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

Title: **Draft Meeting Report**

Agenda item:

Document for: **APPROVAL**

Agenda item	Agenda item title	Tdoc N4-00	Title	Source	Result
1	**Opening, approval of agenda**	0561	Agenda	N4 Chairman	Due to the high number of documents, the Chairman asked whether it was acceptable to have parallel meetings for some sessions. The proposal was rejected by delegates who had submitted documents related to different sessions. The Agenda was eventually approved
2	**Document Allocation**	0562	Tdoc allocation to agenda items	N4 Chairman	A revision was circulated and further revised according to the comments received. Approved with modifications.
3	**Meeting Report**	0563	Helsinki meeting report	MCC	Comments were received only from Ericsson. Approved. The SA report was presented by the CN Chairman: the names of Releases will coincide from now one with the version numbers (R00 will be R4). Release 4 may contain IP MM. Release 5 will contain full specification of the IP Multimedia Subsystem. PCG meeting: all GSM specs are now under control of 3GPP (including TSG GERAN). Meeting reports shall be made available within two weeks time. IPR declarations need to take place in the opening phase of the meeting. Guidelines from MCC will be needed on IPR declarations, and these will be asked to Adrian Scrase (**Action Point: MCC**).
4	**Liaison Statements**	0510	Proposed LS on RAB Assignment QoS Negotiation	R3	See section 6.6.9

Agenda item	Agenda item title	Tdoc N4-00	Title	Source	Result
		0513	Response to liaison statement on support of AMR via IU-PS in GERAN	R3	In copy to N4. Noted.
		0536	CR 23018-057r2 on Handling of the Call Diversion Treatment Indicator	N2	See section 6.1
		0610	Liaison Statement on IPT Basic Call Handling	N2	See section 6.1
		0612	LS to S2 on use of IP for security key distribution	S3	Sent to N4 in copy. Noted.
		0613	Evaluation of the impact on positive authentication reporting on network performance	S3	See section 6.6.6
		0629	Liaison statement on the introduction of GEA2	N1	Sent in copy to N4 and presented by BT. Allocated to sect. 6.2 for a more detailed discussion.
		0630	Answer to the liaison statement on the modified lengths of parameters AUTN and AUTS	N1	Noted.
		0631	Liaison Statement on MS Network Capability IE Conflict	N1	See section 6.2
		0632	LS back on Race conditions avoidance	N1	See section 6.2.1
5	Work Item Management	0668	R00 Project Plan	Siemens	The schedule of the TFO work item needs to checked, according to Siemens, who distributed the document. Postponed for the ad hoc discussion, with a focus on the N4 issues.
		0628	Necessary N4 works for SMWOP (Service Modification WithOut Pre-notification)	NEC	The document highlights areas for activity by N4 in relation to the WI, approved by the CN plenary in Dusseldorf. The item will be discussed in conjunction with N3 delegates.
					The document was then presented in the N3/N4 joint meeting. On the activity it is agreed thta there is no need for a new WI description, since the current one covers the issue satisfactorily.
		0610	Liaison Statement on IPT Basic Call Handling	N2	N4 believes that the appropriate place for discussion of this issue is S2, which is also in the list of addressees.
					However, S2 specs seems to be at a rather high level, according to the N2 Chairman.. N2 is primarily interested in the behaviour of network entities, Vodafone said.
		0681	Draft Principles of 3GPP Work Planning - Release Mechanisms	N4 Chairman	The CN Chairman went through the principles expressed in the document, whcich was then noted.
		0684	Framework for planned content of next Release	N4 Chairman	Not formally agreed at the SA level. Postponed for ad hoc discussion.

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		0682	3GPP Work Planning for IM SubSystem	N4 Chairman	Also to be put on the ad hoc discussion
		0683	CN and IP MM protocols	N4 Chairman	*Naming and addressing functions* was added to the list of issues related to N4 as well as *Subscriber data management in HSS and the HSS to CSCF protocols to support this*.
		0687	ToR for N4	N4 Chairman	Stage 2 LCS was deleted from the list of bullet points. Revised to 0689.
		0689	Revision of 0687	N4 Chairman	Agreed from the N4 perspective.
		0690	Revision of 0683	N4 Chairman	Agreed from the N4 perspective.
6	**Release 99**				
6.1	**Camel Phase 3**	0574	CR 23.018-061 on Update of CAMEL References	Vodafone	Revised to 693
		0639	CR-29.002-173 on Optionality of parameters in GPRS-CSI (R99)	Nokia	The CR proposes to change a couple of data types, to become optional at the protocol level, so that segmentation is possible (parameters are too long, without this change). Ericsson requested whether it is acceptable that this is a Correction, given this explanation. The CR was agreed, but Ericsson was given the chance of consulting colleagues at home.
		0640	CR-29.002-174 on Optionality of parameters in GPRS-CSI (R00)	Nokia	Mirror CR to the above. Agreed as well.
		0536	CR 23.018-057r2 on Handling of the Call Diversion Treatment Indicator	N2	Revised to 0577.
		0693	CR 23.018-061r1 on Update of CAMEL References	N2	Revised to 0722
		0722	CR 23.018-061r2 on Update of CAMEL References	N2	Agreed
6.2	**GPRS**	0583	CR 29.060-126r1 on Sequence number in signalling messages	Ericsson	The changes were illustrated by Ericsson. Nortel would like to set to 0 the Sequence Number, Nokia is in favour of the current Ericsson proposal, given that it solves a problem and a change would involve a delay of three more months. Nortel volunteered to perform the change accordingly. Revised to 0694
		0694	CR 29.060-126r2 on Sequence number in signalling messages	Ericsson/Nortel	Agreed
		0584	CR 29.060-134 on Clarification on GSN address in Error Indication	Ericsson	Small change presented by Ericsson. But see also 0656.

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		0590	CR 29.060-135 on Addition of MS Not Reachable Reason to Send Routing Information for GPRS Response (R99)	Siemens	Alignment of 29.060 with 29.002 and 23.060, through appropriate inclusion of the addition of a parameter. Nokia highlighted that also R97 and R98 need to be corrected. In this case, the appropriate category needs to be identified. The current document,however, was agreed. R97 and R98 versions to be drafted by Siemens. Category should not be C1.
		0695	CR 09.60-xxx on Addition of MS Not Reachable Reason to Send Routing Information for GPRS Response (R97)	Siemens	Category C3. Mirror CR to 0590. Agreed
		0696	CR 09.60-xxx on Addition of MS Not Reachable Reason to Send Routing Information for GPRS Response (R98)	Siemens	Category C3. Mirror CR to 0590. Agreed.
		0591	CR 29.060-136 on Compatibility GTPv0/GTPv1 in case of SGSN change (R99)	Siemens	Functional modification to R99, not a correction, Nokia remarked (there is a link to 23.060). It was noted that Handling of the CR would be more appropriate after approval of the 3GPP plenary, but it was agreed to elaborate the CR now, to save time. Revised to 0698. Postponed to November.
		0698	CR 29.060-136r1 on Compatibility GTPv0/GTPv1 in case of SGSN change (R99)	Siemens	Withdrawn
		0592	CR 29.060-137 on SGSN change with GTP v0 tunnel to GGSN (R99)	Siemens	Postponed to November.
		0595	CR 29.060-131r1 on Security parameter transport in case of 2G <-> 3G interworking (R99)	Siemens	Presented for info at the Helsinki meeting. Comments received were reflected in the revision, with the exclusion of a less essential point. Agreed.
		0605	CR 29.060-139 on Clarifications on the use of TEID in the Control Plane	Fujitsu	Nortel remarked that the text does not add substantially new information. Proposed to remove the last but one sentence before the figure. Revised to 0699
		0699	CR 29.060-139r1 on Clarifications on the use of TEID in the Control Plane	Fujitsu	*If the TEID for Signalling is received from the transmitter, this Information Element shall be stored*: sentence proposed by Nortel and agreed. With this revision the CR was agreed.
		0606	CR 29.060-140 on Correction on the handling of the PDP Context at unsuccessful PDP Context modification	Fujitsu	Agreed
		0616	CR 29.060-141 on Clarifications on the presence condition of TLLI/P-TMSI in SGSN Context request	Fujitsu	Agreed

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		0631	Liaison Statement on MS Network Capability IE Conflict	N1	Principle: when information is received from two different sources, it has to be decided which one has priority. The LS requests to change Stage 2 specification and, if needed, Stage 3 as well.
		0656	CR 29.060-140 on Categorize Error indication as the GTP-U message	NEC	Ericsson do not see the need for moving it to the Control Plane, given that an effort was done to separate things. Lucent, Ericsson, NEC, Nokia were invited to sit together and look at the problem (that also involves Tdoc 0584), that will then be ridiscussed during this meeting. NEC will lead the activity.
		0669	CR 29.060-143 on Correction on Reliable transmission of signalling messages	Lucent	Discussed off line and revised to 0702. It was debated whether the correction also needs to apply to R97 and R98. Agreed not to have it as a C1 category, and also C3 was not agreed. No CR needed, consequently, for R97 and R98.
		0702	CR 29.060-143r1 on Correction on Reliable transmission of signalling messages	Lucent	Presented by Lucent and further revised to 0724
		0724	CR 29.060-143r2 on Correction on Reliable transmission of signalling messages	Lucent	Agreed.
		0679	CR 29.060-144 on Insufficient modification	NTT Software	Nokia proposed to change Category from D to F, since it is actually a correction. Agreed with modifications to the coversheet.
		0716	CR 29.060-145 on Correction to the SGSN Context transfer Request and response messages	Lucent Technologies	Revised to 0729
		0717	CR 29.060-146 on Correction to the SGSN Forward relocation Request and Response messages	Lucent Technologies	Revised to 0730
		0729	CR 29.060-145r1 on Correction to the SGSN Context transfer Request and response messages	Lucent Technologies	Agreed.
		0730	CR 29.060-146r1 on Correction to the SGSN Forward relocation Request and Response messages	Lucent Technologies	NEC suggested to align the names of parameters. Signalling to be replaced with Control Plane. Revised to 0753
		0753	CR 29.060-146r2 on Correction to the SGSN Forward relocation Request and Response messages	Lucent	Agreed
		0718	CR 29.060-147 on Clarification on the handling of response messages	Lucent Technologies	Agreed
6.2.1	Race Conditions	0609	CR 29.060-105 on Race Avoiding Conditions	N4	Revised to 0715

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		0715	CR 29.060-105r1 on Race Avoiding Conditions	Lucent Technologies	No impact from this CR expected for 23.060. *Other comments* deleted from the coversheet. Agreed.
		0632	LS back on Race conditions avoidance	N1	The amount of ongoing discussion leads to the conclusion that N4 do not agree with the position of N1.
		0667	Discussion paper on race conditions	Lucent	Withdrawn
		0672	Solution for race condition of GTP procedures	Fujitsu	Revised to 0723
		0723	Solution for race condition of GTP procedures (revised)	Fujitsu	Noted
		0673	CR 29.060-122r1 on Solution for race condition of GTP procedures	Fujitsu	Clarification on the meaning of the first change was requested by Nortel Networks. Open issues will be clarified off line by a team of interested delegates (Lucent etc.).
		0732	CR 29.060-122r2 on Solution for race condition of GTP procedures	Fujitsu	Changes briefly explained. Nortel observed that his suggested text was not correctly implemented.
		0780	CR 29.060-122r3 on Solution for race condition of GTP procedures	Fujitsu	Agreed conditionally.
		0721	CR 29.060-141r1 on Categorize Error indication as the GTP-U message (Revision of 656)	NEC	A change was proposed by Ericsson to the Error Indication section 7.3.7. Nortel requested time to show the CR internally. Revised to 0733
		0733	CR 29.060-141r2 on Categorize Error indication as the GTP-U message	NEC	Agreed conditionally, if no objections are received within 11th September. NEC will inform explicitly MCC of the CR approval. However, after a supplement of discussion, it was agreed with no conditions.
		0725	Proposed LS on Error Indication message to U-plane	NEC	Needs further discussion.
6.3	**Supplementary Services**				
6.3.1	**Optimal Routing**	0568	CR 23.079-015 on Sheet 1 of Procedure OR_HLR_CF	Vodafone	Agreed
6.3.2	**Call Diversion**	0577	CR 23.018-057r3 on Handling of the Call Diversion Treatment Indicator	Vodafone	Agreed
		0578	CR 23.072-005 on Handling of the Call Diversion Treatment Indicator	Vodafone	Another part of the package to which the previous CR belongs to. Agreed
		0579	CR 23.093-004 on Handling of the Call Diversion Treatment Indicator	Vodafone	Still a component of the package. Agreed
6.3.3	**Follow-Me**	0611	CR 23.094-002 on Correction of the wrong Service Code	Siemens	Agreed

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6.3.4	**Call Hold**	0664	CR 23.018-055r2 on Inclusion of call hold in basic call handling	Vodafone	Revised to 0710
		0710	CR 23.018-055r3 on Inclusion of call hold in basic call handling	Vodafone	Original version presented for information in Helsinki. Covers the interactions between new processes. Being R00 related, new version to be generated is 4.0.0. Vodafone clarified that the approval of this CR, although editorial from the system point of view, will make life much easier when CAMEL Phase 4 has to be implemented. The editorial nature of the CR was questioned by MCC (difficult to justify triggering the creation of v4.0.0) and it was then agreed to catgegorise it as C, functional modification of a feature. The Chairman proposed to better examine the document at home. Vodafone, however, preferred to have an off line discussion with NTT Comware, the only Company that had concerns with a part of the document. In case of solution of these concerns, the CR could be approved. In any case, no other revision will be generated this week. Document put on hold, it will be rediscussed in the meeting.
6.4	**Basic Call Processing**	0564	CR 23.018-059 on Corrections to procedure obtain routeing address	Vodafone	Reason has been added in the procedure Obtain Routing Address. Agreed
		0569	CR 23.018-060 on Corrections to process ICH_VLR	Vodafone	Small change necessary. Agreed
		0570	CR 23.018-055r1 on Inclusion of call hold in basic call handling	Vodafone	Revised to 664
		0571	CR 23.083-005r1 on Inclusion of call hold in basic call handling	Vodafone	Part of a package with Tdoc 710.
		0572	CR 23.135-003 on Inclusion of call hold in basic call handling	Vodafone	Still part of a package with Tdoc 710.
		0596	CR 23.016-016 on Correction to Delete Subscriber Data (R99)	Siemens	The only change is in sect. 4.2.2. Nokia mentioned the requirement to also correct R97 and R98, see Tdocs 0734 and 0735
		0734	CR 03.16-A042 on Correction to Delete Subscriber Data (R97)	Siemens	Agreed
		0735	CR 03.16-A041 on Correction to Delete Subscriber Data (R98)	Siemens	Agreed
6.5	**Location Services**	0575	CR 29.002-162 on Correction on Location Information (R99)	Vodafone	Revised to 665
		0576	CR 29.002-163 on Correction on Location Information (R00)	Vodafone	Revised to 666
		0597	CR 29.002-165 on Removal of LSAIdentity from NoteMM-EventArg (R99)	Siemens	Agreed

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		0736	CR 29.002-xxx on Removal of LSAIdentity from NoteMM-EventArg (R00)	Siemens	Agreed
		0665	CR 29.002-162r1 on Correction on Location Information (R99)	Vodafone	Agreed
		0666	CR 29.002-163r1 on Correction on Location Information (R00)	Vodafone	Agreed
		0641	CR-09.02 A310 on Correction to QoS indication (R98)	Nokia	An indication about the achievable confidence level was introduced in a textual way. Justification was requested about the value of 90% of the confidence level. According to Nokia this is a typical value. Postponed to tomorrow morning. Agreement reached with Siemens on a figure of 67%.
		0642	CR-29.002-175 on Correction to QoS indication (R99)	Nokia	
		0643	CR-29.002-176 on Correction to QoS indication (R00)	Nokia	
6.6	**AOB**				
6.6.1	**TrFO**				
6.6.2	**Multicall**	0607	CR 22.097-003 on Interaction with Multicall	S1	Sent to N4 for information. Noted.
6.6.3	**MSP**	0608	CR 22.135-006 on Interaction with MSP	S1	Sent to N4 for information. Noted.
6.6.4	**EC within Multi Calls**	0621	CR 23.135-002r2 on Requirement on Network to Tear Down Calls to Accept EC in Multicall	Ericsson	Revised to 0712
		0712	CR 23.135-002r3 on Requirement on Network to Tear Down Calls to Accept EC in Multicall	Ericsson	BT observed that the category of the CR should not be a correction, but a functional modification of a feature. Vodafone objected saying that the CR provides an alignment with a Stage 1 specification. Ericsson reported about the history of the Stage 1 CR brought to the attention of S1. Investigations on impacts to N1 specifications should be performed. Revised to 0737
		0737	CR 23.135-002r4 on Requirement on Network to Tear Down Calls to Accept EC in Multicall	Ericsson	The agreed changes, stimulated by BT, have been performed by Ericsson. Agreed
6.6.5	**Addressing, Identities**	0625	CR 23.003-023r1 on Alignment of 23.003 with text from 25.401	Ericsson	Nokia remarked that the CR does not seem editorial and Category F was proposed and accepted. Agreed

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6.6.6	Security, Authentication	0613	Evaluation of the impact on positive authentication reporting on network performance	S3	Presented by the N4 Chairman. The requested feature configures itself as an additional one and Ericsson objected for R99. A response should go to S3 in the spirit of the discussion: impact on several 3GPP procedures is expected as a consequence of the 3GPP2 requirements. LS in response (0742) will be drafted by the N4 Chairman and Vice Chairman.
		0538	CR 29.002-154r1 on Clarification on Authentication Failure Report ack	Ericsson	Replaced by 0670
		0541	CR 29.002-161 on Clarification on Authentication Failure Report ack	Ericsson	Replaced by 0671
		0635	CR 29.002-169 on Inclusion of sending identity address to the Authentication Failure Report (R99)	Nokia	The HLR does not know the VLR/SGSN from which an Authentication Failure Report comes from. It is then proposed to send an explicit message. Ericsson noted that it is an excellent enhancement, but for Release 2000, not a correction to R99. Nokia replied that it is a correction of abehaviour not performing properly. Ericsson objected firmly to have it as an R99 issue, Nokia did not accept to send it directly to CN for their consideration. There seemed to be an agreement on the content, not on the timely implementation. Nokia, BT and Ericsson will discuss it off line and report before the end of the meeting.
		0636	CR-29.002-170 on Inclusion of sending identity address to the Authentication Failure Report (R00)	Nokia	Mirror R00 CR of the previous one.
		0637	CR-29.002-171 on Correction to the Encryption Information in ASN.1 (R99)	Nokia	Withdrawn
		0638	CR-29.002-172 on Correction to the Encryption Information in ASN.1 (R00)	Nokia	Withdrawn
		0670	CR 29.002-154r2 on Clarification on Authentication Failure Report ack (R99)	Ericsson	Originally discussed in Helsinki. It is editorial, since there is no explicit change to the HLR behaviour. Category changed to F. Revised to 743, removing also Data Missing.
		0743	CR 29.002-154r3 on Clarification on Authentication Failure Report ack (R99)	Ericsson	Agreed
		0671	CR 29.002-161r1 on Clarification on Authentication Failure Report ack (R00)	Ericsson	Mirror CR to 0670. Revised to 744
		0744	CR 29.002-161r2 on Clarification on Authentication Failure Report ack (R00)	Ericsson	Agreed

Agenda item	Agenda item title	Tdoc N4-00	Title	Source	Result
6.6.7	Handover	0648	CR 29.002-177 on Clarification of use of Radio Resource Information (R99)	Ericsson	Triggered by a comment from Nortel. Revised to 746
		0746	CR 29.002-177r1 on Clarification of use of Radio Resource Information (R99)	Ericsson	Agreed
		0649	CR 29.002-178 on Clarification of use of Radio Resource Information (R00)	Ericsson	Revised to 0747
		0747	CR 29.002-178r1 on Clarification of use of Radio Resource Information (R00)	Ericsson	Agreed
		0650	CR 29.010-006 on Clarification of use of Radio Resource Information (R99)	Ericsson	Companion CR of 0648, aims at providing a global clarification. Nortel still proposed an amendment, captured by Ericsson. Must to be changed shall to comply with 3GPP guidelines. Nokia wished to analyze it at home, with one week time. BT prefers to also have the reference to 23.009, believed to be complementary to the one added. Revised to 0745
		0745	CR 29.010-006 on Clarification of use of Radio Resource Information (R99)	Ericsson	Conditionally approved. By Monday 11th, Sean will send it to MCC.
		0660	CR 29.002-179 (R99) on Correction to MSC-A handover SDLs	Nortel Networks	Editorial modification, as declared by Nortel. Correction to an incorrect CR implementation. Nokia and NTT Comware would like to have the chance to see it at home. The CR will be split into two parts, for clarity, separating the easy from the controversial part. Tdocs created: 0748 and 0749.
		0748	CR 29.002-179r1 (R99) on Correction to MSC-A handover SDLs	Nortel Networks	Remaining part of the CR, without Sheet 8. Agreed
		0749	CR 29.002-xxx on Correction to MSC-A handover SDLs	Nortel Networks	Containing Sheet 8. Conditionally agreed. To report to MCC by September 8th.
		0661	CR 29.002-180 (R00) on Correction to MSC-A handover SDLs	Nortel Networks	To be split as well.
		0750	CR 29.002-180r1 (R00) on Correction to MSC-A handover SDLs	Nortel Networks	Containing the non sensitive part. Agreed
		0751	CR 29.002-xxx on Correction to MSC-A handover SDLs	Nortel Networks	Containing Sheet 8. Conditionally agreed. To report to MCC by September 8th.

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		0658	CR 29.010-007 on Corrections and updates to align with current R99 specs	Nortel Networks	Number of corrections to 29.010. The term relocation is not used in GSM system, according to Ericsson. Agreed conditionally. To be sent to MCC by September 8th.
		0633	CR 23.009-012r1 on Correction to transcoder handling for R99	N1	Amending some errors regarding transcoder handling (at the time, it was still assumed that TrFO operations were expected by R99, not the case any longer). Comma should be changed into a fullstop after "-report request). **Action Point MCC**: to inform Ban Al Bakri. BT requested whether there are impacts on MAP procedures from this CR. The CR was noted
6.6.8	**Guidelines**	0662	CR 10.02-A004 on the handling of application layer errors in MAP	Vodafone	Changes of substance only were illustrated. Revised to 0775
		0775	Revision of 0662	Vodafone	Agreed. Guidelines from MCC requested (**Action Point MCC**) about the number to be assigned to the 3G equivalent.
		0663	CR 30.002-001 on the handling of application layer errors in MAP	Vodafone	Withdrawn
6.6.9	**QoS**	0510	Proposed LS on RAB Assignment QoS Negotiation	R3	Originally received for the Helsinki meeting. Maximum bit rate and guaranteed bit rate are the parameters that R3 propose as variable. N4 has no mandate to perform the suggested changes, which are competence of N1. However, N4 has no problem in accepting the selection of the indicated parameters. Response LS (Tdoc 0752) will be drafted by Nortel Networks.
		0752	Response to LS on RAB Assignment QoS Negotiation	Nortel Networks	Approved
7	**Release 2000**				
7.1	**TrFO/TFO workshop**				
7.1.1	**Agenda & Doc Allocation**	0686	TrFO Workshop Agenda	TrFO Workshop Convenor	Revised to 0705
		0705	Revised Agenda	TrFO Workshop Convenor	Approved
7.1.2	**Meeting Reports**	0563	Helsinki meeting report	MCC	Revised
		0700	Comments to Draft Report N4-000553 on TrFO/TFO workshop	Alcatel	Approved
		0706	Revised meeting report from Stockholm	MCC	Comments from Alcatel were included. Meeting report was consequently agreed. **Action Point MCC**: Send to CN plenary
7.1.3	**Liaison Statements**	0688	Reply to LS from SA4 (000327R) on codec types for different access technologies		Noted. See also Annex E.

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7.1.4	Stage 2	0623	Updates to Stage 2 for OoBTC - 3G TS 23.153	Ericsson	See Annex E
7.1.5	RAN Capabilities	0626	SRNS relocation during the TrFO connection	NEC	See Annex E
		0651	Support Of SDU's by the RNC & ACS/SCS negotiation	Ericsson	See Annex E
7.1.6	CN Capabilities	0604	Iu UP in comparison with I.366.2	Siemens	See Annex E
		0622	Iu UP Protocol handling Solution for TrFO.	Ericsson	See Annex E
		0624	Inter-MSC Handover for TrFO/TFO connections	Ericsson	See Annex E
		0627	OoBTC work plan	NEC	See Annex E
		0653	DoCoMo's view on the issue of User Plane protocol termination	NTT DoCoMo	See Annex E
		0657	CN Scenarios For TrFO	Ericsson	See Annex E
7.1.7	TrFO Break	0603	TrFO break function	Siemens	See Annex E
		707	LS, Sending of nsi without modification to rab	Ericsson	See Annex E
7.2	Bearer Independent Architecture	0573	Bearer-Independent CS Core Network; Stage 2	Nortel Networks	Changes in respect to the previous version were highlighted. Ericsson wanted to know the status of SIP-T in standardisation at the moment. Specific Annexes for each protocol should be provided, upon suggestion of the Chairman, with a general body for the Spec. The Chairman observed that currently there is no big debate about selection of BICC or SIP-T and that Stage 2 stability has higher priority. TrFO needs to be addressed in the Stage 2 as well.
		0619	3G TS 23.205 V0.0.2 on Bearer-Independent CS Core Network; Stage 2	Ericsson	Revised into 0652.
		0620	Media Gateway Controller - Media Gateway Interface; Stage 3	Ericsson	Presented by Ericsson. There was some lengthy debate about the opportunity of having it as a TS or as a TR. As a starting point, BT would like to see this document as a TR. A volunteer was requested for the Rapporteurship: Ericsson volunteered, provided that working contributions came frome the rest of the delegates. Final agreement: Laura Pomponi (CSELT) editor, Heinz Peter Keutmann (Ericsson) co-editor.

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		0692	Bearer Independent Circuit-Switched Core Network: Work Item description	Ericsson	Approved: **to be sent to CN**.
7.4	**Security**	0602	CR 29.002-168 on Security Header modification (R00)	Siemens	A Security parameter was removed by the security header, upon decision of S3. A supporting LS was not received by MCC and there was some reluctance (e.g. Nokia) to accept the CR without seeing the LS. For this reason, the CR was postponed to the next meeting.
		0652	Revised version of TS 23.205	Ericsson	Changes were commented and the inclusions suggested by Nortel were performed. BT asked clarifications on the concept of originating half and terminated half, that are relating to the call, as explained by Ericsson. References to the web pages (that coudl change) should be avoided: Nortel clarified that they relate to working documents, for the time being. The status of references [7] and [8] was requested by BT: they are targeted for finalisation by December 2000. References to draft documents shall then disappear from the approved Spec. New version will be generated: 0.1.0. BT clarified that Information flows described in Annex A use protocol names, for clarity. In 5.1.3.1 the term "full", before compliance, can be removed. Call flows between the orig. and termin. half are implementation specific, according to Nortel. They will be removed, and the same applies to MGW, upon request of BT. MSC and Media Gateway will consequently be located at the same logical level. The Figure of sect 6.3 should also show the Gateway MSC. Heinz Peter, currently Editor of the Spec, will provide a revision of this document for the next meeting.

Agenda item	Agenda item title	Tdoc N4-00	Title	Source	Result
7.3	Combined MSC/SGSN Node	0654	Draft Work Item Description 'Optimisation of Signalling: Combined MAP Signalling for Mobility Management	NTT Comware/NTT DoCoMo	Revised WI description. Nokia wished to clarify whether comments raised in Helsinki (e.g. in the service aspects) were incorporated. NTT Comware confirmed that the document was revised accordingly. Motorola noted a huge impact on system architecture, although agreeing that a saving (of amount unknown) in signalling will be achieved. It was agreed to check the textual content of the document. Delete the concept of reduction of tariffs to subscribers. Section 5 becomes: Signalling reduction provides cost reduction for operators. Vodafone proposed to highlight network efficiency, instead of cost reduction. Nokia observed that 23.003 is missing in the list of affected specs. Feb 2001 was found a very challenging schedule for completion, however Nortel noted that standardisation is contribution driven, which makes it possible. BT added that the significant level of expertise in MAP is a promising element to meet the target date. There are six supporting companies, all Japanese. According to NTT Comware, N4 should have primary responsibility in the WI. Revised to 0767
		767	Draft Work Item Description 'Optimisation of Signalling: Combined MAP Signalling for Mobility Management (Revision of 0654)	NTT Comware/NTT DoCoMo	Approved. To be sent to the CN plenary
		0655	Draft report on the Combined MAP Signalling for feasibility study	NTT Comware/NTT DoCoMo	Motorola suggested to replace HLR with HSS, given that the Work Item is for R00, although for the assessment of the principles of the documents, this detail was not found necessary by Ericsson. Ericsson also noted that the achievable benefits have not been detailed satisfactorily, at least according to what was requested in Helsinki. Sean Schneyer said he has some performance figures available for the achievable savings, but they came from a rough analysis of the scenarios considered in the document and, hence, declared to be reluctant to mention the Ericsson name on such figures. With a disclaimer on the front page, however, Sean would bee available to circulate them. The document was noted and it was also noted that the figures reported need to be corrected.

Agenda item	Agenda item title	Tdoc N4-00	Title	Source	Result
		0766	Personal evaluations of the Combined MAP operations for MM	Sean Schneyer	No front page was eventually provided for reasons of time, but it was clarified that the source of the figures indicated is Ericsson. Security messages have been taken into account in the calculation, assuming a reasonable number (4) of messages. Clarified that the document was provided to progress with the activity. Given the nature of the document, no electronic version will be available.
8	GSM Maintenance				
8.1	Supplementary Services	0566	CR 04.80-A018 on Addition of error type description for PositionMethodFailure	Nokia	Category C1. Agreed
		0567	CR 24.080-006 on Addition of error type description for PositionMethodFailure	Nokia	Agreed
8.2	GPRS	0580	CR 09.60-A093 on Removal of IHOSS from GTP (Release'97)	Ericsson	Withdrawn
		0581	CR 09.60-A094 on Removal of IHOSS from GTP (R'98)	Ericsson	Category C3. Agreed
		0582	CR 29.060-133 on Removal of IHOSS from GTP (R'99)	Ericsson	Agreed
		0617	CR 09.60-A089r2 (R97) on MM Context information coding clarification	Nokia	Category C3. Noted that the K value is not reflected in 29.060 R99. Nokia will draft a CR for the next meeting. Agreed
		0618	CR 09.60-A090r2 (R98) on MM Context information coding clarification	Nokia	Agreed.
		0593	CR 29.060-138 on Coding of TI in PDP Context (R99)	Siemens	Revised to 0774
		0774	Revision of 0593	Siemens	Agreed
		0594	CR 09.60-A095 on Coding of TI in PDP Context IE (R98)	Siemens	Category C3, Siemens indicated. Revised to 0773
		0773	Revision of 0594	Siemens	Agreed
8.3	Location Information	0585	CR 09.02-A307 on Alignment of Geographic Shape Description with ITU-T and ANSI (R98)	Siemens	Siemens indicated that the category should be C1. Rationale for correction was then explained. Siemens agreed with Nokia about the lack of backwards compatibility in the CR. Nokia and Ericsson did not agree with the CR. Siemens replied that, without the CR, confidence level and screening indicator cannot be provided. A chance was given to Siemens and Nokia to discuss the issue off line.
		0586	CR 29.002-164 on Alignment of Geographic Shape Description with ITU-T and ANSI	Siemens	Mirror CR of 0585 with one difference, explained by Siemens. This prevents form accepting it as a Category A.

Agenda item	Agenda item title	Tdoc N4-00	Title	Source	Result
		0771	CR 29.002-xxx on LCS Support for CAMEL Phase 3 (R99)	Siemens	Agreed without presentation
		0772	CR 29.002-xxx on LCS Support for CAMEL Phase 3 (R00)	Siemens	Agreed without presentation
		0614	CR 03.32-xxx on Alignment of Geographic Shape Description with ITU-T and ANSI	S2	Noted
		0615	CR 23.032-yyy on Alignment of Geographic Shape Description with ITU-T and ANSI	S2	Noted
		0680	CR 29.002-xxx on Alignment of Geographic Shape Description with ITU-T and ANSI	Siemens	
8.4	**IMSI**	0587	CR 29.060-132r1 on encoding of IMSI (R99)	Siemens	Agreed conditionally
		0588	CR 09.60-A91r1 on encoding of IMSI (R98)	Siemens	Agreed conditionally
		0589	CR 09.60-A92r1 on encoding of IMSI (R97)	Siemens	Category C3. First version of the CR presented in Helsinki. Agreed conditionally: by September 11th comments to be provided to MCC.
8.5	**CAMEL**	0598	CR 29.002-166 on Corrections and clarifications for USSD procedures on the HLR - gsmSCF interface (R00)	Siemens	Replaced by 0644
		0599	CR 29.002-167 on Corrections and clarifications for USSD procedures on the HLR - gsmSCF interface (R99)	Siemens	Replaced by 0645
		0600	CR 09.02-A308 on Corrections and clarifications for USSD procedures on the HLR - gsmSCF interface (R98)	Siemens	Replaced by 0646
		0601	CR 09.02-A309 on Corrections and clarifications for USSD procedures on the HLR - gsmSCF interface (R97)	Siemens	Replaced by 0647
		0644	CR 29.002-166r1 on Corrections and clarifications for USSD procedures on the HLR - gsmSCF interface (R00)	Siemens	Nokia, Ericsson, Siemens, Alcatel to closely work on this issue and cooperate.

Agenda item	Agenda item title	Tdoc N4-00	Title	Source	Result
		0645	R 29.002-167r1 on Corrections and clarifications for USSD procedures on the HLR - gsmSCF interface (R99)	Siemens	Nokia, Ericsson, Siemens, Alcatel to closely work on this issue and cooperate.
		0646	CR 09.02-A308r1 on Corrections and clarifications for USSD procedures on the HLR - gsmSCF interface (R98)	Siemens	Withdrawn
		0647	CR 09.02-A309r1 on Corrections and clarifications for USSD procedures on the HLR - gsmSCF interface (R97).	Siemens	Category C3: Alcatel objected. Withdrawn
		0659	CR 09.02-A311 on Addition of Unknown Subscriber USSD operations handled at the HLR' (R97)	Nortel Networks	The CR should fall into Category C3, but Nokia and Ericsson had concerns. Rejected. According to Nokia, CRs for R99 and R00 are not acceptable either: they need to be rediscussed in the next ad hoc on R00. Postponed.
		0757	CR 09.02-xxx on Clarification of Parameters use in the ASN.1 descriptions of unstructured SS MAP operations (R97)	Ericsson	Category should be C3, but Siemens disagreed. The error detected has only two possible solutions, Ericsson said. It was agreed to rediscuss it at the November meeting. Postponed.
		0758	CR 09.02-xxx on Clarification of Parameters use in the ASN.1 descriptions of unstructured SS MAP operations (R98)	Ericsson	Withdrawn
		0759	CR 29.002-xxx on Clarification of Parameters use in the ASN.1 descriptions of unstructured SS MAP operations (R99)	Ericsson	Withdrawn
		0760	CR 29.002-xxx on Clarification of Parameters use in the ASN.1 descriptions of unstructured SS MAP operations (R00)	Ericsson	Withdrawn
		0768	CR 03.18-A062r1 on Correction of Obtain_Routeing_Address for the reconnect case (R97) (Revision of 726)	Vodafone	Triggered by a discussion on a contribution from Siemens. It is a correction and all vendors present in N2 agreed on the C3 category. Agreed
		0769	CR 03.18-A063r1 on Correction of Obtain_Routeing_Address for the reconnect case (R98) (Revision of 727)	Vodafone	Identical in technical substance. Agreed

Agenda item	Agenda item title	Tdoc N4-00	Title	Source	Result
		0770	CR 23.018-063r1 on Correction of Obtain_Routeing_Address for the reconnect case (R99) (Revision of 728)	Vodafone	Same comments as above. Agreed
8.6	**BC allocation**	0674	CR 03.08-A035 on Corrections of the description of BC allocation for VLR (Ph2)	NTC	Rejected
		0675	CR 03.08-A036 on Corrections of the description of BC allocation for VLR (R96)	NTC	Rejected
		0676	CR 03.08-A037 on Corrections of the description of BC allocation for VLR (R97)	NTC	Rejected
		0677	CR 03.08-A038 on Corrections of the description of BC allocation for VLR (R98)	NTC	Rejected
		0678	CR 23.008-031 on Corrections of the description of BC allocation for VLR (R99)	NTC	Agreed
9	**Joint meeting with N3**	0547			Some changes were agreed to the structure of the Project Plan in relation to the Evolution of Bearers in the CN: this entry was then deleted, since no Work Tasks remained within. An agreement was recognised between the working methods of the two groups. It was clarified to NEC that N3 might have requirements on some parameters value and instruct N4 about inclusion in the protocols as appropriate. A proposal was formulated to clarify the fields of activity for N3 and N4. For N3: determination of parameter values over the reference points between MSC server and Media Gateway (documentation will be maintained by N4). For N4: standardisation of protocols over reference points between MSC server and MGW (i.e. H248). Concerning the work tasks (#12 and 13 of the overall project plan) that are tagged with question marks, there was no evidence that either N3 or N4 were working on it. It was eventually agreed to delete them. It was considered useful to present the Work Item description Bearer Independent Circuit Switched Core Network, and it was done by Ericsson, indicating that two new specifications (Stage 2 and Stage 3) are expected. The sentence: *N3 provides parameter values* was added to the Comments column.
10	**Output Documents**	0782	Approved output documents		
10.1	**Approved CRs**				See also Annex
10.2	**Approved LS**				See also Annex.

Agenda item	Agenda item title	Tdoc N4-00	Title	Source	Result
		0697	LS on CAMEL control of Optimal Routeing	N2	Vodafone presented the LS. N4 needs to do some work in the area of the behaviour of the Gateway MSC, not to be considered as a simple transit switch, when a Call, to be Optimally Routed, reaches the GMSC. N4 noted the LS and Vodafone promised contributions on the subject.
10.3	**Approved TS/TR**				
10.4	**Approved WIs**				
11	**Review of dates and hosts for future meetings**				Ericsson is 80% sure they can host it in Australia the January meeting. The May meeting can probably be hosted somewhere in the USA. The July meeting will be hosted by Mannesmann in Dusseldorf. The October meeting will be co-sponsored by BT and Vodafone in the UK. Japanese companies were encouraged to consider hosting a meeting, for a reason of balance. An additional N4 meeting was agreed for 17th - 19th October in the UK, ad hoc on Release 2000 issues, mainly: TrFO, Bearer Independent Core Network Architecture, Security enhancements, Optimal Routeing, Combined MM Operations. For the TrFO part, it will be colocated with R3. Location Services might be added, provided that stable Stage 2 contributions are submitted. If Release 2000 is going to be discussed on 17th and 18th October, the TrFO meeting will be held on the 19th. The agreement reached in this meeting makes NEC confident that one day is enough for the TrFO. If the meeting is not colocated with R3, it will be hosted in Stockholm on 10th - 12th October.
12	**Close**				
	NYA	0565	Faqiang	Siemens Austria	Withdrawn
		0634	Brahim	Alcatel	Withdrawn

A N N E X A - List of participants

Name	Organisation	Tel.	e-mail
AIKAWA Shinichiro	Fujitsu	+81 44 754 4196	aikawa@ss.ts.fujitsu.co.jp
ANGELO Ciriaco	Ericsson	+1 972 583 6093	QUSCIAN@AM1.ERICSSON.SE
BAUER Rolf	Alcatel SEL AG	+49 711 821 42241	RBauer@alcatel.de
BRUCH Diemo	Alcatel SEL AG	+49 711 821 47594	D.Bruch@alcatel.de
CASATI Alessio	Lucent Technologies	+44 1793 883861	acasati@lucent.com
CHENGHOCK Ng	NEC	+81 471 85 7167	Ngcheng@mcs.abk.nec.co.jp
CHOTAI Sunil	BT	+44 1473 605603	Sunil.chotai@bt.com
DRONNE François	France Télécom	+ 33 1 45 29 62 74	francois.dronne@francetelecom.fr
EDGE Stephen	Siemens		stephen.edge@siemens.icn
GARCÍA-MENDIVE Elena	Ericsson LM	+ 49 2407 575 205	Elena.Garcia-Mendive@eed.ericsson.se
GHRIBI Brahim	Alcatel	+33 1 3077 0781	Brahim.Ghribi@Alcatel.Fr
GOREY Kevin	Nortel Networks	+44 1628 434606	kgorey@nortelnetworks.com
HELLWIG Karl	Ericsson	+49 911 5217 300	Karl.Hellwig@Eed.Ericsson.Se
HODGES Phil	Ericsson LM	+49 2407 5756628	Phil.hodges@eed.ericsson.se
HU Yun-Chao	Ericsson Radio Systems *N4 Chairman*	+46 8 508 781 53	Yun-Chao.Hu@era.ericsson.se
IGARASHI Takeshi	NTT Software	+81 45 317 7018	rassy@po.ntts.co.jp
KEUTMANN Heinz-Peter	Ericsson L.M.	+49 24 07 57 51 32	Heinz-Peter.Keutmann@eed.ericsson.se
KYMÄLÄINEN Kimmo	Sonera Corp.	+358 405 300 848	Kimmo.kymalainen@sonera.com
LANIG Eva-Maria	Siemens AG	+49 89 722 34453	Eva-Maria.Lanig@icn.siemens.de
LÓPEZ SORIA Luis	Ericsson L.M.	+34 91 339 2656	Luis.Lopez-Soria@ece.ericsson.se
MÄKINEN Teemu Johannes	Nokia *N4 Vice Chairman*	+358 40 5077283	Teemu.Makinen@Nokia.com
McConville Daniel	Vodafone	+44 1635 682664	Daniel.mcconville@vf.vodafone.co.uk
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
MUHONEN Ahti	Nokia	+358405318469	Ahti.Muhonen@nokia.com
NOGUERA Juan	Ericsson L.M.	+61 3 9301 6117	Juan.noguera@ericsson.com.au
PARK Ian David Chalmers	Vodafone *CN Vice Chairman*	+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
QIAN Faqiang	Siemens	+43 51707 21460	Faqiang.qian@siemens.at
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	+33 4 9294 42 38	franco.settimo@etsi.fr

	N4 Secretary	+39 348 999 85 84	
SOEJIMA Miyuki	NTC	+81 44 900 7313	miyuki@mob.ntc.co.jp
TAMURA Toshiyuki	NEC	+81 471 85 6954	Tamurato@e1sf.ncos.nec.co.jp
VISSER John	Nortel Networks	+1 613 763 7028	jvisser@nortelnetworks.com
WILD Peter	Mannesmann Mobilfunk	+49 211 533 3798	Peter.Wild@D2mannesmann.de
WUNSCH Janice	Lucent Technologies	+1 630 979 6429	Wunsch@lucent.com
YOUNG Michael	Motorola	+1 604 241 6032	Michael.Young@motorola.com

A N N E X B - List of Temporary Documents

3GPP TSG CN WG4#04
Seattle, Washington, US
28 August - 1 September 2000

List of Temporary Documents

Tdoc n° 3GPP	Title	Source	Status
N4-000510	Proposed LS on RAB Assignment QoS Negotiation	R3	LS drafted
N4-000513	Response to liaison statement on support of AMR via IU-PS in GERAN	R3	Noted
N4-000536	CR 23018-057r2 on Handling of the Call Diversion Treatment Indicator	N2	Revised to 0577
N4-000561	Agenda	N4 Chairman	Revised and approved
N4-000562	Tdoc allocation to agenda items	N4 Chairman	Revised
N4-000563	Helsinki meeting report	MCC	Approved
N4-000564	CR 23.018-059 on Corrections to procedure obtain routeing address	Vodafone	**Agreed**
N4-000565	Allocated to Qian Faqiang	Siemens Austria	Withdrawn
N4-000566	CR 04.80-A018, Addition of error type description for PositionMethodFailure	Nokia	**Agreed**
N4-000567	CR 24.080-006, Addition of error type description for PositionMethodFailure	Nokia	**Agreed**
N4-000568	CR 23.079-015 on Sheet 1 of Procedure OR_HLR_CF	Vodafone	**Agreed**
N4-000569	CR 23.018-060 on Corrections to process ICH_VLR	Vodafone	**Agreed**
N4-000570	CR 23.018-055r1 on Inclusion of call hold in basic call handling	Vodafone	Revised to 0664
N4-000571	CR 23.083-005r1 on Inclusion of call hold in basic call handling	Vodafone	**Agreed**
N4-000572	CR 23.135-003 on Inclusion of call hold in basic call handling	Vodafone	Revised to 0755
N4-000573	Bearer-Independent CS Core Network; Stage 2	Nortel Networks	
N4-000574	CR 23.018-061 on Update of CAMEL References	Vodafone	Revised to 0693
N4-000575	CR 29.002-162 on Correction on Location Information (R99)	Vodafone	Revised to 665
N4-000576	CR 29.002-163 on Correction on Location Information (R00)	Vodafone	Revised to 666
N4-000577	CR 23.018-057r3 on Handling of the Call Diversion Treatment Indicator	Vodafone	**Agreed**
N4-000578	CR 23.072-005 on Handling of the Call Diversion Treatment Indicator	Vodafone	**Agreed**
N4-000579	CR 23.093-004 on Handling of the Call Diversion Treatment Indicator	Vodafone	**Agreed**
N4-000580	CR 09.60-A093 on Removal of IHOSS from GTP (Release'97)	Ericsson	Withdrawn
N4-000581	CR 09.60-A094 on Removal of IHOSS from GTP (Release'98)	Ericsson	**Agreed**
N4-000582	CR 29.060-133 on Removal of IHOSS from GTP (Release'99)	Ericsson	**Agreed**
N4-000583	CR 29.060-126r1 on Sequence number in signalling messages	Ericsson	Revised to 694
N4-000584	CR 29.060-134 on Clarification on GSN address in Error Indication	Ericsson	Revised into 0721
N4-000585	CR 09.02-A307 on Alignment of Geographic Shape Description with ITU-T and ANSI	Siemens	Rejected

N4-000586	CR 29.002-164 on Alignment of Geographic Shape Description with ITU-T and ANSI	Siemens	Withdrawn
N4-000587	CR 29.060-132r1 on encoding of IMSI (R99)	Siemens	**Agreed**
N4-000588	CR 09.60-A91r1 on encoding of IMSI (R98)	Siemens	**Agreed conditionally**
N4-000589	CR 09.60-A92r1 on encoding of IMSI (R97)	Siemens	**Agreed conditionally**
N4-000590	CR 29.060-135 on Addition of MS Not Reachable Reason to Send Routing Information For GPRS Response (R99)	Siemens	**Agreed**
N4-000591	CR 29.060-136 on Compatibility GTPv0/GTPv1 in case of SGSN change (R99)	Siemens	Postponed
N4-000592	CR 29.060-137 on SGSN change with GTP v0 tunnel to GGSN (R99)	Siemens	Postponed
N4-000593	CR 29.060-138 on Coding of TI in PDP Context (R99)	Siemens	Revised to 0774
N4-000594	CR 09.60-A095 on Coding of TI in PDP Context IE (R98)	Siemens	Revised to 0773
N4-000595	CR 29.060-131r1 on Security parameter transport in case of 2G <-> 3G interworking (R99)	Siemens	**Agreed**
N4-000596	CR 23.016-016 on Correction to Delete Subscriber Data (R99)	Siemens	**Agreed**
N4-000597	CR 29.002-165 on Removal of LSAIdentity from NoteMM-EventArg (R99)	Siemens	**Agreed**
N4-000598	CR 29.002-166 on Corrections and clarifications for USSD procedures on the HLR - gsmSCF interface (R00)	Siemens	Revised to 0644
N4-000599	CR 29.002-167 on Corrections and clarifications for USSD procedures on the HLR - gsmSCF interface (R99)	Siemens	Revised to 0645
N4-000600	CR 09.02-A308 on Corrections and clarifications for USSD procedures on the HLR - gsmSCF interface (R98)	Siemens	Revised to 0646
N4-000601	CR 09.02-A309 on Corrections and clarifications for USSD procedures on the HLR - gsmSCF interface (R97)	Siemens	Revised to 0647
N4-000602	CR 29.002-168 on Security Header modification (R00)	Siemens	Postponed
N4-000603	TrFO break function	Siemens	
N4-000604	Iu UP in comparison with I.366.2	Siemens	
N4-000605	CR 29.060-139 on Clarifications on the use of TEID in the Control Plane	Fujitsu	Revised to 0699
N4-000606	CR 29.060-140 on Correction on the handling of the PDP Context at unsuccessful PDP Context modification	Fujitsu	**Agreed**
N4-000607	CR 22.097-003 on Interaction with Multicall	S1	Noted
N4-000608	CR 22.135-006 on Interaction with MSP	S1	Noted
N4-000609	CR 29.060-105 on Race Avoiding Conditions	N4	Revised to 715
N4-000610	Liaison Statement on IPT Basic Call Handling	N2	
N4-000611	CR 23.094-002 on Correction of the wrong Service Code	Siemens	**Agreed**
N4-000612	LS to S2 on use of IP for security key distribution	S3	Noted
N4-000613	Evaluation of the impact on positive authentication reporting on network performance	S3	LS drafted
N4-000614	CR 03.32-xxx on Alignment of Geographic Shape Description with ITU-T and ANSI	S2	Noted
N4-000615	CR 23.032-yyy on Alignment of Geographic Shape Description with ITU-T	S2	Noted

	and ANSI		
N4-000616	CR 29.060-142 on Clarifications on the presence condition of TLLI/P-TMSI in SGSN Context request	Fujitsu	**Agreed**
N4-000617	CR 09.60-A089r2 (R97) on MM Context information coding clarification	Nokia	**Agreed conditionally**
N4-000618	CR 09.60-A090r2 (R98) on MM Context information coding clarification	Nokia	**Agreed conditionally**
N4-000619	3G TS 23.205 V0.0.2 on Bearer-Independent CS Core Network; Stage 2	Ericsson	
N4-000620	Media Gateway Controller - Media Gateway Interface; Stage 3	Ericsson	Noted
N4-000621	CR 23.135-002r2 on Requirement on Network to Tear Down Calls to Accept EC in Multicall	Ericsson	Revised to 0712
N4-000622	Iu UP Protocol handling Solution for TrFO.	Ericsson	
N4-000623	Updates to Stage 2 for OoBTC - 3G TS 23.153	Ericsson	
N4-000624	Inter-MSC Handover for TrFO/TFO connections	Ericsson	
N4-000625	CR 23.003-023r1 on Alignment of 23.003 with text from 25.401	Ericsson	**Agreed**
N4-000626	SRNS relocation during the TrFO connection	NEC	
N4-000627	OoBTC work plan	NEC	
N4-000628	Necessary N4 works for SMWOP (Service Modification WithOut Pre-negotiation)	NEC	
N4-000629	Liaison statement on the introduction of GEA2	N1	
N4-000630	Answer to the liaison statement on the modified lengths of parameters AUTN and AUTS	N1	Noted
N4-000631	Liaison Statement on MS Network Capability IE Conflict	N1	
N4-000632	LS back on Race conditions avoidance	N1	
N4-000633	CR 23.009-012r1 on Correction to transcoder handling for R99	N1	Noted
N4-000634	Allocated to Brahim	Alcatel	Withdrawn
N4-000635	CR29.002-169 on Inclusion of sending identity address to the Authentication Failure Report (R99)	Nokia	Withdrawn
N4-000636	R-29.002-170 on Inclusion of sending identity address to the Authentication Failure Report (R00)	Nokia	Withdrawn
N4-000637	CR-29.002-171 on Correction to the Encryption Information in ASN.1 (R99)	Nokia	Withdrawn
N4-000638	CR-29.002-172 on Correction to the Encryption Information in ASN.1 (R00)	Nokia	Withdrawn
N4-000639	CR-29.002-173 on Optionality of parameters in GPRS-CSI (R99)	Nokia	Revised to 0761
N4-000640	CR-29.002-174 on Optionality of parameters in GPRS-CSI (R00)	Nokia	Revised to 0762
N4-000641	CR-09.02 A310 on Correction to QoS indication (R98)	Nokia	
N4-000642	CR-29.002-175 on Correction to QoS indication (R99)	Nokia	
N4-000643	CR-29.002-176 on Correction to QoS indication (R00)	Nokia	
N4-000644	CR 29.002-166r1 on Corrections and clarifications for USSD procedures on the HLR - gsmSCF interface (R00)	Siemens	
N4-000645	R 29.002-167r1 on Corrections and clarifications for USSD procedures on the HLR - gsmSCF interface (R99)	Siemens	
N4-000646	CR 09.02-A308r1 on Corrections and clarifications for USSD procedures on the HLR - gsmSCF interface (R98)	Siemens	Withdrawn

N4-000647	CR 09.02-A309r1 on Corrections and clarifications for USSD procedures on the HLR - gsmSCF interface (R97).	Siemens	Withdrawn
N4-000648	CR 29.002-177 on Clarification of use of Radio Resource Information (R99)	Ericsson	Revised to 0746
N4-000649	CR 29.002-178 on Clarification of use of Radio Resource Information (R00)	Ericsson	Revised to 0747
N4-000650	CR 29.010-006 on Clarification of use of Radio Resource Information (R99)	Ericsson	Revised to 0745
N4-000651	Support Of SDU's by the RNC & ACS/SCS negotiation	Ericsson	
N4-000652	Revised version of TS 23.205	Ericsson	
N4-000653	DoCoMo's view on the issue of User Plane protocol termination	NTT DoCoMo	
N4-000654	Draft Work Item Description 'Optimisation of Signalling: Combined MAP Signalling for Mobility Management	NTT Docomo/NTT Comware	Revised to 0767
N4-000655	Draft report on the Combined MAP Signalling for feasibility study	NTT Docomo/NTT Comware	Noted
N4-000656	CR 29.060-141 on Categorize Error indication as the GTP-U message	NEC	Revised to 721
N4-000657	CN Scenarios For TrFO	Ericsson	
N4-000658	CR 29.010-007 on Corrections and updates to align with current R99 specs	Nortel Networks	**Revised to 0765**
N4-000659	CR 09.02-A311 on Addition of Unknown Subscriber USSD operations handled at the HLR' (R97)	Nortel Networks	Postponed
N4-000660	CR 29.002-179 (R99) on Correction to MSC-A handover SDLs	Nortel Networks	Revised
N4-000661	CR 29.002-180 (R00) on Correction to MSC-A handover SDLs	Nortel Networks	
N4-000662	CR 10.02-A004 on the handling of application layer errors in MAP	Vodafone	Revised to 0775
N4-000663	CR 30.002-001 on the handling of application layer errors in MAP	Vodafone	Withdrawn
N4-000664	CR 23.018-055r2 on Inclusion of call hold in basic call handling	Vodafone	Revised to 0710
N4-000665	CR 29.002-162r1 on Correction on Location Information (R99)	Vodafone	**Agreed**
N4-000666	CR 29.002-163r1 on Correction on Location Information (R00)	Vodafone	**Agreed**
N4-000667	Discussion paper on race conditions	Lucent	Withdrawn
N4-000668	R00 Project Plan	Siemens	
N4-000669	CR 29.060-143 on Correction on Reliable transmission of signalling messages	Lucent	Revised to 0702
N4-000670	CR 29.002-154r2 on Clarification on Authentication Failure Report ack	Ericsson	
N4-000671	CR 29.002-161r1 on Clarification on Authentication Failure Report ack	Ericsson	
N4-000672	Solution for race condition of GTP procedures	Fujitsu	Revised to 723
N4-000673	CR 29.060-122r1 on Solution for race condition of GTP procedures	Fujitsu	
N4-000674	CR 03.08-A035 on Corrections of the description of BC allocation for VLR (Ph2)	NTC	Rejected
N4-000675	CR 03.08-A036 on Corrections of the description of BC allocation for VLR (R96)	NTC	Rejected
N4-000676	CR 03.08-A037 on Corrections of the description of BC allocation for VLR (R97)	NTC	Rejected
N4-000677	CR 03.08-A038 on Corrections of the description of BC allocation for VLR (R98)	NTC	Rejected
N4-000678	CR 23.008-031 on Corrections of the description of BC allocation for VLR (R99)	NTC	**Agreed**
N4-000679	CR 29.060-144 on Insufficient modification	NTT Software	**Agreed**

N4-000680	CR 29.002-xxx on Alignment of geographic shape description with ITU and ANSI	Siemens	
N4-000681	3GPP working principles	N4 Chairman	Noted
N4-000682	3GPP work planning for IM subsystem	N4 Chairman	
N4-000683	CN and IP MM protocols	N4 Chairman	
N4-000684	Framework for planned content of next release	N4 Chairman	
N4-000685	Draft principles of 3GPP work planning	N4 Chairman	
N4-000686	TFO/TrFO workshop agenda	N4 Chairman	
N4-000687	Proposed Terms of Reference for N4	N4 Chairman	
N4-000688	Reply to LS from SA4 (000327R) on codec types for different access technologies	N1	
N4-000689	Revised Proposed ToR for N4	N4 Chairman	Approved: **send to CN**
N4-000690	CN and IP MM Protocols (Revision of 683)	N4 Chairman	Approved: **send to CN**
N4-000691	Revision of 547	N4 Chairman	
N4-000692	Bearer Independent Circuit Switched (rev. of 0548)	Ericsson	**WI approved: Send to CN**
N4-000693	CR 23.018-061r1 on Updated CAMEL references	Vodafone (endorsed by N2)	Revised to 0722
N4-000694	CR 29.060-126r2 on Sequence number in signalling messages (Rev. of 0583)	Nortel/Ericsson	**Agreed**
N4-000695	CR 09.60-xxx on Addition of MS Not Reachable Reason to Send Routing Information For GPRS Response (R97)	Siemens	**Agreed**
N4-000696	CR 09.60-xxx on Addition of MS Not Reachable Reason to Send Routing Information For GPRS Response (R98)	Siemens	**Agreed**
N4-000697	LS on CAMEL control of Optimal Routeing	N2	Noted
N4-000698	CR 29.060-136r1 on Compatibility GTPv0/GTPv1 in case of SGSN change (R99) (Revision of 0591)	Siemens	Withdrawn
N4-000699	CR 29.060-139r1 on Clarifications on the use of TEID in the Control Plane (Revision of 0605)	Fujitsu	**Agreed**
N4-000700	Comments to Draft Report N4-000553 on TrFO/TFO workshop	Alcatel	
N4-000701	Response to LS from N1	Lucent	**Approved**
N4-000702	CR 29.060-143r1 on Correction on Reliable transmission of signalling messages (Revision of 669)	Lucent	Revised to 0724
N4-000703	REPLY TO LIAISON STATEMENT ON SYNCHRONISATION ISSUES DURING CODEC TYPE CHANGE (R3-002013)	R3	
N4-000704	RESPONSE TO LS ON RAB ASSIGNMENT FOR TRFO	R3	
N4-000705	Revision of the TrFO/TFO agenda	N4 Chairman	
N4-000706	Helsinki TrFO/TFO workshop Revised Meeting Report (Revision of Tdoc 553)	MCC	Agreed: **send to CN**
N4-000707	LS to R3 on Sending of NSI without modification to RAB	Ericsson	Revised to 0739
N4-000708	LS on Support of SDU's for TrFO	Ericsson, BT, NEC	

N4-000709	Interworking with AAL2/ATM networks	N3	
N4-000710	CR 23.018-055r3 on Inclusion of call hold in basic call handling (Rev of 0664)	Vodafone	Revised to 0754
N4-000711	Agreement reached during the evening session	N4 Chairman	Revised to 0720
N4-000712	CR 23.135-002r3 on Requirement on Network to Tear Down Calls to Accept EC in Multicall (Rev of 621)	Ericsson	Revised to 0737
N4-000713	LS to S2 on SRNS relocation based on global title	Ericsson	Revised to 0741
N4-000714	CR 29.002-181 on Alignment of Geographic Shape Description with ITU-T and ANSI	Siemens	Withdrawn (duplication)
N4-000715	CR 29.060-105r1 on Race Conditions Avoidance	Lucent Technologies	**Agreed**
N4-000716	CR 29.060-145 on Correction to the SGSN Context transfer Request and response messages	Lucent Technologies	Revised to 0729
N4-000717	CR 29.060-146 on Correction to the SGSN Forward relocation Request and Response messages	Lucent Technologies	Revised to 0730
N4-000718	CR 29.060-147 on Clarification on the handling of response messages	Lucent Technologies	**Agreed**
N4-000719	CR 29.060-148 on Clarification on SGSN context acknowledge message	Lucent Technologies	**Agreed**
N4-000720	TrFO Workshop Results (Revision of 711)	N4 Chairman	Approved, **send to CN, SA, RAN**
N4-000721	CR 29.060-141r1 on Categorize Error indication as the GTP-U message (Rev. of 656)	NEC	Revised to 0733
N4-000722	CR 23.018-061r2 on Updated CAMEL references (Revision of 693)	Vodafone	**Agreed**
N4-000723	Solution for race condition of GTP procedures (Revision of 672)	Fujitsu	Noted
N4-000724	CR 29.060-143r2 on Correction on Reliable transmission of signalling messages (Revision of 702)	Lucent Technologies	**Agreed**
N4-000725	LS to R3 on Error Indication Message to U-plane	NEC	Withdrawn
N4-000726	CR 03.18-A062 on Correction of Obtain_Routeing_Address for the reconnect case (R97)	Vodafone	Revised to 0768
N4-000727	CR 03.18-A063 on Correction of Obtain_Routeing_Address for the reconnect case (R98)	Vodafone	Revised to 0769
N4-000728	CR 23.018-063 on Correction of Obtain_Routeing_Address for the reconnect case (R99)	Vodafone	Revised to 0770
N4-000729	CR 29.060-145r1 on Correction to the SGSN Context transfer Request and response messages (Revision of 0716)	Lucent	**Agreed**
N4-000730	CR 29.060-146r1 on Correction to the SGSN Forward relocation Request and Response messages	Lucent	Revised to 0753
N4-000731	Response LS to "LS back on Race conditions avoidance"	Lucent Technologies	**Approved**
N4-000732	CR 29.060-122r2 on Solution for race condition of GTP procedures (Rev. of 0673)	Fujitsu	Revised to 0780
N4-000733	CR 29.060-141r2 on Categorize Error indication as the GTP-U message (Rev. of 0721)	NEC	**Agreed**
N4-000734	CR 03.16-A042 on Correction to Delete Subscriber Data (R97)	Siemens	**Agreed**

N4-000735	CR 03.16-A041 on Correction to Delete Subscriber Data (R98)	Siemens	**Agreed**
N4-000736	CR 29.002-182 on Removal of LSAIdentity from NoteMM-EventArg (R00)	Siemens	**Agreed**
N4-000737	CR 23.135-002r4 on Requirement on Network to Tear Down Calls to Accept EC in Multicall (Revision of 0712)	Ericsson	**Agreed**
N4-000738	ITU-T contribution on OID	Ericsson	Noted by N4
N4-000739	LS to R3 on Sending of NSI without modification to RAB (Rev. of 0707)	Ericsson	**Approved**
N4-000740	LS on Support of SDU's for TrFO (Revision of 0708)	Ericsson	**Approved**
N4-000741	LS to S2 on SRNS relocation based on global title (Revision of 0713)	Ericsson	**Approved**
N4-000742	Liaison statement on Positive Authentication Reporting LS to S3, CN.	Ericsson, Nokia	Revised to 0789
N4-000743	CR 29.002-154r3 on Clarification on Authentication Failure Report ack (R99) (Rev. of 0670)	Ericsson	**Agreed**
N4-000744	CR 29.002-161r2 on Clarification on Authentication Failure Report ack (R00) (Rev. of 0671)	Ericsson	**Agreed**
N4-000745	CR 29.010-006r1 on Clarification of use of Radio Resource Information (R99) (Rev. of 0650)	Ericsson	**Agreed conditionally**
N4-000746	CR 29.002-177r1 on Clarification of use of Radio Resource Information (R99) (Rev. of 0648)	Ericsson	**Agreed conditionally**
N4-000747	CR 29.002-178r1 on Clarification of use of Radio Resource Information (R00) (Rev. of 0649)	Ericsson	**Agreed conditionally**
N4-000748	CR 29.002-179r1 (R99) on Correction to MSC-A handover SDLs	Nortel Networks	**Agreed**
N4-000749	CR 29.002-xxx on Correction to MSC-A handover SDLs (R99)	Nortel Networks	**Agreed conditionally**
N4-000750	CR 29.002-180r1 (R00) on Correction to MSC-A handover SDLs	Nortel Networks	**Agreed**
N4-000751	CR 29.002-xxx on Correction to MSC-A handover SDLs	Nortel Networks	**Agreed conditionally**
N4-000752	Response to LS on RAB Assignment QoS Negotiation	Nortel Networks	**Approved**
N4-000753	CR 29.060-146r2 on Correction to the SGSN Forward relocation Request and Response messages (Rev. of 0730)	Lucent	**Agreed**
N4-000754	CR 23.018-055r4 on Inclusion of call hold in basic call handling (Revision of 0710)	Vodafone	**Agreed**
N4-000755	CR 23.135-003r1 on Inclusion of call hold in basic call handling (Rev. of 0572)	Vodafone	**Agreed**
N4-000756	CR 23.135-004 on Correction to MT_Multicall SDL	NTT Comware	**Agreed**
N4-000757	CR 09.02-xxx on Clarification of Parameters use in the ASN.1 descriptions of unstructured SS MAP operations (R97)	Ericsson	Postponed
N4-000758	CR 09.02-xxx on Clarification of Parameters use in the ASN.1 descriptions of unstructured SS MAP operations (R98)	Ericsson	Withdrawn
N4-000759	CR 29.002-xxx on Clarification of Parameters use in the ASN.1 descriptions of unstructured SS MAP operations (R99)	Ericsson	Withdrawn
N4-000760	CR 29.002-xxx on Clarification of Parameters use in the ASN.1 descriptions of unstructured SS MAP operations (R00)	Ericsson	Withdrawn
N4-000761	CR-29.002-173r1 on Optionality of parameters in GPRS-CSI (R99) (Rev. of 0639)	Nokia	Revised to 0776

N4-000762	CR-29.002-174r1 on Optionality of parameters in GPRS-CSI (R00) (Rev. of 0640)	Nokia	Revised to 0777
N4-000763	CR 29.002-xxx on Clarification for segmentation of D-CSI and SMS-CSI (R99)	Nokia	Revised to 0778
N4-000764	CR 29.002-xxx on Clarification for segmentation of D-CSI and SMS-CSI (R00)	Nokia	Revised to 0779
N4-000765	CR 29.010-007r1 on Corrections and updates to align with current R99 specs (Revision of 0658)	Nortel Networks	**Agreed Conditionally**
N4-000766	Personal evaluations of the Combined MAP operations for MM	Ericsson	Noted
N4-000767	Draft Work Item Description 'Optimisation of Signalling: Combined MAP Signalling for Mobility Management' (Revision of 0654)	NTT Comware	**Approved WI: send to CN**
N4-000768	CR 03.18-A062r1 on Correction of Obtain_Routeing_Address for the reconnect case (R97) (Revision of 726)	Vodafone	**Agreed**
N4-000769	CR 03.18-A063r1 on Correction of Obtain_Routeing_Address for the reconnect case (R98) (Revision of 727)	Vodafone	**Agreed**
N4-000770	CR 23.018-063r1 on Correction of Obtain_Routeing_Address for the reconnect case (R99) (Revision of 728)	Vodafone	**Agreed**
N4-000771	CR 29.002-xxx on LCS support for CAMEL Phase 3 (R99)	Siemens	**Agreed**
N4-000772	Mirror CR of 0772 for R00	Siemens	**Agreed**
N4-000773	CR 09.60-A095r1 on Coding of TI in PDP Context IE (R98) (Revision of 0594)	Siemens	**Agreed**
N4-000774	CR 29.060-138r1 on Coding of TI in PDP Context (R99) (Revision of 0593)	Siemens	**Agreed**
N4-000775	CR 10.02-A004r1 on the handling of application layer errors in MAP (Rev. of 0662)	Vodafone	**Agreed**
N4-000776	CR-29.002-173r2 on Optionality of parameters in GPRS-CSI (R99) (Rev. of 0761)	Nokia	**Agreed conditionally**
N4-000777	CR-29.002-174r2 on Optionality of parameters in GPRS-CSI (R00) (Rev. of 0762)	Nokia	**Agreed conditionally**
N4-000778	CR 29.002-xxx on Clarification for segmentation of D-CSI and SMS-CSI (R99) (Revision of 0763)	Nokia	**Agreed conditionally**
N4-000779	CR 29.002-xxx on Clarification for segmentation of D-CSI and SMS-CSI (R00) (Revision of 0764)	Nokia	**Agreed conditionally**
N4-000780	CR 29.060-122r3 on Solution for race condition of GTP procedures (Revision of 0732)	Fujitsu	**Agreed conditionally**
N4-000781	Revised meeting schedule 2001 for N2 and N4	N4 and N2 Chairmen	Noted
N4-000782	Agreed Output documents	N4 Chairman	Noted
N4-000783	Revision of 585	Siemens	
N4-000784	Revision of 586	Siemens	
N4-000785	Revision of 680	Siemens	
N4-000786	Revision of 641(R98)	Nokia	**Agreed**
N4-000787	Revision of 642(R99)	Nokia	**Agreed**
N4-000788	Revision of 643(R00)	Nokia	**Agreed**
N4-000789	Revision of 0742		**Approved**
N4-000790	Revision of 0782		Approved

A N N E X   C   -   List of agreed CRs

N4-000564	CR 23.018-059 on Corrections to procedure obtain routeing address	Vodafone	Agreed
N4-000566	CR 04.80-A018, Addition of error type description for PositionMethodFailure	Nokia	Agreed
N4-000567	CR 24.080-006, Addition of error type description for PositionMethodFailure	Nokia	Agreed
N4-000568	CR 23.079-015 on Sheet 1 of Procedure OR_HLR_CF	Vodafone	Agreed
N4-000569	CR 23.018-060 on Corrections to process ICH_VLR	Vodafone	Agreed
N4-000571	CR 23.083-005r1 on Inclusion of call hold in basic call handling	Vodafone	Agreed
N4-000577	CR 23.018-057r3 on Handling of the Call Diversion Treatment Indicator	Vodafone	Agreed
N4-000578	CR 23.072-005 on Handling of the Call Diversion Treatment Indicator	Vodafone	Agreed
N4-000579	CR 23.093-004 on Handling of the Call Diversion Treatment Indicator	Vodafone	Agreed
N4-000581	CR 09.60-A094 on Removal of IHOSS from GTP (Release'98)	Ericsson	Agreed
N4-000582	CR 29.060-133 on Removal of IHOSS from GTP (Release'99)	Ericsson	Agreed
N4-000590	CR 29.060-135 on Addition of MS Not Reachable Reason to Send Routing Information For GPRS Response (R99)	Siemens	Agreed
N4-000595	CR 29.060-131r1 on Security parameter transport in case of 2G <-> 3G interworking (R99)	Siemens	Agreed
N4-000596	CR 23.016-016 on Correction to Delete Subscriber Data (R99)	Siemens	Agreed
N4-000597	CR 29.002-165 on Removal of LSAIdentity from NoteMM-EventArg (R99)	Siemens	Agreed
N4-000606	CR 29.060-140 on Correction on the handling of the PDP Context at unsuccessful PDP Context modification	Fujitsu	Agreed
N4-000611	CR 23.094-002 on Correction of the wrong Service Code	Siemens	Agreed
N4-000616	CR 29.060-142 on Clarifications on the presence condition of TLLI/P-TMSI in SGSN Context request	Fujitsu	Agreed
N4-000625	CR 23.003-023r1 on Alignment of 23.003 with text from 25.401	Ericsson	Agreed
N4-000665	CR 29.002-162r1 on Correction on Location Information (R99)	Vodafone	Agreed
N4-000666	CR 29.002-163r1 on Correction on Location Information (R00)	Vodafone	Agreed
N4-000678	CR 23.008-031 on Corrections of the description of BC allocation for VLR (R99)	NTC	Agreed
N4-000679	CR 29.060-144 on Alignment of the description of tables for Identification Request and SGSN Context Request	NTT Software	Agreed
N4-000694	CR 29.060-126r2 on Sequence number in signalling messages (Rev. of 0583)	Nortel/Ericsson	Agreed
N4-000695	CR 09.60-A096 on Addition of MS Not Reachable Reason to Send Routing Information For GPRS Response (R97)	Siemens	Agreed
N4-000696	CR 09.60-A097 on on Addition of MS Not Reachable Reason to Send Routing Information For GPRS Response (R98)	Siemens	Agreed
N4-000699	CR 29.060-139 on Clarifications on the use of TEID in the Control Plane	Fujitsu	Agreed
N4-000715	CR 29.060-105r1 on Race Conditions Avoidance	Lucent	Agreed

		Technologies	
N4-000718	CR 29.060-147 on Clarification on the handling of response messages	Lucent Technologies	Agreed
N4-000719	CR 29.060-148 on Clarification on SGSN context acknowledge message	Lucent Technologies	Agreed
N4-000722	CR 23.018-061r2 on Updated CAMEL references	Vodafone	Agreed
N4-000724	CR 29.060-143r2 on Correction on Reliable transmission of signalling messages (Revision of 702)	Lucent Technologies	Agreed
N4-000729	CR 29.060-145r1 on Correction to the SGSN Context transfer Request and response messages (Revision of 0716)	Lucent	Agreed
N4-000733	CR 29.060-141r2 on Categorize Error indication as the GTP-U message	NEC	Agreed
N4-000734	CR 03.16-A042 on Correction to Delete Subscriber Data (R97)	Siemens	Agreed
N4-000735	CR 03.16-A041 on Correction to Delete Subscriber Data (R98)	Siemens	**Agreed**
N4-000736	CR 29.002-182 on Removal of LSAIdentity from NoteMM-EventArg (R00)	Siemens	Agreed
N4-000737	CR 23.135-002r4 on Requirement on Network to Tear Down Calls to Accept EC in Multicall	Ericsson	Agreed
N4-000743	CR 29.002-154r3 on Clarification on Authentication Failure Report ack (R99)	Ericsson	Agreed
N4-000744	CR 29.002-161r2 on Clarification on Authentication Failure Report ack (R00)	Ericsson	Agreed
N4-000748	CR 29.002-179r1 on Correction to MSC-A handover SDLs (R99)	Nortel Networks	Agreed
N4-000750	CR 29.002-180r1 on Correction to MSC-A handover SDLs (R00)	Nortel Networks	Agreed
N4-000753	CR 29.060-146r2 on Correction to the SGSN Forward relocation Request and Response messages	Lucent	Agreed
N4-000754	CR 23.018-055r4 on Inclusion of Call Hold in Basic Call Handling	Vodafone	Agreed
N4-000755	CR 23.135-003r1 on Inclusion of call hold in basic call handling	Vodafone	Agreed
N4-000756	CR 23.135-004 on Correction to MT_Multicall SDL	NTT Comware	Agreed
N4-000768	CR 03.18-A062r1 on Correction of Obtain_Routeing_Address for the reconnect case (R97)	Vodafone	Agreed
N4-000769	CR 03.18-A063r1 on Correction of Obtain_Routeing_Address for the reconnect case (R98)	Vodafone	Agreed
N4-000770	CR 23.018-063r1 on Correction of Obtain_Routeing_Address for the reconnect case (R99)	Vodafone	Agreed
N4-000771	CR 29.002-183 on LCS support for CAMEL Phase 3 (R99)	Siemens	Agreed
N4-000772	CR 29.002-184 on LCS support for CAMEL Phase 3 (R00)	Siemens	Agreed
N4-000773	CR 09.60-A095r1 on Coding of TI in PDP Context IE	Siemens	Agreed
N4-000774	CR 29.060-138r1 on Coding of TI in PDP Context IE	Siemens	Agreed
N4-000775	CR 10.02-A004r1 on The handling of application layer errors in MAP	Vodafone	Agreed
N4-000786	CR 09.02-A310r1 on Correction to QoS indication (R98)	Nokia	Agreed
N4-000787	CR 29.002-175r1 on Correction to QoS indication (R99)	Nokia	Agreed
N4-000788	CR 29.002-176r1 on Correction to QoS indication(R00)	Nokia	Agreed
N4-000587	CR 29.060-132r1 on encoding of IMSI (R99)	Siemens	Agreed
N4-000588	CR 09.60-A91r1 on encoding of IMSI (R98)	Siemens	Agreed
N4-000589	CR 09.60-A92r1 on encoding of IMSI (R97)	Siemens	Agreed
N4-000617	CR 09.60-A089r2 (R97) on MM Context information coding clarification	Nokia	Agreed

N4-000618	CR 09.60-A090r2 (R98) on MM Context information coding clarification	Nokia	Agreed
N4-000745	CR 29.010-006r1 on Clarification of use of Radio Resource Information (R99)	Ericsson	Agreed
N4-000746	CR 29.002-177r1 on Clarification of use of Radio Resource Information (R99)	Ericsson	Agreed
N4-000747	CR 29.002-178r1 on Clarification of use of Radio Resource Information (R00)	Ericsson	Agreed
N4-000749	CR 29.002-185 on Correction to MSC-A handover SDLs	Nortel Networks	Agreed
N4-000751	CR 29.002-186 on Correction to MSC-A handover SDLs	Nortel Networks	Agreed
N4-000765	CR 29.010-007r1 on Corrections and updates to align with current R99 specs	Nortel Networks	Agreed
N4-000776	CR 29.002-173r2 on Optionality of parameters in GPRS-CSI	Nokia	Agreed
N4-000777	CR-29.002-174r1 on Optionality of parameters in GPRS-CSI (R00)	Nokia	Agreed
N4-000778	CR 29.002-187 on Clarification for segmentation of D-CSI and SMS-CSI	Nokia	Agreed
N4-000779	CR 29.002-188 on Clarification for segmentation of D-CSI and SMS-CSI	Nokia	Agreed
N4-000780	CR 29.060-122r3 on Solution for race condition of GTP procedures	Fujitsu	Agreed

A N N E X D - TFO/TrFO meeting report

3GPP TrFO&TFO Harmonisation Workshop#3   **Tdoc N4 – 000705**
Seattle, Washington, USA   **(N4 – 000686)**
29-30 of August 2000

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

Title: **Draft Meeting Report**

Agenda item:

Document for: APPROVAL

Opening of the meeting and approval of the agenda

The TrFO Workshop was opened by the TrFO Workshop Convenor, Mr. Yun-Chao HU, LM Ericsson AB, with MCC Secretariat support Mr. Franco SETTIMO. After an informal poll it was noted that the majority of the workshop participants were from N4 (obviously due of the colocation with N4). The workshop was further attended by representatives of WGs S2, S4, N1 and R3. A concern has been raised to the limited participation of R3, since a number of issues that are currently under discussion requires close involvement of R3 experts.

The Agenda was revised to Tdoc 0705, after some rearrangement of the agenda issues and Tdoc allocation.
Allocation of documents to agenda items

See previous point of the report
Meeting Reports – 0563, 0700

Tdoc 0700

With reference to workshop#2, Alcatel recogniseded the basic correctness of the meeting report although it was found too synthetic in some parts, where significant debates took place during the meeting and formulated a written proposal to enhance it. Into more specific details:

1. *Text on Tdoc 0519* agreed to be included in the previous meeting report.
2. *Text related to 0476*: agreed to be included.
3. *Text related to 454*: agreed to be included.
4. *Text related to 493*: NTT should be NTT DoCoMo. Ericsson expressed concern on the sentence "Mainly an S2 document", however Alcatel precised that it had remained on the exploder not for a very long time. The new sentence will be "Mainly an S2 document provided by Alcatel".

Action Point (disclosed) MCC: to revise Tdoc 553 including the above changes and circulate it on the TrFO/TFO exploder. For better clarity, it was agreed to allocate a new Tdoc number: **N4-000706**.

Input liaison statements: allocation to agenda items as appropriate – 0688, 0703, 0704

Tdoc 0688

Ericsson presented the reply to LS from SA4 (000327R) on codec types for different access technologies. Recognised to be basically the formulation of a question for S4, so the TrFO Workshop Convenor proposed to note the LS from the N4 point of view.

Tdoc 0703

REPLY TO LIAISON STATEMENT ON SYNCHRONISATION ISSUES DURING CODEC TYPE CHANGE (R3-002013) was presented by NEC, although it is an official LS coming from WG R3, not processed via the normal way because of technical difficulties (access to the 3GPP server) encountered. Further clarification given by the WG R3 representative indicated that the original question from the TrFO/TFO workshop in Helsinki had not been formulated with enough clarity. It was also found prudent to wait for the reply from S4, since direct questions were posed to this group as well.
Eventually it was agreed to give a response, providing further clarifications on the issues mentioned in the document. Ericsson volunteered to draft an LS in response (Tdoc 707).

Tdoc 704

RESPONSE TO LS ON RAB ASSIGNMENT FOR TrFO, discussed in R3. Ericsson clarified that fallback mechanisms can be provided in the CN if the CN knows in advance that TrFO is not supported.
It was found appropriate to draft a response LS on synchronisation: NEC, BT, and Ericsson will sit down together to elaborate a joint response (Tdoc 0708).

Technical Issues – 0623 (stage 2)

Tdoc 0623

The changes proposed to 3G TS 23.153 "Out of Band Transcoder Control - Stage 2" (version 2.0.1 is the new proposed one) were presented by Ericsson.
Some questions (e.g. RANAP signalling handled by the MSC server) were parked on request of the Convenor, and the discussion of the document was consequently postponed to include the agreements made on the other conributions submitted to this meeting. Unfortunately, this discussion could not take place due to timing constraints of the workshop. The Convenor requested the source of the contribution to resubmit at the next workshop.

RAN Capabilities
Handover
SDUs Support and ACS/SCS Negotiation - 0651

Tdoc 0651

A document on Support of SDUs by RNC and ACS/SCS negotiation was presented by Ericsson, who proposed to follow 4 rules, duly listed in the document, to enable TrFO. Ericsson clarified that the principle of the figure and the discussions so far is to illustrate the architecture of Codec negotiations, not to restrict the choice to the BICC protocol. According to NEC, the 4 bullet points include restrictions to the radio interface, potentially preventing (according to Lucent Technologies) from the benefits that AMR is capable of providing.
No clear agreement on the proposed rules could be reached. However during the discussion it became clear that the following was agreed by the workshop:

- **The RFCI set per codec type shall be symmetrical in both directions. The behaviour of an RNC for receiving RFCIs at Iu UP initialisation from the Core Network shall be changed to be applied for both uplink and downlink. In R99 only the uplink RFCIs are changed, for R00 the downlink RFCIs need to be changed as well.**
- **WG R3 shall provide the necessary specifications or CRs. Standardisation of RFCI indexes would simplify the TrFO, but it is the workshop's understanding that this is sensitive within R3**

CN Capabilities
Workplan
CN Scenarios – 0604, 0657

Tdoc 0604

Presented by Siemens and supported by NEC. Ericsson appreciated the document and remarked that the saving of bandwidth consequent to the selection of Iu UP protocols in the Core Network, could be even better highlighted. The document consequently proposes to use the Iu UP protocol throughout the Core Network, avoiding unnecessary conversions to other protocols.

Tdoc 0657

The body of the contribution had been already seen in Helsinki but the conclusions presented here are significantly different. The document proposes to use a homogeneous solution for the framing protocol, independently of the traffic case.
After some discussion an agreement was eventually reached. A single framing protocol, namely Iu UP, is to be used within a single PLMN for speech (on AAL2/ATM, IP): this means no framing negotiations are required.

Tdoc 0709

Presented by an N3 delegate. *Interworking functions at the edge*, as for the transcoder, was proposed as an issue to be studied by N4. If positive, N3 sees no problem in a single framing protocol.
Recommendations:

- to locate IWF at the edge of the network. A Work Item will be provided by N3, based on contributions from N4
- PLMN-BC IE needs to be available at the edge MGW.

These achievements (Tdoc 0657, 0709) result in the followign agreements:

- The usage of the Iu UP Protocol as a framing protocol within the circuit-switched AAL2/ATM and IP core network for compressed speech and CS data services based on considerations of required protocol terminations and protocol conversions

- The location of the CS data services IWF at the edge of the network (i.e. IWF on the Edge). However, the workshop also realised that the PLMN-BC IE needs to be available at the edge MGW to trigger the activation of the IWF.

- N3 will provide a WI to initiate this work. It was also realised that N4 will be involved into this work to transfer the PLMN-BC towards the border MGW.

Iu UP Protocol – 0653, 0603, 0622, 0627

Tdoc 0653

Presented by NTT DoCoMo, with the objective of allowing operators to have network options (in this case, Iu UP termination) suitable for each individual network configuration, in the perspective of cost optimisation. It was observed that fulfilment of this requirement might prevent from inclusion of TrFO in Release 4 (new name for Release 2000). Ericsson noted that Iu UP termination is not clear defined in the document.
The document was noted.

Tdoc 0603

Presented by Siemens. The addition of the impacts on RANAP or Iu UP of the proposed solutions seems to be worthwhile, according to Ericsson.

Tdoc 0622

Presented by Ericsson.

Tdoc 0627

Presented by NEC who expressed favour for a solution which does not terminate Iu UP protocol in the CN network for mobile-to-mobile calls.

Discussion of the following Tdocs 0603, 0622, 0627:

It was agreed that the contributing companies would sit together, formulating the decision points to be discussed at meeting restart the morning after (Moon session).

Alternatives

1. Monitoring always and in all MGW
2. Monitoring only when RFCI can be changed in all MGW. RFCIs are stored in the MGW
3. RFCIs are read from associated RNCs when is needed.

Alternative 1:

    Pro:

- Fast response
- No impacts to Iu UP, Mc i/f, BICC standards

    Cons

- Additional HW required for every node per call

Alternative 2:

    Pro:

- No monitoring HW required during stable call phase (not during call setup, relocation, ….)

    Cons

- Every MGW needs to support the "listen" function
- One additional RANAP IE required

Alternative 3:

    Pro:

- HW efficiency
- No Monitoring HW required

    Cons

- Retrieve of RFCI information required, introducing "round trip" delay, to be introduced by every MGW
- Prevention of changing of RFCI during relocation
- Iu UP standardization impacts (new operations)
- Complicated interacting signalling procedures

One alternative to be selected. This issue will be handled in the output session of the workshop (see section 8)

Handover – 0624, 0626

Tdoc 0624

Presented by Ericsson. Proposal: if inter-MSC handover/relocation is performed in R00 in the same way as for R99, then transcoders should always be inserted by the Non-Anchor side, as for R99. BT objected that the decision to be taken is based on a SA document, not promptly available. Ericsson volunteered to draft an LS (Tdoc N4-000713) to S2.

Tdoc 0626

Basic working model for relocation is described in the NEC document. Some parts have been already covered in the agreement reached during the first day. The document was eventually noted. NEC requested clarifications about the procedure to submit the request for OID to ITU-T: one company has to bring the contribution, and Ericsson volunteered, since 3GPP has no official liaison procedures with ITU-T.

TrFO Break -
No contributions adressed to this issue
Voting Issue

Considerable progress has been made during the workshop. A number of agreements can be reported to the TSG Plenaries. Therefore, no discussion took place on this issue during the workshop.

AOB

Output Documents

Tdoc 711

This document describes the first draft of the agreements made during the workshop based on the notes from Franco and Yun-Chao. An Ad Hoc session was established to complete the status report with the key persons (Mr. Toshiyuki TAMURA, NEC, Phil HODGES, LM Ericsson AB, Eva-Maria LANIG, Siemens AG). This document will be presented for comments of the workshop participants (Tdoc 720)

Tdoc 720

The document contains a detailed description of the agreements reached during the workshop.. The following comments were raised:

Sect. 1: no comment.
Sect. 2.1: Alcatel remarked that there is nothing agreed for IP and proposes *Framing of IP network is open*. A consistent change was then performed by the TrFO Wokshop Convenor. The term in brackets (e.g. modems) was found misleading. An explicity reference to Circuit Switched Core Network was introduced.
Sect. 2.2: it was better specified "*it would be beneficial to locate the IWF ...*". BT proposed to specify the benefit achieved (simplification of service modification without prenotification). Multimedia was added to speech/data/fax upon seggestion of NTT DoCoMo.
Sect. 2.3: Ericsson proposed to clarify the meaning of the first sentence, introducing the concept of local handover. RNS was corrected to SRNS. "*...and call set up*" was deleted from the first sentence. BT proposed to add a sentence indicating, qualitatively, that "*Changes to the Iu UP protocols are foreseen to indicate the valid RFCIs*". Ericsson, however, noted that changes were restricted to the behaviour of RNC for receiving of Iu UP re-initialisation. BT observed that for R00, also the downlink needs to be changed. Codec mode was corrected into codec type.
Sect. 3: title was changed to *Agreed Alternatives for obtaining RFCI Infomation at TrFO breaks.* A preface was included.

Sect. 3.1: in the Benefits "obtaining" was replaced with the broader concept of availability of information within MGW. The estimated standardisation work was better clarified. No impact on speech delay was better detailed in the section dedicated to disadvantages.
Sect. 4: the necessity of an intervention from the plenary was highlighted.

Tdoc 0707

LS to R3 on Sending of NSI without modification to RAB. Objective: to inform R3 that our requirement is still there. Revised to 0739.

Tdoc 0739

Approved.

Tdoc 0708

LS to R3 on Support of SDUs for TrFO. Objective: to provide further clarificaiton to R3 and to request an answer to the question that was raised in a previous LS. Revised to 0740.

Tdoc 0740

Agreed.

Tdoc 0713

LS to S2 on SRNS relocation based on global title. Objective: the Ericsson contribution makes references to a S2 document from which the stutus is unclear. Therefore status infortmation was requested. Revised to 0741.

Tdoc 0741.

Approved.

Closing of the meeting

The Convenor thanked all participants in the workshop for their supportive contributions and for their availability to work until unsociable hours, a practise that allowed reaching significant achievements.

The Convenor stated that a status report will be given to the TSG CN, RAN and SA Plenaries based on the agreed document 0720.

The Convenor stated that no voting is required within TSG SA since the workshop has all confidence that an appropriate decision on the alternatives can be reached at the TSG Plenaries.

The workshop stated that a joint session with R3 is desirable, leaving us with the request to have a meeting within the week 42 (16-20 October, UK). The Workshop Convenor was requested to investigate the joint session opportunity with the R3 Chairman. To enable sufficient time for stage 2 activities the workshop requested a period of 3 days for the next workshop.