide this document to the next workshop.

4.6 Conclusion of the Technical Discussion

In the absence of a clear opinion of the floor, it was suggested to have an informal voting. Ian Park reminded that an informal voting is only a tool for the Chairman to drive the discussion to a consensus. In this particular case, a formal voting should involve all the competent bodies, namely CN, RAN, SA., and the first step is to identify clearly the two candidate solutions for which a vote is cast. This clarity, according to Ian Park, did not come out from the discussion.

Ericsson did not hide their disappointment: they had no specific feedback on the possible disadvantages of their proposal, while disadvantages for the competing proposal came out from the discussion.

The Chairman wanted to ask for a hand raising about the question: **to mandate Iu protocols to be terminated in the Core Network**, but Ericsson objected, in the absence of clearly detailed criticism to their proposal.
An opinion poll about the above question, not an informal vote, was then started and provided the following outcome:

Bellsouth (F), ICO (F), NEC (C), NTT DoCoMo (C), Motorola (C), Alcatel (C), Ericsson (F), BT (C), Siemens (C), Nortel Networks (=), Lucent (=), Nokia (F), TIM (F), NTC (C), NTT Software (C), Fujitsu (C), NTT Comware (C), Vodafone (=) where the meaning between brackets is the following:

F; Favourable
C Contrary
= Abstained.

Ericsson remarked their unavailability to compromise on the solution of the majority, since the technical consistency of the majority solution was not demonstrated.
It was then asked to indicate clearly in the status report will that no progress was achieved since the first Stockholm workshop.

The date for a third workshop (with the objective of achieving either a consensus or at least a clear formulation of the question to vote for) was then debated, given that the notification of a vote must be sent out 30 days in advance and included in the Agenda of the meeting. **The workshop will be held on the 29th of August during the N4 meeting** and either consensus on the technical issue will be reached, or consensus will be reached on the question to vote. The date and scope were agreed.

5 AOB

6 Output Documents

7 Closing of the meeting (18:00 Tuesday)

Since there was not enough time to conclude the discussion, the Chairman proposed to carry over Tdocs N4-000451, N4-000455, N4-000476 to the next meeting, if contributors still feel the need to discuss them. Contributors were requested to resubmit them.

The Chairman thanked the workshop participants and expressed the wish of seeing them all again in Seattle.

ANNEX A

LIST OF PARTICIPANTS

Name	Organisation	Tel.	e-mail
AIKAWA Shinichiro	Fujitsu	+81 44 754 4196	aikawa@ss.ts.fujitsu.co.jp
BAUER Rolf	Alcatel SEL AG	+49 711 821 42241	RBauer@alcatel.de
BRUCH Diemo	Alcatel SEL	+49 711 821 47594	D.Bruch@alcatel.de
CHOTAI Sunil	BT	+44 1473 605603	Sunil.chotai@bt.com
de VRIES Edzo	Lucent Technologies	+31 35 687 2313	eedvries@lucent.com
GOREY Kevin	Nortel Networks	+44 1628 434606	kgorey@nortelnetworks.com
HODGES Phil	Ericsson LM	+49 2407 5756628	Phil.hodges@eed.ericsson.se
HU Yun-Chao	Ericsson Radio Systems ***Workshop Convenor***	+46 8 508 781 53	Yun-Chao.Hu@era.ericsson.se
IGARASHI Daisuke	NTT DoCoMo	+81 468 40 3332	igarashi@nw.yrp.nttdocomo.co.jp
IGARASHI Takeshi	NTT Software	+81 45 317 7018	rassy@po.ntts.co.jp
JØRGENSEN Per Johan	Ericsson	+47-37293076	etopj@eto.ericsson.se
KEUTMANN Heinz-Peter	Ericsson L.M.	+49 24 07 57 51 32	Heinz-Peter.Keutmann@eed.ericsson.se
LEPÄNAHO Henrik	Nokia	+358 9 5116 5070	henrik.lepanaho@nokia.com
MÄKINEN Teemu	Nokia	+358 40 5077283	Teemu.Makinen@Nokia.com
MENARD John	Lucent Technologies	+1 630-979-6376	jmenard@lucent.com
MITAMURA Kazuo	NTT Comware	+81 43 211 2708	mitamura.kazuo@se.nttcom.co.jp
MOUSSET Claire	Nortel Networks	+44 1628 434285	cmousset@nortelnetworks.com
MOUTON Virginie	Nokia	+358505689933	Virginie.Mouton@nokia.com
MUHONEN Ahti	Nokia	+358405318469	Ahti.Muhonen@nokia.com
NOGUERA Juan	Ericsson L.M.	+61 3 9301 6117	Juan.noguera@ericsson.com.au
OHANA Alain	BellSouth Mobility DCS	+1 305 933 0911	alain.ohana@pcs.bls.com
PARK Ian David Chalmers	Vodafone	+44 1635 673 527	ian.park@vf.vodafone.co.uk ian_park_vf@compuserve.com
POMPONI Laura	CSELT	+39 011 228 7576	laura.pomponi@cselt.it
RAHM Martin	Nokia	+358 40 7796141	martin.rahm@nokia.com
SAWADA Masahiro	NTT DoCoMo	+81 468 40 3332	masahiro@nw.yrp.nttdocomo.co.jp
SCHMITT Peter	Siemens	+49 6621 169 152	Peter.schmitt@icn.siemens.de
SETTIMO Franco	ETSI MCC ***Secretary***	+33 4 9294 42 38 +39 348 999 85 84	franco.settimo@etsi.fr
SIMPSON Steven	Motorola	+44 1793 565378	steve.simpson@motorola.com
SOEJIMA Miyuki	NTC	+81 44 900 7313	miyuki@mob.ntc.co.jp
STUEMPERT Martin	Ericsson	+49 2407 575 333	eedmars@eed.ericsson.se
SUERBAUM Clemens	Siemens	+49 89 722-42418	clemens.suerbaum@icn.siemens.de
TAMURA Toshiyuki	NEC	+81 471 85 6954	Tamurato@e1sf.ncos.nec.co.jp
THIERION Philippe	Nortel Networks	+33 139 443 766	pthierio@nortelnetworks.com
TIRILOK PREM	TELLABS OPERATIONS INC	+1 630 378 8565	Prem.Tirilok@tellabs.com
TSAO Wen-Lin	Cisco Systems	+1 408 527 7647	Wtsao@cisco.com
VESELY Alexander	Siemens	+43 5 1707 21318	alexander.vesely@siemens.at
WYRWAS Richard	ICO Global Communications	+44 20 86 00 10 65	Richard.Wyrwas@ico.com
YOUNG Michael	Motorola	+1 604 241 6032	Michael.Young@motorola.com

ANNEX B

LIST OF TEMPORARY DOCUMENTS

Tdoc nº 3GPP	Title	Source	Status
N4-000420	Liaison statement ON USER PLANE PROTOCOL VERSION CONTROL	R3	
N4-000423	Liaison Statement on Terminology of TrFO/TFO and possible interworking scenarios	S2	
N4-000443	How to obtain RFCI information in Core Network	NEC	
N4-000444	TrFO call connection flow model	NEC	
N4-000451	Core Network Scenarios	Ericsson	
N4-000452	Active Codec Set (ACS) Negotiation and Notification	Ericsson	
N4-000453	RAN Capabilites - Supported SDU Formats	Ericsson	
N4-000454	Iu handling and RFCI Allocation Procedures in CN	Ericsson	
N4-000455	Codec Negotiation at Handover/Relocation	Ericsson	
N4-000462	Active Codec Set (ACS) Negotiation and Notification: rev.1	NTT DoCoMo	
N4-000470	Proposed Work Item Description for R00: Out of band Transcoder Control	NEC	Revised to 523
N4-000471	TrFO-TFO Proposed Agenda and Tdoc Allocation	Workshop Convenor	
N4-000473	Mode selection by the RNC	Siemens	
N4-000474	Implicit Codec Type Detection	Siemens	
N4-000475	Current state of discussions & TrFO break	Siemens	Revised to 492
N4-000476	Through Connection and Iu User Plane Initialization during TrFO establishment	Siemens	
N4-000492	Current state of discussions & TrFO break (rev. of 475)	Siemens	
N4-000493	Working Assumption on the User Plane Protocol in the Core Network for the CS Domain	Alcatel	
N4-000519	TrFO call connection flow model	Alcatel	
N4-000520	LS to S2 Response Liaison Statement On Terminology Of TrFO/TFO And Possible Interworking Scenarios	Siemens	Email approval
N4-000523	Proposed Work Item Description for R00: Out of band Transcoder Control	NEC	Revised to 531
N4-000524	Liaison statement On Synronisation Issues During Codec Type Change	Siemens	Email Approval
N4-000525	LS, RAB ASSIGNMENT FOR TRFO	Ericsson	Revised to 551
N4-000531	Proposed Work Item Description for R00: Out of band Transcoder Control	NEC	Approval by N4
N4-000551	LS, RAB ASSIGNMENT FOR TRFO	Ericsson	Endorsed by N4 Email approval
N4-000553	Draft TrFO-TFO meeting report	MCC	