

DRAFT Meeting Report, version 1.01.0

**TSG CN WG2#25
Helsinki, Finland**

29 July – 2 August, 2002

Chairman: Keijo Palviainen (Nokia)

MCC support: Andrijana Jurisic(ETSI)

Hosts: [Elisa](#), [Ficora](#) , [the Finnet Group](#), [Nokia](#), [Sonera of Finland](#)

List of participants:	Annex A
Output documents	Annex B
Tdoc list (incl. the status)	Annex C

Documents could be found on the 3GPP-server:

ftp://ftp.3gpp.org/TSG_CN/WG2_camel/Plenary/TSGN2_25_Helsinki/Docs

1 Opening of the meeting and approval of the agenda

N2-020629 : CN2 chairman, Title: Proposed meeting agenda

Discussion :

Conclusion: approved

N2-020658 : Alcatel, Type: Discussion document, Title: Handling of CRs proposing ASN.1 changes

Discussion: It is proposed to do syntax checking of complete ASN.1 module during the meeting, with implemented CRs that are agreed and got “provisional” approval from CN2 and if the syntax error is found, CR will be revised during the meeting and corrected CRs will be CN2 approved.

T-Mobil proposal is to send all CRs containing ASN.1 to e-mail approval.

Conclusion is that we will keep current practice to approve documents in the meeting only and possible syntax errors reported by syntax check should cause CRs in the next CN2 meeting.

Conclusion: noted

2 Allocation of documents to agenda items

N2-020630: CN2 chairman, Title: Allocation of documents to agenda items

Discussion:

Conclusion: approved

3 Reports

N2-020703: MCC, Title: Draft Meeting Report from CN2#25

Discussion :

Conclusion: approved

N2-020704: MCC, Title: Draft Meeting Report from CN#16

Discussion :

Conclusion: noted

4 Input Liaison Statements

N2-020653: Source: SA3, Type: LS IN , Title: Reply LS on Immediate Service Termination

Discussion :

Conclusion: noted

N2-020654: Source: TC SPAN, Type: LS IN , Title: LS on Network Integration Testing

Discussion: Unfortunately CN2#25 did not have enough time to study the attached test specifications in detail. CN2 is willing to give feedback to TC SPAN regarding to CAMEL. However, CN2 does not expect to endorse TC SPAN specifications formally. For the next CN2 meeting, companies are encouraged to bring in comments on the CAMEL part. The input for CN2 should concentrate on checking if TC SPAN specifications are in line with CAMEL specifications. Outgoing LS to TC SPAN will be sent in N2-020732.

Conclusion: noted

N2-020732: Source: CN2 chairman, Type: LS OUT , Title: Reply to “LS on Network Integration Testing”

Discussion : CN2 asks TC SPAN to provide a brief introduction of TC SPAN testing activity. TC SPAN is kindly asked to wait until end of CN2#26 meeting for CN2 comments on attached test specifications.

Conclusion: revised to N2-020796

N2-020796: Source: CN2 chairman, Type: LS OUT , Title: Reply to “LS on Network Integration Testing”

Discussion :

Conclusion: approved

5 Work item management & miscellaneous

Status of CN2 specifications and drafts

Type	Number	Title	Rel	current vers	WG	rapporteur
TS	03.78	CAMEL Phase 1; Stage 2	R1996	5.8.0	N2	LANTELME, Isabelle
TS	03.78	CAMEL Phase 2; Stage 2	R1997	6.11.1	N2	LANTELME, Isabelle
TS	03.78	CAMEL Phase 2; Stage 2	R1998	7.8.1	N2	LANTELME, Isabelle
TS	09.78	CAMEL Application Part phase 1 (stage 3)	R1996	5.7.0	N2	NOLDUS, Rogier
TS	09.78	CAMEL Application Part phase 2 (stage 3)	R1997	6.5.0	N2	NOLDUS, Rogier
TS	09.78	CAMEL Application Part phase 2 (stage 3)	R1998	7.1.0	N2	NOLDUS, Rogier
TR	21.978	Feasibility Technical Report – CAMEL Control of VoIP Services	R1999	3.0.0	N2	SMITH, David
TS	23.078	Customised Applications for Mobile network Enhanced Logic (CAMEL) Phase 3 - Stage 2	R1999	3.13.0	N2	HOMANN, Christian
TS	23.078	Customised Applications for Mobile network Enhanced Logic (CAMEL) Phase 3 - Stage 2	Rel-4	4.5.1	N2	HOMANN, Christian
TS	29.078	Customised Applications for Mobile network Enhanced Logic (CAMEL) Phase 3; CAMEL Application Part (CAP) specification	R1999	3.11.0	N2	NOLDUS, Rogier
TS	29.078	Customised Applications for Mobile network Enhanced Logic (CAMEL) Phase 3; CAMEL Application Part (CAP) specification	Rel-4	4.5.0	N2	NOLDUS, Rogier
Draft	23.078	Customised Applications for Mobile network Enhanced Logic (CAMEL) Phase 4 - Stage 2	Rel-5	5.0.0	N2	SUMIO, Myagava
Draft	29.078	Customised Applications for Mobile network Enhanced Logic (CAMEL) Phase; CAMEL Application Part (CAP) specification	Rel-5	5.0.0	N2	NOLDUS, Rogier

5.1 IPR call reminder

Reminder to Individuals Members and the persons making the technical proposals about their obligations under their respective Organizational Partners IPR Policy.

An IPR declaration was announced by the chairman. IPRs do not need to be declared at the WG meeting but should go to the respective organization.

5.2 Work Item (WI) status review

N2-020650: Source: Lucent Technologies, Type: WID, Title: Discussion of changes in revised WID for PRESNC

Discussion: No work from CN2 required currently and this will be noted in the main copy of the WID that will be sent to CN#17 plenary meeting. If there are requirements for CN2, they will come via SA1. This is a WI under CN4 responsibility.

Conclusion: *noted*

N2-020651: Source: Lucent Technologies, Type: WID, Title: Revised WID for PRESNC

Discussion: We use existing capabilities of CAMEL 4. The last sentence “It needs to be determined if changes are required in this area.” Will be replaced by “No changes required in 23.078” and this message will be conveyed to the originator of the document.

Conclusion: *noted and afterwards revised to N2-020791*

N2-020791: Source: Lucent Technologies, Type: WID, Title: Revised WID for PRESNC

Discussion:

Conclusion: *provided for information only*

N2-020652: Source: Lucent Technologies, Type: WID, Title: WID for Release 6 commonality and interoperability between IMSs

Discussion: No CN2 work required.

Conclusion: *noted*

N2-020705 : MCC, Type: Work plan, Title: Latest version of the Work plan

Discussion : Progress of the items will be adjusted according to the working assumption during the meeting.

Conclusion: *noted*

N2-020789 : CN2 Chairman, Type: Work plan, Title: Comments on the progress of the CAMEL4 work

Discussion : The name of the “CAMEL4 Functional Split into subsets” task has been changed to “Partial implementation of the CAMEL phase 4”. Completion rate depends on the e-mail approval. The work plan will be updated by MCC according the assumptions contained in this document.

Summary of the CAMEL4 work progress:

<u>Title</u>	<u>3GPP release</u>	<u>Notes of progress</u>
<u>CAP over IP</u>	<u>REL-4</u>	<u>CN2 work is completed.</u>
<u>CAMEL4 / Stage 1</u>	<u>REL-5</u>	<u>Not a CN2 issue.</u>
<u>CAMEL4 / Interactions with Optimal Routing</u>	<u>REL-5</u>	<u>Complete.</u>
<u>CAMEL4 / Call Party Handling</u>	<u>REL-5</u>	<u>Complete.</u>
<u>CAMEL4 / Mid call procedure for MO and MT calls</u>	<u>REL-5</u>	<u>Complete.</u>
<u>CAMEL4 / CAMEL for IMS</u>	<u>REL-5</u>	<u>Stage 2 (23.278) done, 23.278 generic 95%, Stage 2 Si interface 100%, Stage 3 29.278 90%.</u>
<u>CAMEL4 / CAMEL control over MT SMS</u>	<u>REL-5</u>	<u>Complete.</u>
<u>CAMEL4 / Inclusion of flexible tone injection</u>	<u>REL-5</u>	<u>Complete.</u>
<u>CAMEL4 / Charging notification to the CSE</u>	<u>REL-5</u>	<u>Has been removed from CAMEL4.</u>

Enhancements of dialled services	REL-5	Has been removed from CAMEL4.
Provision of location information of called subscriber (Alerting phase)	REL-5	Complete.
Notification of GPRS mobility management to CSE	REL-5	Complete.
Inclusion of ODB data in the CSE-HLR interface.	REL-5	Complete.
Location information during an ongoing call (Handover DP)	REL-5	Complete.
GPRS AnyTimeInterrogation	REL-5	Complete.
IMEISV to SCP	REL-5	Complete
Partial implementation of CAMEL4	REL-5	Complete

Conclusion: approved

5.3 Meeting calendar of year 2002

[See agenda item 10.](#)

5.4 Terms of reference

6 Maintenance of earlier CAMEL phases

6.1 CAMEL phase 1

6.2 CAMEL phase 2

N2-020706: TS 03.78, R97, Source: MCC, Type: discussion document, Title: SDL source files for TS 03.078 for R97

Discussion: The document contains SDL source files that are created according the current published TS 03.78 v6.11.0. TS 03.78 v 6.11.1 will be created after the meeting with the SDL source files attached. The last row of the Change History will mention editorial clean up of the sheet 7(8) in the procedure "CAMEL_MT_GMSC_INIT" (result FTN is replaced by GSM_FTN).

Conclusion: approved

N2-020707: TS 03.78, R98, Source: MCC, Type: discussion document, Title: SDL source files for TS 03.078 for R98

Discussion: The document contains SDL source files that are created according the current published TS 03.78 v7.8.0. TS 03.78 v 7.8.1 will be created after the meeting with the SDL source files attached. The last row of the Change History will mention editorial clean up of the sheet 7(8) in the procedure "CAMEL_MT_GMSC_INIT" (result FTN is replaced by GSM_FTN).

Conclusion: approved

7 CAMEL3, Resolution of outstanding issues for Release 99

7.1 CAMEL3, Miscellaneous

N2-020695: Source: Vodafone, Type: Discussion document, Title: CAMEL Phase 3: Questions raised at CAMEL IREG

Discussion: GSM-A IREG CAMEL group who are in the process of writing test cases for CAMEL Phase 3 asked CN2 to provide clarification on issues listed in this document. Vodafone will pass the information back to the GSM-A IREG CAMEL group.

Following issues were clarified:

1. Is it possible to send Apply Charging GPRS when there are no armed detection points (but processing is suspended at Waiting_For_Instructions)? Is the existence of a pending report sufficient to maintain a control relationship? There seem to be differing views on whether this will be a monitor or control relationship. How can we distinguish what is possible in a monitor as oppose to a control relationship?

CN2 response: Control relationship exists if there are EDP-Rs armed, or during TDP or ~~EDR-P~~EDP-R (i.e. state WaitingForInstructions). A monitoring relationship exists, if there is no controlling relationship, and if there are EDP notifications or pending reports. Reference 6.2.2. 23.078, v3.8.0. For GPRS control or for ApplyChargingGPRS a controlling relationship is required per BCSM (so there must be a control relationship for that instance of the state model).

Monitoring relationship exists when there are EDP-Ns pending or any report pending. For GPRS control or for Apply Charging GPRS, a control relationship is required per BCSM. If Apply Charging is sent for certain state model, then that state model has to have control relationship.

2. If there is a CAMEL3 GPRS monitor relationship, is Entity Released GPRS sent when the PDP Context is disconnected (as no DP will be reported for this)?

CN2 response: When the user or SGSN disconnects, then the EntityReleasedGPRS operation is sent if the PDPcontextDisconnection EDP is not armed (shown in SDLs). The SCP is not able to disconnect PDP context in a Monitoring relationship.

3. If there are no armed detection points but one pending report then when the Apply Charging Report GPRS is sent to the gsmSCF, can the gsmSCF respond with a subsequent Apply Charging GPRS?

CN2 response: No, gprs SSF may transit to state IDLE (depending on the scenario) after sending ApplyChargingReportGPRS and if there are no EDP armed. The ApplyChargingGPRS requires control relationship.

4. Is a test case required for a Secondary PDP Context (Connect GPRS is not possible)? Is this different from having two PDP Contexts active with different APNs? What is the realistic use of Secondary PDP Contexts?

CN2 response: A secondary PDP context is used when the IP address and APN are the same but Quality of Service is different to the primary PDP context. One clear use of this is IMS, in which the signalling has one PDP context and the speech/user data has another context, both using the same APN (in order for both contexts to share the same IP address). CN2 finds that the SGSN behaviour is not specified if the SCP sends connect GPRS to a secondary PDP context, therefore testing of this would not be useful.

5. In Initial DP SMS Location Information in MSC and Location Information in SGSN are marked as conditional (shall be sent if available). Does this mean that Location Information shall always be present (i.e. Location Information in MSC and Location Information in SGSN are mutually exclusive and one shall be present) or is it possible to get an Initial DP SMS with no location information?

CN2 response: LocationInformation in SGSN and MSC are mutually exclusive. Location information is always available: At least the VLR number or SGSN number is always contained ((refer to section 7.1.6.2.2. in 23.078).

6. If the gsmSCF changes the SMSC address which leads to the SM being barred (e.g. due to ODB Barring of all International Short Messages), does this lead to the SMS Failure DP being reported? If the DP is reported, what cause value is used? If the DP is not reported, how does the service logic in the gsmSCF terminate (timeout)?

This issue will be sent to CN2 e-mail list. For the time being no answer was given.

7. When is "Location update in the same VLR service area" reported? Is it on a change of Location Area (LAI), change of Cell ID or something else?

CN2 response: Location update in the same VLR area is reported when the location area changes within an MSC/VLR area.

8. (CAMEL Phase 1 onwards) When the gsmSCF receives Initial DP at DP2 (Collected_Info), if the gsmSCF performs a number translation sending a Connect message (but does not arm any EDPs or request any reports), can the Connect message be sent in a TC_END? How should the gsmSSF react to receiving a TC_END containing a Connect?

CN2 response: The SCP is allowed to send CAP operations in the TC-END Message. If the SCP sends 'Connect' at DP2 in TC-END without arming EDPs then the MSC/gsmSSF shall route the call according to the number in 'Connect'.

9. Is the mapping of CAP messages to TCAP short dialogues vendor specific or is it described in the standard? Are there potential interworking problems?

CN2 response: The general principal of opening and closing TCAP dialogues is specified in R99 CAMEL specification. However there may be small differences between vendors: in general, the receiving entity shall accept all allowed combinations of the sending entity. E.g. the sending entity may send multiple CAP operations in a single TC message, or pack them one-by-one.

CN2 will ask IREG to send the latest test specs for CN2 for information.

Conclusion :noted, all the answers will be sent to IREG CAMEL group in N2-020737

N2-020737: Source: CN2(Vodafone), Type: LS OUT, Title: CAMEL Phase 3: Answers to Questions raised at CAMEL IREG

Discussion :

Conclusion: approved

N2-020710: TS 23.078, R99, Source: Siemens, Type: CR, CR# 438, Title: ERB when VT call is reported in DP T_Busy due to Call Deflection

Discussion: When VT call meets Call Deflection, it is reported as DP T_Busy, if armed, as call forward. The information elements "Cause" could indicate this reason. In the case of CF, the cause IE may be one of the release cause listed in the table 4.1. However for the Call Deflection, it is restricted only to the RCH operation. This restriction would not be able to make the gsmSCF know the proper forwarding reason. The CR proposes to remove the restriction for the call deflection in the table 4.1.

Vodafone does not find this as critical correction for R99. The deletion of the sentence does not help for the problem identified on the cover page.

Conclusion: rejected

N2-020713: TS 29.078, R99, Source: Siemens, Type: CR, CR# 268, Title: ERB when VT call is reported in DP T_Busy due to Call Deflection

Discussion: Nokia believes that it is not serious problem to correct it in R99. Does the SCP really has to know if it is Call forwarding on busy or Call deflection? SCP knows that CF/CD is going to happen, but not necessarily the exact reason code. Vodafone wants to correct this in Rel-5 only.

Conclusion: rejected

N2-020711: TS 23.078, Rel-4, Source: Siemens, Type: CR, CR# 439, Title: ERB when VT call is reported in DP T_Busy due to Call Deflection

Discussion : rejected

Conclusion :

N2-020714: TS 29.078, Rel-4, Source: Siemens, Type: CR, CR# 269, Title: ERB when VT call is reported in DP T_Busy due to Call Deflection

Discussion :

Conclusion : rejected

N2-020712: TS 23.078, Rel-5, Source: Siemens, Type: CR, CR# 440, Title: ERB when VT call is reported in DP T_Busy due to Call Deflection

Discussion: The document does not correct the issue described.

Conclusion: rejected

N2-020715: TS 29.078, Rel-5, Source: Siemens, Type: CR, CR# 270, Title: ERB when VT call is reported in DP T_Busy due to Call Deflection

Discussion: “type of the call forwarding service” will be replaced by “release cause”. Category becomes F, since R99 and rel-4 CRs are rejected. WI code will be CAMEL4. No other specification are affected and this shall be indicated in the cover page.

Conclusion : revised to N2-020741

N2-020741: TS 29.078, Rel-5, Source: Siemens, Type: CR, CR# 270r1, Title: ERB when VT call is reported in DP T_Busy due to Call Deflection

Discussion:

Conclusion: approved without presentation

N2-020716: TS 23.078, R99, Source: Siemens, Type: CR, CR# 441, Title: Inconsistent description on ACR: time information

Discussion: This CR corrects the description on ACR Time Information in the stage 2 to align with the stage 3. Is the problem also in GPRS case? That could be a subject of another CR.

For the *Time If No Tariff Switch* Information Element, additional the sentence shall be added: “If answer is not detected, it shall be set to “0”. “

Conclusion : revised to N2-020742

N2-020742: TS 23.078, R99, Source: Siemens, Type: CR, CR# 441, Title: Inconsistent description on ACR: time information

Discussion:

Conclusion: approved without presentation

N2-020717: TS 23.078, Rel-4, Source: Siemens, Type: CR, CR# 442, Title: Inconsistent description on ACR: time information

Discussion:

Conclusion :revised to N2-020743

N2-020743: TS 23.078, Rel-4, Source: Siemens, Type: CR, CR# 442r1 Title: Inconsistent description on ACR: time information

Discussion :

Conclusion : approved without presentation

N2-020718: TS 23.078, Rel-5, Source: Siemens, Type: CR, CR# 443, Title: Inconsistent description on ACR: time information

Discussion :

Conclusion : revised to N2-020744

N2-020744: TS 23.078, Rel-5, Source: Siemens, Type: CR, CR# 443r1, Title: Inconsistent description on ACR: time information

Discussion :

Conclusion : approved without presentation

7.2 CAMEL3/ATM&ATSI

N2-020729: TS 29.002, R99, Nortel, Type: CR, Title: Optional CallBarringFeatureList parameter in ATMod

Discussion: The CallBarringFeatureList parameter in Ext-CallBarringInfoFor-CSE shall be marked as optional according to the proposal in this CR.

Vodafone finds that this is not a backwards compatible change. Why Ext-ForwardingInfoFor-CSE does not have the same change? The comments will be forwarded to CN4 and will be discussed during the joint session (N4-020858).

Conclusion: revised to N2-020738

N2-020738: TS 29.002, R99, Nortel, Type: CR, Title: Optional CallBarringFeatureList parameter in ATMod

Discussion: Presented during the Joint meeting with CN4 in document N4-0201013. According to Nortel, this is an critical correction. This should be indicated in the cover sheet.

Is it functional modification? This is alignment between stage 2 and stage 3, but not an functional modification.

Siemens finds that there is no serious malfunction and that CR is not essential correction. Parameters could be sent and ignored? How to define that? If the sending entity sends the redundant information, the receiving entity can discard it at the functional level. HLR responds with changed data and in addition it responds with unmodified data which is not requested but it is additional info sent by HLR. Unmodified data could be sent and ignored. That behaviour could be defined in TS 23.078 rather than at protocol level.

MAP ASN.1 should not be modified and CN2 should adjust stage 2 specification. The requirement to send only changed data should be removed from stage 2. Nokia supports Siemens view that R99 MAP spec should not be changed. We should maintain consistency between R99, Rel-4 and Rel-5.

Conclusion: rejected

N2-020730: TS 29.002, Rel-4, Nortel, Type: CR, Title: Optional CallBarringFeatureList parameter in ATMod

Discussion: This is a Rel--4 mirror CR of N2-020738. CN4 document number is N4-020859.

Conclusion: revised to N2-020739

N2-020739: TS 29.002, Rel-4, Nortel, Type: CR, Title: Optional CallBarringFeatureList parameter in ATMod

Discussion: N4-021014

Conclusion: rejected

N2-020731: TS 29.002, Rel-5, Nortel, Type: CR, Title: Optional CallBarringFeatureList parameter in ATMod

Discussion: N4-020860

Conclusion: revised to N2-020740

N2-020740: TS 29.002, Rel-5, Nortel, Type: CR, Title: Optional CallBarringFeatureList parameter in ATMod

Discussion: Rel-5 mirror CR of N2-020738. CN4 document number is N4-021015.

Conclusion: rejected

7.3 CAMEL3/GPRS

N2-020676: TS 29.078, R99, Alcatel, Type: CR, CR#262, Title: Correction of 29.078 CANCEL-gprs

10(481448)

Discussion: Consequences of not approved should explain what happens if the CR is not approved.

Nokia: there is inconsistency between stage2 and stage3 and should be stated in "Consequences if not approved" field. CANCEL GPRS would work only in scenario 2. Category should have subcategory (essential correction).

Conclusion: revised to N2-020745

N2-020745: TS 29.078, R99, Alcatel, Type: CR, CR#262r1, Title: Correction of 29.078 CANCEL-gprs

Discussion:

Conclusion: approved

N2-020677: TS 29.078, Rel-4, Alcatel, Type: CR, CR#263, Title: Correction of 29.078 CANCEL-gprs

Discussion:

Conclusion: revised to N2-020746

N2-020746: TS 29.078, Rel-4, Alcatel, Type: CR, CR#263r1, Title: Correction of 29.078 CANCEL-gprs

Discussion:

Conclusion: approved without presentation

N2-020678: TS 29.078, Rel-5, Alcatel, Type: CR, CR#264, Title: Correction of 29.078 CANCEL-gprs

Discussion:

Conclusion: approved

N2-020719: TS 23.078, R99, Siemens, Type: CR, CR#444, Title: Secondary PDP context for DP change of position context

Discussion: In Initial DP GPRS, Secondary PDP context IE is sent if this IF is initiated due to the secondary PDP context activation. Although this IF is also sent in the case of the inter routing area update at DP Change of Position Context, the new SGSN is not able to distinguish between the primary and the secondary PDP context. This CR adds a short description that this IE is not sent at DP Change of Position context.

Target SGSN in inter SGSN routing area update does not know about the second PDPcontext, SecondaryPDPContext field is not available. Is this serious and frequent error enough to be corrected in R99? Orange France finds this as not critical correction. Nokia finds that this is not critical correction for R99, but clarification only. Vodafone does not agree to have subcategory "agreed by consensus".

Conclusion: rejected

N2-020720: TS 23.078, Rel-4, Siemens, Type: CR, CR#445, Title: Secondary PDP context for DP change of position context

Discussion:

Conclusion: rejected

N2-020721: TS 23.078, Rel-5, Siemens, Type: CR, CR#446, Title: Secondary PDP context for DP change of position context

Discussion: In "Consequences if not approved" field, SGSN is missing in "inter routing area update". Work item code shall be changed from CAMEL3 to CAMEL4 and category shall be changed to F, since the R99 and Rel-4 CRs were rejected. Other specifications affected should be marked. Consequences if not approved should be enhanced.

Conclusion: revised to N2-020747

N2-020747: TS 23.078, Rel-5, Siemens, Type: CR, CR#446, Title: Secondary PDP context for DP change of position context

Discussion:

Conclusion: approved without presentation

11(~~48148~~)

N2-020772: Nortel, Type: Discussion document, Title: Definition of LocationInformation GPRS in 29.078

Discussion: This was a late document.

Conclusion: postponed to next meeting

N2-020773: TS 29.078, R99, Nortel, Type: CR, CR#271, Title: Correction of LocationInformation GPRS definition

Discussion: This was a late document.

Conclusion: postponed to next meeting

N2-020774: TS 29.078, Rel-4, Nortel, Type: CR, CR#272, Title: Correction of LocationInformation GPRS definition

Discussion: This was a late document.

Conclusion: postponed to next meeting

7.4 CAMEL3/MO SMS

7.5 CAMEL3/Call Related

N2-020645: TS 29.078, R99, Nokia, Type: CR, CR#254, Title: Removal of ReleaseCall from Assisting gsmSSF

Discussion: As this is R99 CR, it would be useful to have an example of the error case in “Consequences if not approved”. The ReleaseCall operation is allowed in Application Context between gsmSCF and Assisting gsmSSF but the functionality is not specified. The callHandlingPackage is removed from capAssistHandoffssfToScf CONTRACT by this CR.

Current stage 3 specifies that the gsmSCF “may” not use the ReleaseCall, but does not explicitly deny. This CR should make the handling clear. Originally the ReleaseCall is copied to this Application Context from the CS2 INAP-handoff-SSF.

On the cover sheet the category should be “agreed by consensus”., as it is not critical. This CR does not change the functionality, but clarifies the specification.

Conclusion: revised to N2-020748

N2-020748: TS 29.078, R99, Nokia, Type: CR, CR#254r1, Title: Removal of ReleaseCall from Assisting gsmSSF

Discussion:

Conclusion: approved without presentation

N2-020646: TS 29.078, Rel-4, Nokia, Type: CR, CR#255, Title: Removal of ReleaseCall from Assisting gsmSSF

Discussion: Category should be “A”.

Conclusion: revised to N2-020749

N2-020749: TS 29.078, Rel-4, Nokia, Type: CR, CR#255r1, Title: Removal of ReleaseCall from Assisting gsmSSF

Discussion:

Conclusion: approved without presentation

N2-020647: TS 29.078, Rel-5, Nokia, Type: CR, CR#256, Title: Removal of ReleaseCall from Assisting gsmSSF

Discussion:

Conclusion: revised to N2-020750

N2-020750: TS 29.078, Rel-5, Nokia, Type: CR, CR#256r1, Title: Removal of ReleaseCall from Assisting gsmSSF

Discussion:

12(481448)

Conclusion: *approved without presentation*

N2-020697: TS 23.078, R99, Alcatel, Type: CR, CR#433, Title: Correction in CAMEL_MO_Dialled_Services procedure

Discussion: According to this CR, in MO reconnection case , in the CAMEL_MO_Dialled_Services procedure “SEND_INFO_FOR_RECONNECTED-CALL” internal message shall be sent rather than SEND_INFO_FOR_OUTGOING_CALL. A new state is created in order to receive the response.

Different implementations may exist, and thus interoperability problems. What are possible misinterpretations if CR is not approved? Call may be cleared unnecessarily and this should be added in consequences if not approved.

On page 5, “Reconnect=True” decision box should have question mark and should have “NO” branch.

“CAMEL invocation?” decision box should have TRUE branch.

“:=” should be written correctly on the last page in the task boxes.

Conclusion: *revised to N2-020751*

N2-020751: TS 23.078, R99, Alcatel, Type: CR, CR#433r1, Title: Correction in CAMEL_MO_Dialled_Services procedure

Discussion:

Conclusion: *approved without presentation*

N2-020698: TS 23.078, Rel-4, Alcatel, Type: CR, CR#434, Title: Correction in CAMEL_MO_Dialled_Services procedure

Discussion: Current version is 4.5.1.

Conclusion: *revised to N2-020752*

N2-020752: TS 23.078, Rel-4, Alcatel, Type: CR, CR#434r1, Title: Correction in CAMEL_MO_Dialled_Services procedure

Discussion:

Conclusion: *approved without presentation*

N2-020699: TS 23.078, Rel-5, Alcatel, Type: CR, CR#435, Title: Correction in CAMEL_MO_Dialled_Services procedure

Discussion:

Conclusion: *revised to N2-020753*

N2-020753: TS 23.078, Rel-5, Alcatel, Type: CR, CR#435r1, Title: Correction in CAMEL_MO_Dialled_Services procedure

Discussion:

Conclusion: *approved without presentation*

8 CAMEL for Release 4

8.1 General and miscellaneous Rel-4 issues

N2-020631: TS 23.078, Rel-4, Nokia, Type: CR, CR#411, Title: CAMEL3 inter-working with Rel-4 GPRS barring

Discussion: CAMEL3 is introduced in 3GPP R99. GPRS barring is specified in Rel-4. Therefore, R99 CAMEL3 does not specify the inter-working with GPRS barrings. The Rel-4 and Rel-5 23.078 shall specify in which point in PDP

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context state model the barring check shall be done. It is specified here that barring is checked after the CAMEL invocation. Conditional barrings need a checking after 1st DP. It is easier to check the unconditional barring at the same point, although it may result to unnecessary IDP-GPRS operation. If the unconditional barring is checked at the NULL PIA then the checking would apply also for the inter-SGSN RAU. That is no needed because the source-SGSN does all checkings necessary. In future it would be easier to overwrite the barrings by SCP, but this will need a change in CAP.

- Does this impact any SDL procedures? No.
- “Supplementary service” should be replaced by “Operator determined barring category”.
- Reference: Is reference to barring specification needed? No.
- Current version should be 4.5.1.
- **This will be the first difference between R99 and Rel-4 CAMEL3 stage2.**

Conclusion: revised to N2-020754

N2-020754: TS 23.078, Rel-4, Nokia, Type: CR, CR#411r1, Title: CAMEL3 inter-working with Rel-4 GPRS barring

Discussion:

Conclusion: approved without presentation

N2-020755: TS 23.078, Rel-5, Nokia, Type: CR, CR#450, Title: CAMEL3 inter-working with Rel-4 GPRS barring

Discussion: This is a Rel-5 mirror CR to CR 411r1.

Conclusion: approved without presentation

8.2 CAP over IP

9 CAMEL4, Release 5

9.1 CAMEL 4 / Stage 1

9.2 Miscellaneous CAMEL 4 issues

N2-020632: Rel-5, Source: CN2 Chairman, Type: Discussion, Title: CAMEL4 open issue list

Discussion : The CN2 meetings have identified a number of open issues on TS 23.078 and TS 29.078. This document lists those open issues.

Open issue no.8 added: Can a URL be a triggering criterion? What is the meaning of D-IM-CSI without URL?

Definition of “Call Party Handling” operations that was needed in TS 23.078 is covered by Vodafone’s documents N2-020691 and N2-020692.

Conclusion: revised to N2-020756

N2-020756: Rel-5, Source: CN2 Chairman, Type: Discussion, Title: CAMEL4 open issue list

Discussion :

Conclusion: noted

N2-020673: TS 23.008, Rel-5, Alcatel, Type: CR, Title: Wrong Camel capability for D-CSI, T-CSI, VT-CSI and D-CSI

Discussion: The document was presented in CN2-CN4 Joint meeting in N4-021048. The CAMEL handling of a subscriber with O-CSI, T-CSI, VT-CSI has been upgraded in CAMEL phase 4 to consider CPH operations. The handling of a D-CSI at DP3 may occur after the handling of an O-CSI at DP2. In case the O-CSI is phase 4 it is preferable to have a phase 4 D-CSI and doing so to remain in a phase 4 logic.

The issue of D-CSI is opened (whether we should use CAMEL phase 4 D-CSI); Siemens finds it acceptable to upgrade D-CSI to CAMEL phase 4.

Conclusion is that D-CSI is updated to CAMEL phase 4. Cross references should be corrected on the cover page.

Conclusion: CN4 approved, CN2 endorsed

N2-020675: TS 23.078, Rel-5, Alcatel, Type: CR, CR#422, Title: Inconsistency for the negotiated Camel Capability handling of the D-CSI

Discussion: In case the O-CSI is phase 4 it is preferable to have a phase 4 D-CSI. IMEISV is a new CAPv4 parameter; D-CSI could be used to convey it. The other specs affected should refer to CR number; MCC will update the cover page off line.

Conclusion: approved

N2-020722: TS 23.078, Rel-5, Siemens, Type: CR, CR#447, Title: Detail description for applicability of call cases

Discussion: Call cases in the information element table are not clearly stated. This CR improves the description to which column shall apply in terms of the V/GMSC and the CSI.

For the MF case, if the dialogue between the gsmSSF and the gsmSCF due to the D-CSI or N-CSI is invoked after the call forwarding procedure, the information elements in the MF column shall apply

MF column should have O-CSI (reference to figure 6.7). Status column will be introduced which is applicable for all call cases. Each Information Element (IE) is marked as Mandatory (M), Specific conditions (S) or Optional (O) in the "Status" column.

Conclusion: revised to N2-020757

N2-020757: TS 23.078, Rel-5, Siemens, Type: CR, CR#447r1, Title: Detail description for applicability of call cases

Discussion: In section 4.6, "O/D/N-CSI" should be replaced by "O-CSI, D-CSI or N-CSI".

Conclusion: revised to N2-020793

N2-020793: TS 23.078, Rel-5, Siemens, Type: CR, CR#447r2, Title: Detail description for applicability of call cases

Discussion:

Conclusion: approved without presentation

N2-020648: TS 29.078, Rel-5, Nokia, Type: CR, CR#257, Title: TC-U-Abort before the TC dialogue is established

Discussion: The abandon cases before the TC dialogue is established are clarified for CS, PS and SMS dialogues and related notes are removed due the conflict with the clause 14 definitions.

Alcatel proposes to delete the word "locally" on 3 places, e.g. in sentence : If the calling party abandons after the sending of "InitialDP" and before the TC dialogue is established, then the gsmSSF shall locally abort the interaction with the gsmSCF by means of an abort to TC.

Cover page needs an update in the "Summary of change". For MO-SMS "In the case of" is replaced by "for" through the document.

Conclusion : revised to N2-020782

N2-020782: TS 29.078, Rel-5, Nokia, Type: CR, CR#257r1, Title: TC-U-Abort before the TC dialogue is established

Discussion:

Conclusion : approved without presentation

N2-020666: TS 23.078, Rel-5, Alcatel, Type: CR, CR#418, Title: Playing of warning tones

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Discussion: At the last CN2 meeting it was said that the warning tone shall be played to the party which was indicated in the Apply Charging operation. The CR proposes that the warning tone shall be played to the party that is charged for the call/leg. This party to which the warning tone is to be played will be indicated by the gsmSCF. It is proposed to rename the "Party To Charge" to "Party To Play Warning Tone". As the leg to play the warning tone may be in another CS, the CS_gsmSSF send the Int_Apply_Warning_Tone to the CSA_gsmSSF. The CSA_gsmSSF will send forward this primitive to the CS_gsmSSF where the leg to play the warning tone resides.

The Play Tone IE is sent in the Apply Charging IF "if a tone has to be played to the party for whom the BCSM is operating".

- "Party to play tone" will be changed to "party to receive a warning tone"
- If the party is not active, the tone is ignored. AC could be sent to each party, just to play a tone.
- Nokia is not quite happy with enhancements introduced by this CR. There is no support and no opposition from other companies.
- New parameter will be moved to Audible indicator table as the existence of the parameter depends on presence of Audible indicator. Party To Receive Warning Tone identifies the party to whom the warning tone indicated by the tone or the burst list shall be played.
- If the parameter is not sent then we will apply the same logic as in CAMEL phase 3. Should be documented in stage 3 to whom the tone is played – should that be updated as well if we introduce new Leg ID? Yes.
- Cover page needs update. Parameter will be optional.

Conclusion : revised to N2-020783

N2-020783: TS 23.078, Rel-5, Alcatel, Type: CR, CR#418r1, Title: Playing of warning tones

Discussion: "Party to play warning tone" shall be replaced by new name "Party to receive warning tone" in PlayTone and PlayBurstList definitions.

Revision of this CR shall be in separate package together with the stage 3 CR.

Conclusion : revised to N2-020794

N2-020794: TS 23.078, Rel-5, Alcatel, Type: CR, CR#418r2, Title: Playing of warning tones

Discussion:

Conclusion : approved without presentation

N2-020667: TS 29.078, Rel-5, Alcatel, Type: CR, CR#260, Title: Playing of warning tones

Discussion:

Conclusion : revised to N2-020784

N2-020784: TS 29.078, Rel-5, Alcatel, Type: CR, CR#260r1, Title: Playing of warning tones

Discussion: To be in a separate package together with a stage 2 CR. CR should be rev1 and correct Tdoc number on the cover sheet.

Conclusion : approved

N2-020668: TS 29.078, Rel-5, Alcatel, Type: CR, CR#261, Title: ASN.1 syntax basic corrections

Discussion:

Conclusion : approved

N2-020701: TS 23.078, Rel-5, Nortel, Alcatel, Type: CR, CR#437, Title: Ordering D-CSI destination number triggering criterion

Discussion:

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Nortel proposal: Inconsistent invocation of CAMEL services may arise if the order of processing triggering criteria in the MSC for D-CSI is not clarified. In order to ensure a consistent solution across all MSCs, all MSCs must use the destination number triggering criterion for number comparison purposes in the order they are received from the HLR.

Is the order decided by the operator? The only order that we have to specify is the order in which VMSC or GMSC check this, it is not necessary to specify the order in which HLR sends destination numbers (operator may control the order).

Nortel proposes to check criteria in given order as received from HLR. Alcatel, Nokia and Orange France supports this. If there are 2 numbers with the same length but with different digits, in which order they are handled? Numbers based on the number length should be checked. Lucent proposes to check the longest number first. Siemens, T-Mobil and Vodafone supports.

What happens if we specify this for Rel-5 but not for R99 and Rel-4. Backward compatibility problem exists. The meeting finds that this should be resolved in R99/Rel-4 as well, but first we have to decide the principle. If we correct this in Rel-5 than it becomes essential correction in R99 because of backward compatibility. Vodafone agrees with that, but has raised the question does it changes the functionality of already designed R99. Nokia: if this is not documented for R99, then different implementation may occur.

What is specified currently can be interpreted in a way that MSC checks the destination numbers in order it receives them : "The check described in this subclause shall be repeated for every number contained in the destination number triggering criterion of the D-CSI until there is a match DP Analysed_Info is triggered, or until all the destination numbers have been checked without a match."

Conclusion : revised to N2-020761

N2-020761: TS 23.078, Rel-5, Nortel, Alcatel, Type: CR, CR#437r1, Title: Ordering D-CSI destination number triggering criterion

Discussion: "Vendor specific is replaced by "implementation specific". The mechanism used in the VMSC to determine the order in which destination numbers are sent in the Resume Call Handling message is implementation specific. HLR determines the order in which the numbers are sent according Nortel proposal.

Chairman's **Nokia's** view is that it's better to specify how the MSC behaves, not the HLR behaviour. **In other words, MSC shall handle the numbers in a certain order.** Nortel wants the HLR change the order, while Nokia finds better to leave it open (i.e. HLR shall set the order based on two facts: in which order it wants triggering to happen, and the specified MSC behaviour). Nokia finds that it is HPLMN issue, whether the HLR puts the criteria in a certain order, or whether operators manually rearranges the criteria..

Lucent: If we specify the order in which the HLR sends the destination numbers, then the sentence that the VMSC can use the mechanism to determine the order in which destination numbers are sent in Resume Call Handling (vendor specific) is contradictory.

In CAMEL we don't specify what the HPLMN does. It's HPLMN issue whether operator does it itself manually or HLR SW. Nokia's view is that we should specify what MSC does. Alcatel supports Nokia view that HLR should not change the order in the list of numbers.

Alcatel finds that it is better not to reorder the list, but it is not necessary to specify that. Orange France supports that.

Two last sentences should be removed. The HLR will not be specified, and the MSC/VLR does not change the order in Resume Call Handling.

HLR of HPLMN is not specified. We assume that MSC/VLR does not change the order in RCH operation but we will not specify VLR behaviour (that it keeps the order).

Proposal is to have health warning. Lucent has a comment about the term "destination"

Conclusion: postponed to the next meeting

N2-020671: TS 23.078, Rel-5, Alcatel, Type: CR, CR#421, Title: Correction of clause 4.3.3 N-CSI

Discussion: This CR changes the title of the clause 4.3.3 from "Network Service CAMEL subscription information (N-CSI)" to "Network CAMEL service information (N-CSI). Vodafone has doubt whether this change of section title is necessary.

Nokia: the change proposed in the CR is according the stage 1 (Network CAMEL Service Information (N-CSI))

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Conclusion : approved

N2-020700: TS 23.078, Rel-5, Nortel, Type: CR, CR#436, Title: Handling Password and WrongPasswordAttemptsCounter in ATSI result and ATMod

Discussion: This CR introduces a description of the “optionally” of the two parameters: “Password” and “Wrong Password Attempts counter”. Both parameters shall be absent if the subscriber has the call barring subscription option “control of supplementary service by the service provider”.

Wrong Password Attempt counter is not available in the SCP anyway, therefore no need to be sent.

Conclusion: withdrawn

N2-020723: TS 23.078, Rel-5, Siemens, Type: CR, CR#448, Title: Location information for MF call

Discussion: This CR proposes to allow Location Information for MF call in Initial DP.

- In GMSC (ORLCF), does GMSC check the CF cause? No
- GMSC gets the Location Information in SRI ack.
- What is the need for this service, i.e. to provide Location Information at MF call? Call forwarding is not so critical on Location Area. Siemens: Some Location Area could be more expensive, so Location Information could be useful.
- Why this is not proposed together with a Call Deflection? It should be taken into account.
- Comments: Nokia doubts whether this is really useful service. If location information is obtained after paging, it is very useful for GMSC and VMSC.
- Nokia finds that this is not an correction, but an addition of the feature.

Conclusion: revised to next meeting

9.3 CAMEL4 / Interactions with Optimal Routing

9.4 CAMEL4 / Call Party Handling

N2-020694: Rel-5, Vodafone, Type: Discussion document, Title: CPH: Open Issues & Decisions

Discussion: This document lists open issues and principle decisions related to Call Party Handling. The document will be revised to reflect the solved open issues in this meeting.

Conclusion: revised to N2-020767

N2-020767: Rel-5, Vodafone, Type: Discussion document, Title: CPH: Open Issues & Decisions

Discussion:

Conclusion: noted

N2-020696: TS 23.018, Rel-5, Vodafone, Type: CR, Title: Setting of Leg1_Status Variable

Discussion: Other specifications affected field should be marked with “x”, not with “N”. The document is presented in N2-N4 Joint meeting in N4-020965.

Conclusion :CN2 endorsed, CN4 approved

N2-020633: TS 23.078, Rel-5, Nokia, Type: CR, CR#412 Title: CPH clarification on overall SDL architecture

Discussion: Call Party Handling concept is a bit unclear. This CR intends to help understanding of various SDLs in 23.078 and 23.018.

- Mapping from Processes to CPH concepts is added.
- It is clarified that legs are not moved between BCSMs.

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- 2 legs per BCSM.
- Only one CSA per CAP dialogue in CAMEL4.
- Active legs in the same CS hear each other.

Comments:

- In bullet 3, "BCSM" should be replaced by "leg".

- In bullet 5, where it is explained that active legs in the same Call Segment have a voice connection and they hear each other and the same in-band tone and announcements, the sentence is added: "The only exception is Apply Charging warning tone in which the party is explicitly indicated by the gsmSCF."

- Should we mention DP2 and DP12 or shall we leave it as it is (OCH_MSC and other)? Yes, but if we change SDLs we should update this as well, but full names of DPs should be used.

Conclusion : revised to N2-020768

N2-020768: TS 23.078, Rel-5, Nokia, Type: CR, CR#412r1, Title: CPH clarification on overall SDL architecture

Discussion:

Conclusion : e-mail approval (Deadline for objections is 12.8., 17:00 CET, document sent to CN2 e-mail list by MCC)
Since no objections received on CN2 e-mail list until the deadline, the document is APPROVED.

N2-020656: TS 22.078, Rel-5, Vodafone, Type: CR, Title: Clarification on re-connecting held parties in a CPH configuration

Discussion: The CR gives a clarification that the "Connecting an individual call party to the group" is only applicable to a "normal A-B" call if the group has reached the active phase. This CR reflects what is already contained in SDLs.

Conclusion: ICA out-of-the-blue case (NC) needs to be clarified also. Consequences if not approved should be enhanced.

If, at the initial service event, the CSE instructed the IPLMN/VPLMN not to route the call leg directly to the destination, then the CSE may instruct the IPLMN/VPLMN to connect a separate held call party to the group at any point during the alerting and active phases of the call leg if a control relationship exists.

Who is the held party? Which call leg must be alerting or active? ...all these shall be clarified in the revised version.

Cover page should be enhanced

Conclusion : revised to N2-020769

N2-020769: TS 22.078, Rel-5, Vodafone, Type: CR, Title: Clarification on re-connecting held parties in a CPH configuration

Discussion: In the ICA case either leg must be alerting or active. Reason for change could be more clear.

Other comments should indicate the amount of CN2 work if this CR is not approved. CN2 is working with assumption that this CR is approved.

Conclusion: revised to N2-020798

N2-020798: TS 22.078, Rel-5, Vodafone, Type: CR, Title: Clarification on re-connecting held parties in a CPH configuration

Discussion:

Conclusion: endorsed by CN2 (MCC to send to SAI as source CN2)

N2-020655: TS 23.078, Rel-5, Vodafone, Type: CR, CR#414, Title: Move Leg not allowed before Active phase of "normal" A-B call

Discussion: CR proposes Introduction of Move_Leg_Allowed boolean variable in Process CSA_gsmSSF.

On Page 13, sheet 9(21) , decision box in the left branch "Disconnect leg is for Leg ID 2?" may work differently in Multiple_CS case. CSA does not check here the DP.

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Conclusion : approved

N2-020657: TS 23.078, Rel-5, Vodafone, Type: CR, CR#415, Title: Disconnect of penultimate leg in CSID1

Discussion: The introduction of decision box "Any EDP or reports outstanding" should be cancelled in process CS_gsmSSF in sheet 41(56). Why this decision box was introduced?

Int_Continue may release the last leg, Int_Release_Call may be duplication in some cases. At least at Abandon DP. ReleaseCall to an IDLE process does not hurt but it's not a clean solution.

Conclusion : revised to N2-020770

N2-020770: TS 23.078, Rel-5, Vodafone, Type: CR, CR#415, Title: Disconnect of penultimate leg in CSID1

Discussion:

Conclusion : approved without presentation

N2-020669: TS 23.078, Rel-5, Alcatel, Type: CR, CR#419, Title: No use of Call Segment ID for the direct gsmSCF - gsmSRF case

Discussion: The CR clarifies when the Call Segment ID is sent.

CancelArg is a choice therefore only Invoke ID can be present. Invoke ID can not be "M", but shall be "E" (category "E" means exclusive).

Conclusion : revised to N2-020771

N2-020771: TS 23.078, Rel-5, Alcatel, Type: CR, CR#419, Title: No use of Call Segment ID for the direct gsmSCF - gsmSRF case

Discussion: Do we have to send the call segment ID also in 2 party call case. It was stated that it should be sent, but now it's left open. Intention of the CR was to fix SRF case what is solved, but still call segment ID is opened.

Open issues: Shall call segment ID be present in CANCEL operation for 2 party call? Call Party Handling Open Issues document will be updated.

Conclusion : approved

N2-020681: TS 23.078, Rel-5, Vodafone, Type: CR, CR#423, Title: Change "Initial Call Segment" to "CSID1"

Discussion: Definitions may need an update, in tdoc N2-020691.

CSID1 is the CS which is number 1. "Clear CSID" task box on page 9 is unclear. It was there earlier, not changed by this CR.

Conclusion : approved

N2-020682: TS 29.078, Rel-5, Vodafone, Type: CR, CR#265, Title: Change "Initial Call Segment" to "CSID1"

Discussion: This CR replaces all the occurrences of "Initial Call Segment" with "CSID1".

Conclusion : approved

N2-020691: TS 23.078, Rel-5, Vodafone, Type: CR, CR#432, Title: Introduction of CPH Definitions

Discussion: This CR introduces definitions for Call Party Handling Information Flow, Call Segment and Call Segment Association and adds CPH, CSID, CS and CSA to abbreviations list.

Definition of ICA is not changed. Call Segment definition could be complete sentence.

Conclusion revised to N2-020779

N2-020779: TS 23.078, Rel-5, Vodafone, Type: CR, CR#432, Title: Introduction of CPH Definitions

Discussion:

Conclusion : approved without presentation

N2-020692: TS 29.078, Rel-5, Vodafone, Type: CR, CR#266, Title: Introduction of CPH Definitions

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Discussion: This CR adds the CSID and CPH to abbreviations list.

Conclusion : approved

N2-020683: TS 23.078, Rel-5, Vodafone, Type: CR, CR#424, Title: Removal of DP_MidCall state from CAMEL_EXPORT_LEG_MSC

Discussion: This CR removes the DP_MidCall state from CAMEL_EXPORT_LEG_MSC. As a consequence of this, CAMEL_EXPORT_LEG_MSC cannot return an Answer result, so CAMEL_ICA_MSC has also been modified.

Conclusion : approved

N2-020684: TS 23.078, Rel-5, Vodafone, Type: CR, CR#425, Title: FtN in Perform Call Handling ack

Discussion: If the Forwarded-to Number is not available due to CAMEL handling (a Disconnect Leg operation has been received for Leg 2) then the MSC shall populate this parameter with a dummy number.

Dummy number is not used in any external interface.

“In internal MSC information flow” title, we could make clear which are the entities.

Conclusion: approved

N2-020685: TS 23.078, Rel-5, Vodafone, Type: CR, CR#426, Title: CSA_gsmSSF: Handling signals in states such as DL_ack

Discussion: In some cases we have very short dialogue, do we need for such short states?

On page 26 there are 2 “Save” boxes. Old “Save “ should be deleted. If the saved message is not allowed, there should be no save.

Conclusion :revised to N2-020792

N2-020792: TS 23.078, Rel-5, Vodafone, Type: CR, CR#426r1, Title: CSA_gsmSSF: Handling signals in states such as DL_ack

Discussion:

Conclusion: approved without presentation

N2-020634: TS 23.078, Rel-5, Nokia, Type: CR, CR#413 Title: Only one AC/ACR per BCSM

Discussion: This document is contradicting with N2-020666 and corresponding stage 3 CR. LEG ID identifies the call party concerned by the Apply Charging IF. Only the served subscriber, announcement leg, or leg created with Initiate Call Attempt IF shall be identified.

“If existing” is better than “If true” in parameter description.

Alcatel does not like this kind of restriction.

Conclusion : rejected

N2-020686: TS 23.078, Rel-5, Vodafone, Type: CR, CR#427, Title: Use of Release Call and Release Call Segment in gsmSSF processes

Discussion: Proposal is that Int_Release_Call is used to indicate that all legs within the CS, and the CS, shall be released. Any empty CS shall be released.

We may have to change the CR to force CS to IDLE when last leg is released. We need to check what happens in all cases if we have EDP-R; do we go to idle after EDP-R if there are no more legs.

Page 13 and Page 29: Application end cause ReleaseCall to CS, which triggers ApplychargingReport.

Int_Release_Call may go to non-controlling CS. In CS there may be a check.

Conclusion : revised to next meeting

N2-020687: TS 23.078, Rel-5, Vodafone, Type: CR, CR#428, Title: Removal of "Note that" in descriptions of CPH operations

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Discussion:

Conclusion: approved

N2-020688: TS 23.078, Rel-5, Vodafone, Type: CR, CR#429, Title: Wrong State Name in CSA_gsmSSF

Discussion:

Conclusion : approved

N2-020689: TS 23.078, Rel-5, Vodafone, Type: CR, CR#430, Title: Change Int_Continue_Without_Leg2 to Int_Disconnect_Leg (Leg2)

Discussion:

Conclusion: approved

N2-020690: TS 23.078, Rel-5, Vodafone, Type: CR, CR#431, Title: Contents of CWA at MidCall DP

Discussion:

Conclusion: approved

N2-020693: TS 29.078, Rel-5, Vodafone, Type: CR, CR#267, Title: Move Leg and Split Leg Error - Task Refused

Discussion: It would be better to centralise error handling description (into clause 10).

Conclusion : revised to N2-020797

N2-020797: TS 29.078, Rel-5, Vodafone, Type: CR, CR#267r1, Title: Move Leg and Split Leg Error - Task Refused

Discussion:

Conclusion : approved without presentation

9.5 CAMEL4 / DTMF Mid-call DP

9.6 CAMEL4/IMS

N2-020635: TS 23.278, Rel-5 , Lucent , Type: TS, Title: Draft TS 23.278

Discussion: The document presents the draft TS 23.278 v 2.1.0 which will be taken as a basis for a further work.

SDL drawing size should be 170x210. The rapporteur is using Telelogic TAU v 4.3.

Conclusion : approved as the basis for the further work

N2-020639: TS 23.278, Rel-5 , Lucent , Type: CR, Title: Draft TS 29.278

Discussion: This Tdoc contains the proposed draft for CAP specification TS 29.278 for CN2 discussion and approval.

At the last meeting (CN2#24), it has been decided that the new stage 3 specification 29.278 for CAMEL/IMS interworking shall be as follows:

- a. The specification shall contain mainly IMS ASN.1 definitions and Procedure descriptions only.
- b. Use Rel99 29.078 specification as the base for the draft 29.278.
- c. A new application context name will be used for the IMS CAP operations to avoid problem with tag numbering.

The stage 3 specification for CAMEL/IMS imported most of the common CAP types from Release 99 TS 29.078.

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However, there are a few new data types that are needed for IMS (e.g. MediaType, SIPCallID, CalledPartyURL, etc.). Hence, some new CAP modules were defined. This approach seems preferable than modifying Release 99 29.078 specification to include the new data types needed for IMS call control.

The proposed draft for TS 29.278 is attached to this CR as "drft_29278v010.doc". Significant changes from TS 29.078 are highlighted.

Comments:

- Syntax check has to be done later.

Conclusion:

- For the time being we import data types, operation and modules from R99 TS 29.078 and R99 TS 29.002. For those modules that have to have new parameters added, they will be defined in TS 29.278.
- Unused references should be removed.
- Srf module is copied from R99 TS 29.078 at the time being. We will refer to R99 gsmSRF definitions: section 6.2 will refer to TS 29.078. The same for procedure descriptions, they should contain only a reference to R99 procedure description. When this draft spec becomes approved spec, it will be easier to maintain it if there are only references to TS 29.078.
- Object identifiers should have version 4? YES
- We should have new numbers for IMS object identifiers (cap-IMS-object-identifiers(100) shall be changed). MCC will find out the source for the new numbers.
- Reference to R99 TS 29.078 would be beneficial also in procedures descriptions.
- Christian Homann (Alcatel) will give off line guidance to Angelica Remoquillo (Lucent), the rapporteur of TS 29.278, regarding PARAMETERS-BOUNDS.

Conclusion :revised to N2-020758

N2-020758: TS 23.278, Rel-5 , Lucent , Type: CR, Title: Draft TS 29.278

Discussion: This document and approved stage 3 CRs in addition, will form a document that will be sent to CN#17 Plenary meeting for approval..

Conclusion :approved without presentation

N2-020649: TS 23.008, Rel-5 , Lucent , Type: CR, Title: CR to 23.008 on the Organisation of CAMEL IMS Data

Discussion: (N4-020812) This document has some overlapping text with Alcatel's document N2-020672. Section 5.3 is changed here as well as in document N2-020674. In Alcatel's document is proposed that gsmSSF Address is dynamic data, while Lucent is proposing it as a permanent data. It should not be permanent data and Lucent is ready to accept Alcatel's proposal. Anyway, Lucent document will be taken as a base for comments.

Comments: Sections 3.8.1 and 3.8.2 are splitted further. Section numbering will be done as proposed in Alcatel's document N2-020672. Section 3.8.1.1 uses current O-CSI naming for O-IM-CSI.

In Alcatel's CR the wording is more appropriate for "MO state model". Alcatel's comments will be considered off line.

Conclusion :revised to N2-020733

N2-020733: TS 23.008, Rel-5 , Lucent , Type: CR, Title: CR to 23.008 on the Organisation of CAMEL IMS Data

Discussion : The document was presented in Joint meeting with CN4 in N4-021012. CR cover sheet should be corrected of line. The CR is revision 1.

Conclusion: CN2 endorsed, CN4 approved

N2-020672: TS 23.008, Rel-5 , Alcatel , Type: CR, Title: Addition of the O-IM-CSI, D-IM-CSI and VT-IM-CSI in 23.008

Discussion: Editor's notes in this documents should be solved.

1. Editor's note1: Is it also in IP multimedia an E164 number. Can it be also SIP URL ? refer to 22.078

23(48148)

GsmSCF address is always E.164 number, no URL. E.164 gsmSCF address is used for notification purposes.

2. Editor's note2: *The Number criteria are CS like. However can it be also SIP URL ? refer to 22.078*

Orange France: Number criteria could be SIP URL. For this CR we assume that it's ISDN# only.

Conclusion: noted

N2-020674: TS 23.008, Rel-5 , Alcatel , Type: CR, Title: Addition of the IM-SSF address variable

Discussion : The IM-SSF address is entered in the HSS/HLR at UE registration and is deleted when the HSS/HLR is notified of the UE deregistration. This variable is a transient data of the HSS/HLR identifying the IM-SSF where the IM CSI shall be downloaded.

Lucent is in favour to keep existing gsmSSF address.

Alcatel: we have permanent data and temporary data from HLR point of view. Alcatel prefers not to mix them.

How we will notify IM SSF about the change? Where the HLR stores IM SSF (in a field like it stores VLR address)? When the HLR stores VLR address, this is temporary data. GsmSCF address is almost permanent data (given by the operator).

IM SSF that is added during the registration should be used also for the notifications (Alcatel proposal). Lucent agrees that IM SSF is dynamic data assigned during registration, but Lucent proposes to use the same address list (existing field gsmSCF address, not to add a new field into HLR) Is there a risk to have try notification even if not registered?)

Alcatel and Lucent agreed that gsm SCF list includes IM-SSF address. The difference between Alcatel's and Lucent proposal is just a storage (permanent – temporary data).

Conclusion :noted

N2-020640: TS 23.278, Rel-5 , Lucent Technologies, Type: CR, Title: Stage 2 IF description for Initial DP for IMS

Discussion : When SCSCF address is different than IM-SSF address? Parameter S-CSCF address will be removed from this CR. SIP address is globally unique, S-CSCF address is not needed.

We have CalledPartyNumber and CalledPartyURL, and they are mutually exclusive and the text suggests that called party URL is never sent. "C" may not be the correct indication for a mutually exclusive parameter, therefore "E" should be used.

Additional Calling Party number is used for displaying in the phone. It is removed as according to Lucent it can not be passed by SIP, so it should not be in the CAP either. SCP is not able to change the number presented.

IMSI is not used in IMS. Lucent clarified that in Filter criteria, IMSI is passed from HSS to S-CSCF during registration. IMSI can be assigned for the user, and this parameter can be passed to the IM SSF.

Media Type can be moved closer to the ex parameter Bearer Capability.. Conditions for CalledPartyURL will be changed and the parameter is not mandatory.

Original Called Party URL and Redirecting party URL parameters will be added.

Conclusion : revised to N2-020759

N2-020759: TS 23.278, Rel-5 , Lucent Technologies, Type: CR, Title: Stage 2 IF description for Initial DP for IMS

Discussion : Called party number is clarified. It is mutually exclusive with Called party URL. MSC does not have the information under which condition which number will be used for the service logic. IM-SSF will not be able to determine whether ISDN number format or URL shall be sent. We should always have URL number as this is received in SIP message. ISDN number can be derived from SIP URL.

Original Called Party ID and Original Called Party URL in 23.078 is not explained in the same way as here that IE shall always be sent if available.

Conclusion:

- "Number" does not apply for URL

- "Conditional" and "Mandatory" will be explained only once on central place.

24(48148)

Conclusion : revised to N2-020764

N2-020764: TS 23.278, Rel-5 , Lucent Technologies, Type: CR, Title: Stage 2 IF description for Initial DP for IMS

Discussion:

Conclusion : approved without presentation

N2-020641: TS 29.278, Rel-5 , Lucent Technologies, Type: CR, Title: Stage 2 IF description for Initial DP for IMS

Discussion : This CR adds the stage 3 specification for InitialDP for CAMEL/IMS.

On page 4, Called party URL it is not necessary to refer to encoding. – this comment can be removed from procedure description.

Unused parameters and procedure descriptions will be removed from descriptions and also from the ASN.1. Other comments by Vodafone and Nokia are given off line and implemented in revised version.

Conclusion : revised to N2-020760

N2-020760: TS 29.278, Rel-5 , Lucent Technologies, Type: CR, Title: Stage 2 IF description for Initial DP for IMS

Discussion : This is the revision of N2-020641 with implemented meeting conclusions and lots of off line comments. Lucent wants to revisit the decision to delete parameters from ASN that are never used on page 3. If we have them in ASN, we have to describe them. If we later discover that we need those parameters we can later add them at the same place. It's never sent if it is not used, so there is no change in the protocol if delete them. If we import data type, we could just keep those parameters according to Alcatel.

Nokia wants to remove unused parameters, Alcatel supports Lucent to keep them. The decision is to keep unused parameters in the ASN.1 and decision is that we do not copy unused parameters to stage 2. In the procedure description we should only state that the parameter is not used (T-Mobil).

We will delete the sentence which describes when to send parameters and when not to send them as this is already defined in the stage 3. We should avoid the repetition of descriptions in stage 2 and stage 3, so they will not be copied to stage 2.

Called party number, original called party number id,the description is reworded that it is ISDN format. Orange France is in favour of keeping it.

Media Type is not BOUND., currently has tag value 1-6. Tag numbers 1-5 are used in Rel-5. For forward compatibility it would be good to start Tag values from 20. Lucent: Tag numbers does not matter because of the different application context. Tag numbers will be kept as proposed here. MediaType integer is for further study (how is it used).

In the ASN we give the reference in which specification parameters are defined. For the current CR we will put a comment that the values are for further study.

Conclusion : revised to N2-020762

N2-020762: TS 29.278, Rel-5 , Lucent Technologies, Type: CR, Title: Stage 2 IF description for Initial DP for IMS

Discussion :

Conclusion : approved without presentation

N2-020636: TS 23.278, Rel-5 , Lucent Technologies and MMO2 , Type: CR, Title: CAMEL SDL procedures for MT for unregistered subscriber

Discussion: IM-SSF is not involved in call control. Establish TemporaryConnection is not supported in IMS.

Page 7 should be aligned with a CR about the registration procedure. Editorial correction on sheet CAMEL_IMCN_MT_INVITE is needed.

Conclusion: revised to N2-020780

N2-020780: TS 23.278, Rel-5 , Lucent Technologies and MMO2 , Type: CR, Title: CAMEL SDL procedures for MT for unregistered subscriber

Discussion:

25(481448)

Conclusion: approved without presentation

N2-020637: TS 23.278, Rel-5 , Lucent Technologies, Type: CR, Title: Corrections to SDL Process gsmSSF

Discussion : CSE is not used in stage2. gsmSCF was used, the cover page is incorrect – MCC to correct the cover page offline.

Conclusion: approved

N2-020638: TS 23.278, Rel-5 , Lucent Technologies, Type: CR, Title: Various (misc) corrections/modifications to TS 23.278

Discussion :

Conclusion : approved

N2-020642: TS 23.278, Rel-5 , Lucent Technologies, Type: CR, Title: IF description for IM-SSF-gsmSCF interface (stage 2)

Discussion : Definition of “Conditional”, “Mandatory”, etc. should be centralised.

ACR should have also the parameter Time if tariff switch. Description of Time if no tariff switch should be improved.

We should leave the option “the time if no terrif switch” and mark it as “conditional”, and the description should be left in here.

Conclusion : revised to N2-020765

N2-020765: TS 23.278, Rel-5 , Lucent Technologies, Type: CR, Title: IF description for IM-SSF-gsmSCF interface (stage 2)

Discussion :

Conclusion : approved without presentation

N2-020644: TS 23.278, Rel-5 , Lucent Technologies, Type: CR, Title: Clarification of IM-SSF and imcnSSF terms

Discussion :

Conclusion : approved

N2-020679: TS 23.278, Rel-5 , Lucent Technologies, Type: CR, Title: IM-SSF procedure for sending multiple ATSI to HSS

Discussion : After ATSI Negative Response is “no”, Error is “Information not available”.

ATSI queries are sent one by one, and the response is needed to wait before sending a new query (procedure CAMEL_IMCN_Register in IM-SSF). It should be a comment in the SDL about the option to ask CSIs in parallel. We will introduce this comment about the parallel query.

Editorial comment: Decision box “Error Information Not available” should be solid line , not dotted line as for the comment. The “yes” and “no” branches should be clearly separated.

If HSS indicates a non-CAMEL subscriber on ATSI_query, then it will be an error.

Conclusion :revised to N2-020766

N2-020766: TS 23.278, Rel-5 , Lucent Technologies, Type: CR, Title: IM-SSF procedure for sending multiple ATSI to HSS

Discussion :

Conclusion :approved without presentation

N2-020680: TS 23.278, Rel-5 , Lucent Technologies, Type: CR, Title: Cancellation of old IM-SSF address for re-registration with a new S-CSCF name

Discussion : How the HLR/HSS knows the IM-SSF address based on S-CSCF address? There is a table that maps S-CSCF and IM-SSF.

26(481448)

What is the meaning of the term “lost terminal”? CN1 uses that term, but CN2 decided to remove this example about the lost terminal.

“The IM-SSF address in the gsmSCF address list shall be changed when the HSS receives a notification of a registration for a UE with a S-CSCF name” ...the word shall has to be consistant through the document.

HSS/HLR is used through document, although the term HLR could be omitted in IMS. We will use the term HLR/HSS for the time beeing, and later if necessary we will drop out HLR.

Conclusion :revised to N2-020781

N2-020781: TS 23.278, Rel-5 , Lucent Technologies, Type: CR, Title: Cancellation of old IM-SSF address for re-registration with a new S-CSCF name

Discussion :

Conclusion : approved without presentation

N2-020643: TS 29.278, Rel-5 , Lucent Technologies, Type: CR, Title: CAP operation procedures for IMS (stage 3)

Discussion: This is a late document.

Conclusion : withdrawn

N2-020726: TS 23.278, Rel-5 , Lucent Technologies, Type: CR, Title: Stage 2 IF descriptions for Connect and ContinueWithArgument operations for IMS

Discussion : This CR contains the IF descriptions to be added in 23.278 for Connect and ContinueWithArguments operations.

For mutually exclusive parameters we use “O,E”, but not “O”. It should be specified in text that at least one of them need to be present.

Original Called Party ID and Original Called Party URL should be mutually exclusive.

Conclusion :revised to N2-020799

N2-020799: TS 23.278, Rel-5 , Lucent Technologies, Type: CR, Title: Stage 2 IF descriptions for Connect and ContinueWithArgument operations for IMS

Discussion :

Conclusion : approved without presentation

N2-020725: TS 29.278, Rel-5 , Lucent Technologies, Type: CR, Title: ASN.1 and stage 3 procedures for CAP Connect and ContinueWithArgument

Discussion: *ConnectArgExtension needs to be added to ConnectArg.*

O-CSI Applicable shall be removed. General description needs an correction, e.g. “Call control function”.

Conclusion : revised to N2-020800

N2-020800: TS 29.278, Rel-5 , Lucent Technologies, Type: CR, Title: ASN.1 and stage 3 procedures for CAP Connect and ContinueWithArgument

Discussion :

Conclusion : approved without presentation, will be provided on Monday, 5th of August, 23:59 CET

N2-020801: TS 23.278, Rel-5 , Lucent Technologies, Type: TS, Title: Draft TS 23.278 v 2.1.0

Discussion :

Conclusion : Will be provided for e-mail approval by 9th of August, 23:59 CET. Deadline for rejection is 23rd of August, 23:59 CET. Since no objections received by the deadline, the document is APPROVED.

N2-020802: TS 29.278, Rel-5 , Lucent Technologies, Type: TS, Title: Draft TS 29.278 v 1.0.0

27(481448)

Discussion :

Conclusion : Will be provided for e-mail approval by 9th of August, 23:59 CET. Deadline for rejection is 23rd of August, 23:59 CET. Since no objections received by the deadline, the document is APPROVED.

9.7 CAMEL control over MT SMS

N2-020702: TS 29.002, Rel-5, Vodafone, Type: CR, Title: Description of MT SM delivery via two serving nodes

Discussion:

Conclusion: revised to N2-020708

N2-020708: TS 29.002, Rel-5, Vodafone, Type: CR, CN4 CR#442r1, Title: Description of MT SM delivery via two serving nodes

Discussion: (N4-020979) The CR replaces the current SDL description of the SMS-GMSC behaviour to show the possibility of delivery attempts via two serving nodes, and defines the interworking with CAMEL for the case when the SMS-GMSC is integrated with the VMSC.

Alcatel: The architecture diagram for MT SMS in 23.078 doesn't mention SMS-GMSC. CAMEL interaction is with the VMSC or SGSN.

Vodafone: The case where the message is delivered from the SMS-GMSC covered the situation when the SMS-GMSC and the serving VMSC are physically integrated. In functional terms, SMS-GMSC and VMSC are separated. This issue could be clarified by a separate CR for the next meeting.

The first box on page 4 should be marked as "MS" instead of "MSC". Instances of "GMSC" should be "SMS- GMSC"

Conclusion: revised to next CN2 and CN4 meeting

N2-020709: TS 29.002, Rel-5, Vodafone, Type: CR, Title: Correction of handling of MT-SMS in the SGSN

Discussion: Presented in CN2-CN4 joint meeting in N4-020709. After the subscriber data checks, the SGSN checks whether a CAMEL dialogue should be opened as specified in 3GPP TS 23.078. If required, the SGSN opens a CAMEL dialogue as specified in 3GPP TS 23.078. If the CAMEL service bars the MT SM then the failure is reported to the SMS GMSC, and the MT SM is not delivered to MS.

If the procedure is ended unsuccessfully because there is no response to paging, the SGSN sends an absent subscriber_SM error to the SMS GMSC with the absent subscriber diagnostic indication set to 'No Paging Response for GPRS'; if the location area is unknown, the SGSN sends a system failure error to the SMS GMSC. The failure in the MT SM delivery is reported to the gsmSCF as specified in 3GPP TS 23.078.

SDLs should be corrected. CAMEL procedures are not called if CAMEL is not supported.

Conclusion: revised to N4-021050 which was endorsed by CN2 without presentation

N2-020724: TS 23.078, Rel-5, Vodafone, Type: CR, CR#449, Title: Correction of handling of MT-SMS in the SGSN

Discussion: Procedure CAMEL_MT_SMS_VLR could have option triangle also. One option is to approve triangle as proposed by Vodafone, or to change the one for MT SMS.

For consistency we use diamond in this CR in this decision. Section 7.5.4.3 is not the best place, but better 7.5.4.1. Clause numbering will be checked off line.

Conclusion: revised to N2-020795

N2-020795: TS 23.078, Rel-5, Vodafone, Type: CR, CR#449r1, Title: Correction of handling of MT-SMS in the SGSN

Discussion:

Conclusion: postponed to next meeting

9.8 Inclusion of flexible tone injection

9.9 Charging notification to CSE

N2-020663: TS 23.078, Rel-5, Alcatel, Type: CR, CR#417, Title: Removal of ChargingNotification feature

Discussion:

Conclusion: approved

N2-020664: TS 29.002, Rel-5, Alcatel, Type: CR, Title: Removal of ChargingNotification feature

Discussion: The document was presented in Joint meeting with CN4 in **N4-021047**. As SA1 decided to remove Charging Notification feature and it has been already removed from stage 1, this CR is alignment with stage 1.

Conclusion: endorsed by CN2, approved by CN4

N2-020665: TS 29.078, Rel-5, Alcatel, Type: CR, CR#259, Title: Removal of ChargingNotification feature

Discussion: CR# of linked CRs should be indicated in the cover page (in N2-020663 and N2-020665)

Conclusion: approved

9.10 Enhancements of dialled services

9.11 Provision of location information of called subscriber

9.12 Notification of GPRS mobility management to CSE

9.13 CAMEL4/ ODB in HLR-SCP interface

9.14 CAMEL4/ Location Information during ongoing call

9.15 CAMEL4/GPRS AnyTimeInterrogation

N2-020670: TS 23.078, Rel-5, Alcatel, Type: CR, CR#420, Title: T_Change_Of_Position is not applicable for an MO call

Discussion : T_Change_Of_Position is not applicable for an MO call. The proposed change itself is considered to be editorial. T_Change_Of_Position description is moved to Call_Accepted description.

Tables from page 4 will be merged.

Cover page should be corrected: title should be updated to "Clean-up of the LocationInformation table for the Call_Accepted DP" and category should be "D" (editorial correction).

Conclusion: revised to N2-020785

N2-020785: TS 23.078, Rel-5, Alcatel, Type: CR, CR#420r1, Title: Clean-up of LocationInformation table for Call_Accepted DP

Discussion: I

Conclusion: approved

9.16 CAMEL4 / Functional Split into subsets

N2-020727: T-Mobile D, Type: Discussion document, Title: Partial Implementations of CAMEL Phase 4

Discussion: This document contains in attachment the output documents of the SA1 meeting that took place July 8th, 2002 in Rome, Italy. To resolve the controversy on the topic of functional subsets for CAMEL Phase 4, SA1 has decided to discuss this topic on a SA1 SWG CAMEL meeting.

Following documents are attached:

S1-0201495: Working Assumption concerning the feature negotiation for CAMEL phase 4 (Source: Siemens, Vodafone, T-Mobile, Alcatel, Lucent Technologies) and

S1-0201500: Handling of partial implementations of CAMEL phase 4 (CR to 22.078; Source: Siemens AG, Lucent Technologies, T-Mobile, Alcatel, Vodafone)

SA1 has been advised that it is not likely that the matter will be complete from the CN2 perspective until TSGs#18."

Conclusion: noted

N2-020659: TS 23.078, Rel-5, Alcatel, Type: CR, CR#416, Title: Handling of partial implementations of CAMEL phase 4

Discussion: A functional entity (VMSC, GMSC or SGSN) may support the complete CAMEL phase 4 or, as a network option, it may support the complete CAMEL phase 3 functionality and offer a partial implementation of CAMEL phase 4 in addition.

Nokia: If partial CAMEL phase 4 is supported, then should be indicated all functions supported. Therefore, parameters should be conditional.

Vodafone's comments:

- 1) The list of additional capabilities indicated from gsmSSF to gsmSCF should be for CS only, and only applicable to the GMSC/VMSC. There is no value in adding this for the SGSN, or for SMS etc.
- 2) The list of additional capabilities indicated from gsmSSF to gsmSCF should only be in IDP and ICA ack, not anywhere else. This represents Vodafone's understanding of what was agreed at the SA1 CAMEL meeting in Rome. If these two comments are accepted, then Vodafone could agree the CR. If they won't agree to these, then an e-mail discussion should be proposed on exactly what is required.

Vodafone proposes to remove "Offered CAMEL 4 functionalities" from the table in section VLR or SGSN to gsmSCF information flow - from Mobility Management Event Notifications. T-Mobile would like to keep this parameter. If we keep, we should remove SGSN from the description.

On page 4 "Capabilities" of CAMEL phase 4 are described and there is a list of CSIs. Later "Functionalities" are described, as well as the list of functionalities. Chairman prefers a term "functional subsets" or to find better terms for these 2 issues.

Why different name for sets sent to HLR and SCF? CSIs are rough level, and the other level is very detailed level of parameters (T-Mobile)

We should have clear definitions for them in subclause 2 and refer later to description. T-Mobile: What would be possible alternative on naming to have it more clear?

It should be clearly stated: The HLR and gsmSCF are informed on different level of detail about a partial implementation of CAMEL phase 4 via an indication of the capabilities and functionalities respectively offered by the entity to the user. The HLR is generally informed on a CSI-level (the offered capabilities) while the gsmSCF is informed on a more detailed level of the functionalities offered by the entity. The gsmSCF shall not use capabilities or functionalities of a functional entity if they are not offered by this functional entity.

We can change CAP spec, but not change MAP spec. Description of the parameters should not be in stage3.

The functionalities of CAMEL phase 4 which may be offered to the gsmSCF are listed on page 5.

Conclusion:

We will introduce a new table, and we will leave the introduction.

Conclusion: revised to N2-020734

N2-020734: TS 23.078, Rel-5, Alcatel, Type: CR, CR#416r1, Title: Handling of partial implementations of CAMEL phase 4

Discussion: The document was presented in CN2-CN4 Joint meeting in **N4-0201044**.

The capabilities of CAMEL phase 4 which may be offered to the HLR are listed in section 1.1.1 (“**Offered CAMEL4 Capabilities**”). CAMEL phase 4 capabilities are the various enhancements indicated by the CSIs. In addition, the support of CAMEL phase 4 "Enhancement of Provide Subscriber Information" is treated as a capability. A functional entity will indicate to the HLR all the capabilities it offers.

The functionalities of CAMEL phase 4 which may be offered to the gsmSCF are listed in section 1.1.2 (“**Offered CAMEL4 Functionalities**”). The Offered CAMEL4 Functionalities are the new and enhanced functionalities of CAMEL 4 which may be offered on a more detailed level. A functional entity (VMSC, GMSC or SGSN) shall indicate to the gsmSCF all the functionalities it offers.

SSF shall indicate all options that supports.

Operator can administrate the list of offered functionalities – that is the meaning of the optionality of the components in the Offered CAMEL 4 functionalities structure. The purpose of this contribution is to simplify roaming agreements and testing. Original reason was to support partial implementation, but now it is a situation that operator can decide which features to offer to the roaming subscriber.

“S” is proper notation for “OfferedCAMEL4 functionality” and specific conditions should be defined (“O” means that it is service logic dependent)

Conclusion: revised to N2-020775 (N4-0201044 is revised to N4-021091)

N2-020775: TS 23.078, Rel-5, Alcatel, Type: CR, CR#416r2, Title: Handling of partial implementations of CAMEL phase 4

Discussion: CR has to be tidied up in order to make it readable due to lot’s of change bars.

T-Mobil wants to indicate M-CSI functionality to the gsmSCF; M-CSI capability to the HLR is not so critical. We will keep the indication of the M-CSI going from VLR to gsmSCF, but remove it from the VLR to HLR IFs. The logical consequence of this is that the HLR can't send any indication of offered M-CSI in the ATSI ack message.

The relationship in ICA is that new MSC can indicate ICA support towards SCF. M-CSI content that HLR sends to VLR is identical in CAMEL3 and CAMEL4? There is some difference between the M-CSI for CAMEL phase 3 and CAMEL phase 4, but if the implementation supports CAMEL phase 4, then the support of CAMEL phase 4 M-CSI is mandatory.

In InsertSubscriberDataack we remove all M-CSI (from the VLR-HLR interface) , but it is not removed from the MSC-SCP interface.

Vodafone: MG-CSI relates to the reporting of mobility management events in the packet switched domain.

Working assumption

- Indication of M-CSI will be deleted from all the interfaces. Deletion of M-CSI information element from various information flows is a result. Support of M-CSI is indicated to SCP by CAP. It is not indicated in MAP protocol (VLR to HLR information flow).
- MG-CSI shall not be part of VLR interface (will be removed from VLR column, i.e. “S” should be replaced by “-“).
- In chapter 4.6.8, “Offered CAMEL4 Capabilities” should be replaced by “Offered CAMEL4 CSIs”.
- Subclause 1.1.1 should read: “CSIs of CAMEL 4 for which indication of support may be offered to the HLR, are the following:...”

Conclusion: revised to N2-020786 (N4-021091 is revised to N4-021093)

N2-020786: TS 23.078, Rel-5, Alcatel, Type: CR, CR#416r3, Title: Handling of partial implementations of CAMEL phase 4

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Discussion: Some open issues are marked as "for further study".

Conclusion: Noted by CN4 as N4-021093, sent for e-mail approval by MCC. Deadline for rejection is 12.8., 17:00 CET. Since no objections received on CN2 e-mail list until the deadline, the document is APPROVED.

N2-020763: TS 23.078, Rel-5, Vodafone, Type: CR, CR#451, Title: Handling of partial implementations of CAMEL phase 4

Discussion: (N4-021072) This CR contains editorial and technical revisions of CR 23.078-416r1 (N2-020734). CR contains modification of the new parameters for the handling of "supported CAMEL 4 subsets" such that they handle now the "partial CAMEL implementations" by an entity.

In addition to the indicated CSI-s, "support of CAMEL ph4 ATI for GPRS is indicated to the HLR". ATI itself is not directly visible for the VMSC / SGSN. Therefore, this issue is indicated as PSI in the current contribution.

Vodafone proposes that PSI is not indicated to SCP. Therefore, SGSN does not need to indicate anything. T-Mobil: It would be nice to know PSI support in advance, rather than to try and possibly fail.

Telecom Italia supports Handling of partial implementations of CAMEL phase 4 in general, but does not agree with negotiation of ICAoperation, i.e. if CAMEL4 is supported, ICA must be supported (not negotiable).

What is the meaning of CAMEL 4 O-CSI? That means that the Camel Capability Handling indicates CAMEL4.

Why is M-CSI part of the list of CSIs?

Conclusion: *withdrawn*

N2-020660: TS 29.002, Rel-5, Alcatel, Type: CR, Title: Handling of partial implementations of CAMEL phase 4

Discussion: In "Offered CAMEL4 functionalities" on page 17, there is spelling error in "Change of position" parameter name and the comment that shall be removed, description of bit streams. CR number in "other specs affected" field will be added. Alcatel agreed.

Conclusion: *revised to N2-020735*

N2-020735: TS 29.002, Rel-5, Alcatel, Type: CR, Title: Handling of partial implementations of CAMEL phase 4

Discussion: N4-021045

Conclusion: *revised to N2-020776*

N2-020776: TS 29.002, Rel-5, Alcatel, Type: CR, Title: Handling of partial implementations of CAMEL phase 4

Discussion: *The document was presented in the CN2-CN4 Joint meeting in N4-021092.* This document does not contain any parameters that are marked for further study.

The name "capabilities" should be replaced with "CSIs". The parameter "Offered CAMEL 4 CSIs" and "User error" shall be in different lines of cells in the table (there should be one parameter per row). Originator of the CR will correct this and do the correct numbering (tag numbers and code points of enumerated types & bit strings should be tidied up).

M-CSI should be deleted from "Offered CAMEL4 Capabilities".

Conclusion: *revised to N2-020787 and to N4-021094*

N2-020787: TS 29.002, Rel-5, Alcatel, Type: CR, Title: Handling of partial implementations of CAMEL phase 4

Discussion:

Conclusion: *Will be sent for e-mail approval by 17:00 CET on 5th of August as N4-021094 to CN4 e-mail list. If no objections are received on CN4 list by 17:00 on the 12th of August it becomes an agreed CN4 output to CN4#17. The document is CN2 endorsed.*

N2-020661: TS 23.008, Rel-5, Alcatel, Type: CR, Title: Handling of partial implementations of CAMEL phase 4

Discussion: *Presented in joint meeting in N4-021046.* Other specifications affected field should be updated.

- "Capabilities" should be replaced by "CSIs" throughout the document.

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- The table in 2.14.2.1 there is an entry showing support of CAMEL phase 4 for the M-CSI Negotiated CAMEL Capability Handling. We need to delete "4" possibility. The same applies to the SS-CSI.

Conclusion: revised to N2-020788 and N4-021095 The document is CN2 endorsed.

N2-020788: TS 23.008, Rel-5, Alcatel, Type: CR, Title: Handling of partial implementations of CAMEL phase 4

Discussion:

Conclusion: will be sent for e-mail approval in N4-021095 by 17:00 CET on 5th of August. If no objections are received on CN4 list by 17:00 on the 12th of August it becomes an agreed CN4 output to CN4#17. The document is CN2 endorsed.

N2-020662: TS 29.078, Rel-5, Alcatel, Type: CR, CR#258, Title: Handling of partial implementations of CAMEL phase 4

Discussion: Syntax error to be corrected and "other specs affected" field should be updated

Conclusion: revised to N2-020736

N2-020736: TS 29.078, Rel-5, Alcatel, Type: CR, CR#258r1, Title: Handling of partial implementations of CAMEL phase 4

Discussion:

Conclusion: revised to N2-020777

N2-020777: TS 29.078, Rel-5, Alcatel, Type: CR, CR#258r2, Title: Handling of partial implementations of CAMEL phase 4

Discussion: There are no controversial parameters visible in this CR. This document should be in the separate package.

Conclusion: approved

N2-020728: T-Mobile D, Type: Discussion document, Title: Partial Implementations of CAMEL Phase 4: Open Issues

Discussion: This document lists the open issues concerning partial implementations of CAMEL Phase 4.

Issue no.1: Is there an impact in the error handling? What kind of impact?

In first case, MSC does not support ICA and indicate that it does not support it, we should not specify any error handling. We do not want to support partial implementations. In case 2, MSC supports it, but it does not offer it for roamers.

Conclusion on issue no. 1: We do not have to specify new error handling when SSP does not support the functionality that the SCP is requesting.

Issue no. 2: Consider the case of a network element that supports a certain CAMEL4 feature (e.g. the support of ICA). Further consider, that this network element does not offer the feature (i.e. it does not indicate the support towards the gsmSCF). What happens if the gsmSCF uses the functionality anyway (i.e. the gsmSCF sends an ICA, although the MSC did NOT offer it in the IDP)? Shall there be an error? Shall the network element handle the ICA anyway? Do we have to specify this in the standard, or can we leave it open?

Discussion on item 2: Alcatel: From SCP point of view there should be no difference in case if ICA is not supported and not implemented. It should be not relevant for SCP.

When the SCP gets an indication that SSF does not support a functionality, SCP shall not use these functionalities. CN2 does not specify what SSF does if SCP tries to use not supported capability or functionality.

Vodafone: wants to specify some "feature not supported" error. Alcatel and Marconi's approach is approach is that specifying of "feature not supported" error makes much more complicated roaming agreements.

Nokia does not want to standardise how to reject the functions that are implemented, but offered. . In case MSC does support the feature but it didn't offer it previously, this behaviour should be vendor specific.

According to Nokia, in case of ICA out-of-the-blue, it may be configuration error. This error handling in specific cases could be studied later. T-Mobil: will make remark to error handling in Open issues list.

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Conclusion on issue no.2: SCP shall not try to use capabilities or functionalities which the SSF does not support. CN2 does not specify what the SSF does if SCP tries to use non-supported capability or functionality. We should only standardise the primary issues.

Issue no. 3: The capabilities and functionalities offered by a network element might be different, depending on whether the indication is sent to a HLR/gsmSCF inside the HPLMN or to a different PLMN. Do we have to specify this in general?

Shall there be a differentiation just between HPLMN and VPLMN, or on a network basis (e.g. MCC/MNC), or on a network node basis (full GT of the network node)? Do we need to specify this, or can this be left vendor specific?

Conclusion on issue no. 3: We leave the subset negotiation as vendor specific, so we will not specify anything in the specification.

Issue no. 4: Shall we indicate the offered functionalities in the MM-Event?

Conclusion on issue no. 4: Support of the functionalities in the MM-Event is left opened.

Conclusion: revised to N2-020778

N2-020778: T-Mobile D, Type: Discussion document, Title: Partial Implementations of CAMEL Phase 4: Open Issues

Discussion:

Conclusion: noted

10 Review of dates and hosts for future meetings

Review of the N2 meeting schedule for 2002

TITLE	TYPE	DATES	LOCATION	CTRY
3GPPCN2#26	WG	23-27 September	Miami	USA
3GPPCN2#27	WG	11-15 November	Bangkok	Thailand

11 Closing of the meeting (15:30 Friday)

Action points:

- TS 23.278 and TS 29.278 will be presented to CN#17 for approval
- Handling of partial implementations of CAMEL phase 4 and CPH should form separate CR packages for CN#17
- As "CAMEL4 Functional split into subsets" has changed the name, MCC should check all other places like WP, ToR, WID and replace it by "Handling of partial implementations of CAMEL phase 4"
- TS v.6.11.1 and TS 03.78 v 7.8.1 will be created after the meeting by MCC. New versions will contain SDL source files attached and editorial clean-up of the sheet 7(8) in procedure "CAMEL_MT_GMSC_INIT"

The meeting was closed at 15:30. Chairman thanked to all the participants for very efficient work during this meeting.

Annex A

Attendees list

Name	Organization represented	Status, partner	Phone	Fax	e-mail
Mr. Nuno Paulo Dias Pereira	BOUYGUES Telecom	3GPPMEMBER (ETSI)	+33 01 39 26 69 09	+33 01 39 45 40 26	ndiasper@bouyguestelecom.fr
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Annex B Output Documents

CAMEL 3 approved CRs to be presented in CN#17 for approval

TDoc #	WI	Rel	Title	Spec	CR	Rev	Cat	Version	Conclusion	So
N2-020742	CAMEL3	R99	Inconsistent description on ACR: time information	23.078	441	1	F	3.D.0	approved	Siem AG
N2-020743	CAMEL3	Rel-4	Inconsistent description on ACR: time information	23.078	442	1	A	4.5.1	approved	Siem AG
N2-020744	CAMEL3	Rel-5	Inconsistent description on ACR: time information	23.078	443	1	A	5.0.0	approved	Siem AG
N2-020745	CAMEL3	R99	Correction of 29.078 CANCEL-gprs	29.078	262	1	F	3.12.0	approved	Alca
N2-020746	CAMEL3	Rel-4	Correction of 29.078 CANCEL-gprs	29.078	263	1	A	4.5.0	approved	Alca
N2-020748	CAMEL3	R99	Removal of ReleaseCall from Assisting gsmSSF	29.078	254	1	F	3.12.0	approved	Noki
N2-020749	CAMEL3	Rel-4	Removal of ReleaseCall from Assisting gsmSSF	29.078	255	1	A	4.5.0	approved	Noki
N2-020750	CAMEL3	Rel-5	Removal of ReleaseCall from Assisting gsmSSF	29.078	256	1	A	5.0.0	approved	Noki
N2-020751	CAMEL3	R99	Correction in CAMEL_MO_Dialled_Services procedure	23.078	433	1	F	3.13.0	approved	Alca
N2-020754	CAMEL3	Rel-4	CAMEL3 inter-working with Rel-4 GPRS barring	23.078	411	1	F	4.5.1	approved	Noki
N2-020755	CAMEL3	Rel-5	CAMEL3 inter-working with Rel-4 GPRS barring	23.078	450		A	5.0.0	approved	Noki
N2-020752	CAMEL3	Rel-4	Correction in CAMEL_MO_Dialled_Services procedure	23.078	434	1	A	4.5.1	approved	Alca
N2-020753	CAMEL3	Rel-5	Correction in CAMEL_MO_Dialled_Services procedure	23.078	435	1	A	5.0.0	approved	Alca

CAMEL4 approved CRs to be presented in CN#17 for approval

TDoc #	WI	Title	Spec	CR	Re	C	Versi	Conclusio	Source
N2-020655	CAMEL4	Move Leg not allowed before Active phase of "normal" A-B call	23.078	414		F	5.0.0	approved	Vodafone
N2-020663	CAMEL4	Removal of ChargingNotification feature	23.078	417		C	5.0.0	approved	Alcatel
N2-020665	CAMEL4	Removal of ChargingNotification feature	29.078	259		C	5.0.0	approved	Alcatel
N2-020668	CAMEL4	ASN.1 syntax basic corrections	29.078	261		F	5.0.0	approved	Alcatel
N2-020671	CAMEL4	Correction of clause 4.3.3 N-CSI	23.078	421		F	5.0.0	approved	Alcatel
N2-020675	CAMEL4	Inconsistency for the negotiated Camel Capability handling of the D-CSI	23.078	422		F	5.0.0	approved	Alcatel
N2-020678	CAMEL4	Editorial correction of 29.078 CANCEL-gprs	29.078	264		D	5.0.0	approved	Alcatel
N2-020681	CAMEL4	Change "Initial Call Segment" to "CSID1"	23.078	423		F	5.0.0	approved	Vodafone
N2-020682	CAMEL4	Change "Initial Call Segment" to "CSID1"	29.078	265		F	5.0.0	approved	Vodafone
N2-020683	CAMEL4	Removal of DP_MidCall state from CAMEL_EXPORT_LEG_MSC	23.078	424		F	5.0.0	approved	Vodafone
N2-020684	CAMEL4	FtN in Perform Call Handling ack	23.078	425		F	5.0.0	approved	Vodafone
N2-020687	CAMEL4	Removal of "Note that" in descriptions of CPH operations	23.078	428		F	5.0.0	approved	Vodafone
N2-020688	CAMEL4	Wrong State Name in CSA_gsmSSF	23.078	429		F	5.0.0	approved	Vodafone
N2-020689	CAMEL4	Change Int_Continue_Without_Leg2 to Int_Disconnect_Leg (Leg2)	23.078	430		F	5.0.0	approved	Vodafone
N2-020690	CAMEL4	Contents of CWA at MidCall DP	23.078	431		C	5.0.0	approved	Vodafone
N2-020692	CAMEL4	Introduction of CPH Definitions	29.078	266		D	5.0.0	approved	Vodafone
N2-020741	CAMEL4	ERB when VT call is reported in DP T_Busy due to Call Deflection	29.078	270	1	F	5.0.0	approved	Siemens AG

N2-020747	CAMEL4	Secondary PDP context for DP change of position context	23.078	446	1	F	5.0.0	approved	Siemens AG
N2-020768	CAMEL4	CPH clarification on overall SDL architecture	23.078	412	1	B	5.0.0	approved	Nokia
N2-020770	CAMEL4	Disconnect of penultimate leg in CSID1	23.078	415	1	F	5.0.0	approved	Vodafone
N2-020771	CAMEL4	No use of Call Segment ID for the direct gsmSCF - gsmSRF case	23.078	419	1	F	5.0.0	approved	Alcatel
N2-020777	CAMEL4	Handling of partial implementations of CAMEL phase 4	29.078	258	2	C	5.0.0	approved	Alcatel
N2-020779	CAMEL4	Introduction of CPH Definitions	23.078	432	1	D	5.0.0	approved	Vodafone
N2-020782	CAMEL4	TC-U-Abort before the TC dialogue is established	29.078	257	1	F	5.0.0	approved	Nokia
N2-020784	CAMEL4	Playing of Warning Tones	29.078	260	1	B	5.0.0	approved	Alcatel
N2-020785	CAMEL4	Cleanup of the LocationInformation table for the call accepted DP	23.078	420	1	D	5.0.0	approved	Alcatel
N2-020786	CAMEL4	Handling of partial implementations of CAMEL phase 4	23.078	416	3	C	5.0.0	approved	Alcatel
N2-020792	CAMEL4	CSA_gsmSSF: Handling signals in states such as DL_ack	23.078	426	1	F	5.0.0	approved	Vodafone
N2-020793	CAMEL4	Detail description for applicability of call cases	23.078	447	2	F	5.0.0	approved	Siemens AG
N2-020794	CAMEL4	Playing of Warning Tones	23.078	418	2	B	5.0.0	approved	Alcatel
N2-020797	CAMEL4	Move Leg and Split Leg Error - Task Refused	29.078	267	1	F	5.0.0	approved	Vodafone

Documets for e-mail approval:

TDoc #	Type	Title	Source	WI	CR	Rev	Cat	Spec	Rel	Conclusion	Versi
N2-020768	CR	CPH clarification on overall SDL architecture	Nokia	CAMEL4	412	1	B	23.078	Rel-5	approved	5.0.0
N2-020786	CR	Handling of partial implementations of CAMEL phase 4	Alcatel	CAMEL4	416	3	C	23.078	Rel-5	approved	5.0.0
N2-020801	TS	Draft TS 23.278 v 2.1.0	Rapporteur	IMS-CAMEL				23.278	Rel-5	See Note +approved	2.1.0
N2-020802	TS	Draft TS 29.278 v 1.0.0	Rapporteur	IMS-CAMEL				29.278	Rel-5	See Note +approved	1.0.0

Note 1: Sent to CN2 e-mail list for approval. The deadline for rejection is 23rd of August 23:59 CET. The Draft report will be updated after the deadline. All the documents that have been sent for e-mail approval are marked as “approved”, since no objections received by the deadline.

Approved Output Liaison Statements

TDoc #	Type	Title	Source	Conclusion	To	CC
N2-020737	LS OUT	Reply to "Questions raised at CAMEL IREG"	CN2	approved	GSM-A CAMEL IREG	
N2-020796	LS OUT	Reply to “LS on Network Integration Testing”	CN2	approved	TC SPAN	

Annex C List of Documents

TDoc #	Type	Title	Source	WI	CR	Rev	Cat	Rel	Versi	Spec	Conclusi
N2-020629	Agenda	Meeting agenda	CN2 chairman								approved
N2-020630	Agenda	Allocation of documents to agenda items	CN2 chairman								approved
N2-020631	CR	CAMEL3 inter-working with Rel-4 GPRS barring	Nokia	CAMEL 3	411		F	Rel-4	4.5.1	23.078	revised to N2-020754
N2-020632	DISC	CAMEL4 open issue list	CN2 chairman								revised to N2-020756
N2-020633	CR	CPH clarification on overall SDL architecture	Nokia	CAMEL 4	412		B	Rel-5	5.0.0	23.078	revised to N2-020768
N2-020634	CR	Only one AC/ACR per BCSM	Nokia	CAMEL 4	413		F	Rel-5	5.0.0	23.078	rejected
N2-020635	Info	Draft 23.278	Lucent Technologies	IMS-CAMEL				Rel-5	2.0.0	23.278	approved
N2-020636	CR	CAMEL SDL procedures for MT for unregistered subscriber	Lucent TechnologiesAnd	IMS-CAMEL			F	Rel-5	2.0.0	23.278	revised to N2-020780
N2-020637	CR	Corrections to SDL Process gsmSSF	Lucent Technologies	IMS-CAMEL			F	Rel-5	2.0.0	23.278	approved
N2-020638	CR	Various (misc) corrections/modifications to TS 23.278	Lucent Technologies	IMS-CAMEL			F	Rel-5	2.0.0	23.278	approved
N2-020639	TS	TS 29.278 v0.1.0	Lucent Technologies	IMS-CAMEL			F	Rel-5	(new)	29.278	revised to N2-020758
N2-020640	CR	Stage 2 IF description for Initial DP for IMS.	Lucent Technologies	IMS-CAMEL			F	Rel-5	2.0.0	23.278	revised to N2-020759
N2-020641	CR	InitialDP CAP operation procedures for IMS (Stage 3)	Lucent Technologies	IMS-CAMEL			F	Rel-5	(new)	29.278	revised to N2-020760

N2-020642	CR	IF description for IM-SSF-gsmSCF interface (stage 2)	Lucent Technologies	IMS-CAMEL			F	Rel-5	2.0.0	23.278	revised to N2-020765
N2-020643	CR	CAP operation procedures for IMS (stage 3)	Lucent Technologies	IMS-CAMEL			F	Rel-5	(new)	29.278	withdrawn
N2-020644	DISC	Clarification of IM-SSF and imcnSSF terms	Lucent Technologies	IMS-CAMEL			F	Rel-5	2.0.0	23.278	approved
N2-020645	CR	Removal of ReleaseCall from Assisting gsmSSF	Nokia	CAMEL 3	254		F	R99	3.12.0	29.078	revised to N2-020748
N2-020646	CR	Removal of ReleaseCall from Assisting gsmSSF	Nokia	CAMEL 3	255		A	Rel-4	4.5.0	29.078	revised to N2-020749
N2-020647	CR	Removal of ReleaseCall from Assisting gsmSSF	Nokia	CAMEL 3	256		A	Rel-5	5.0.0	29.078	revised to N2-020750
N2-020648	CR	TC-U-Abort before the TC dialogue is established	Nokia	CAMEL 4	257		F	Rel-5	5.0.0	29.078	revised to N2-020782
N2-020649	Info	CR to 23.008 on the Organisation of CAMEL IMS Data	Lucent Technologies	IMS-CAMEL			B	Rel-5	V5.1.0	23.008	revised to N2-020733
N2-020650	DISC	Discussion of changes in revised WID for PRESNC	Lucent Technologies /	PRESNC				Rel-6			noted
N2-020651	WID	Revised WID for PRESNC	Lucent Technologies /	PRESNC				Rel-6			noted
N2-020652	WID	WID for Release 6 commonality and interoperability between IMSs	Lucent Technologies /	???				Rel-6			noted
N2-020653	LS IN	Reply LS on Immediate Service Termination	SA3 (Vodafone)	To: CN4, CC: SA, CN2							noted
N2-020654	LS IN	LS on Network Integration Testing	TC SPAN (Teleko)	To: CN, CN2, CN3,							noted
N2-020655	CR	Move Leg not allowed before Active phase of "normal" A-B call	Vodafone	CAMEL 4	414		F	Rel-5	5.0.0	23.078	approved
N2-020656	CR	Clarification on re-connecting held parties in a CPH configuration	Vodafone	CAMEL 4			F	Rel-5	5.7.0	22.078	revised to N2-020769
N2-020657	CR	Disconnect of penultimate leg in CSID1	Vodafone	CAMEL 4	415		F	Rel-5	5.0.0	23.078	revised to N2-020770
N2-020658	DISC	Handling of CRs proposing ASN.1 changes	Alcatel								noted
N2-020659	CR	Handling of partial implementations of CAMEL phase 4	Alcatel	CAMEL 4	416		C	Rel-5	5.0.0	23.078	revised to N2-020734
N2-020660	CR	Handling of partial implementations of CAMEL phase 4	Alcatel	CAMEL 4			C	Rel-5	5.2.0	29.002	revised to N2-020735
N2-020661	CR	Handling of partial implementations of CAMEL phase 4	Alcatel	CAMEL 4			C	Rel-5	5.1.0	23.008	revised to N2-020788

N2-020662	CR	Handling of partial implementations of CAMEL phase 4	Alcatel	CAMEL 4	258		C	Rel-5	5.0.0	29.078	revised to N2-020736
N2-020663	CR	Removal of ChargingNotification feature	Alcatel	CAMEL 4	417		C	Rel-5	5.0.0	23.078	approved
N2-020664	CR	Removal of ChargingNotification feature	Alcatel	CAMEL 4			C	Rel-5	5.2.0	29.002	endorsed by CN2
N2-020665	CR	Removal of ChargingNotification feature	Alcatel	CAMEL 4	259		C	Rel-5	5.0.0	29.078	approved
N2-020666	CR	Playing of Warning Tones	Alcatel	CAMEL 4	418		B	Rel-5	5.0.0	23.078	revised to N2-020783
N2-020667	CR	Playing of Warning Tones	Alcatel	CAMEL 4	260		F	Rel-5	5.0.0	29.078	revised to N2-020784
N2-020668	CR	ASN.1 syntax basic corrections	Alcatel	CAMEL 4	261		F	Rel-5	5.0.0	29.078	approved
N2-020669	CR	No use of Call Segment ID for the direct gsmSCF - gsmSRF case	Alcatel	CAMEL 4	419		F	Rel-5	5.0.0	23.078	revised to N2-020771
N2-020670	CR	T_Change_Of_Position is not applicable for an MO call.	Alcatel	CAMEL 4	420		F	Rel-5	5.0.0	23.078	revised to N2-020785
N2-020671	CR	Correction of clause 4.3.3 N-CSI	Alcatel	CAMEL 4	421		F	Rel-5	5.0.0	23.078	approved
N2-020672	CR	Addition of the O-IM-CSI, D-IM-CSI and VT-IM-CSI in 23.008	Alcatel	CAMEL 4			F	Rel-5	5.1.0	23.008	noted
N2-020673	CR	Wrong Camel capability for D-CSI, T-CSI, VT-CSI and D-CSI	Alcatel	CAMEL 4			F	Rel-5	5.1.0	23.008	endorsed
N2-020674	CR	Addition of the IM-SSF address variable	Alcatel	CAMEL 4			F	Rel-5	5.1.0	23.008	noted
N2-020675	CR	Inconsistency for the negotiated Camel Capability handling of the D-CSI	Alcatel	CAMEL 4	422		F	Rel-5	5.0.0	23.078	approved
N2-020676	CR	Correction of 29.078 CANCEL-gprs	Alcatel	CAMEL 3	262		F	R99	3.12.0	29.078	revised to N2-020745
N2-020677	CR	Correction of 29.078 CANCEL-gprs	Alcatel	CAMEL 3	263		A	Rel-4	4.5.0	29.078	revised to N2-020746
N2-020678	CR	Editorial correction of 29.078 CANCEL-gprs	Alcatel	CAMEL 4	264		D	Rel-5	5.0.0	29.078	approved
N2-020679	CR	IM-SSF procedure for sending multiple ATSI to HSS	Lucent Technologies	IMS-CAMEL			F	Rel-5	2.0.0	23.278	revised to N2-020766
N2-020680	CR	Cancellation of old IM-SSF address for re-registration with a new S-CSCF name	Lucent Technologies	IMS-CAMEL			F	Rel-5	2.0.0	23.278	revised to N2-020781
N2-020681	CR	Change "Initial Call Segment" to "CSID1"	Vodafone	CAMEL 4	423		F	Rel-5	5.0.0	23.078	approved

N2-020682	CR	Change "Initial Call Segment" to "CSID1"	Vodafone	CAMEL 4	265		F	Rel-5	5.0.0	29.078	approved
N2-020683	CR	Removal of DP_MidCall state from CAMEL_EXPORT_LEG_MSC	Vodafone	CAMEL 4	424		F	Rel-5	5.0.0	23.078	approved
N2-020684	CR	FtN in Perform Call Handling ack	Vodafone	CAMEL 4	425		F	Rel-5	5.0.0	23.078	approved
N2-020685	CR	CSA_gsmSSF: Handling signals in states such as DL_ack	Vodafone	CAMEL 4	426		F	Rel-5	5.0.0	23.078	revised to N2-020792
N2-020686	CR	Use of Release Call and Release Call Segment in gsmSSF processes	Vodafone	CAMEL 4	427		C	Rel-5	5.0.0	23.078	revised to next meeting
N2-020687	CR	Removal of "Note that" in descriptions of CPH operations	Vodafone	CAMEL 4	428		F	Rel-5	5.0.0	23.078	approved
N2-020688	CR	Wrong State Name in CSA_gsmSSF	Vodafone	CAMEL 4	429		F	Rel-5	5.0.0	23.078	approved
N2-020689	CR	Change Int_Continue_Without_Leg2 to Int_Disconnect_Leg (Leg2)	Vodafone	CAMEL 4	430		F	Rel-5	5.0.0	23.078	approved
N2-020690	CR	Contents of CWA at MidCall DP	Vodafone	CAMEL 4	431		C	Rel-5	5.0.0	23.078	approved
N2-020691	CR	Introduction of CPH Definitions	Vodafone	CAMEL 4	432		D	Rel-5	5.0.0	23.078	revised to N2-020779
N2-020692	CR	Introduction of CPH Definitions	Vodafone	CAMEL 4	266		D	Rel-5	5.0.0	29.078	approved
N2-020693	CR	Move Leg and Split Leg Error - Task Refused	Vodafone	CAMEL 4	267		F	Rel-5	5.0.0	29.078	revised to N2-020797
N2-020694	DISC	CPH: Open Issues & Decisions	Vodafone					Rel-5			revised to N2-020767
N2-020695	DISC	CAMEL Phase 3: Questions raised at CAMEL IREG	Vodafone					Rel-5			noted
N2-020696	CR	Setting of Leg1_Status Variable	Vodafone	CAMEL 4			F	Rel-5	5.3.0	23.018	endorsed by CN2
N2-020697	CR	Correction in CAMEL_MO_Dialled_Services procedure	Alcatel	CAMEL 3	433		F	R99	3.13.0	23.078	revised to N2-020751
N2-020698	CR	Correction in CAMEL_MO_Dialled_Services procedure	Alcatel	CAMEL 3	434		A	Rel-4	4.5.0	23.078	revised to N2-020752
N2-020699	CR	Correction in CAMEL_MO_Dialled_Services procedure	Alcatel	CAMEL 3	435		A	Rel-5	5.0.0	23.078	revised to N2-020753
N2-020700	CR	Handling Password and WrongPasswordAttemptsCounter in ATSI result and ATMod	Northel	CAMEL 4	436		F	Rel-5	5.0.0	23.078	withdrawn
N2-020701	CR	Ordering D-CSI destination number triggering criterion	Northel	CAMEL 4	437		C	Rel-5	5.0.0	23.078	revised to N2-020761

N2-020702	CR	Description of MT SM delivery via two serving nodes	Vodafone	TEI_5	CN 4 CR		F	Rel-5	5.2.0	29.002	revised to N2-020708
N2-020703	Report	CN2#24 Draft Meeting Report	MCC								approved
N2-020704	Report	CN#16 Draft Meeting Report	MCC								noted
N2-020705	WP	Latest version of the Work Plan	MCC								noted
N2-020706	other	SDL source files for TS 03.078 for R97	MCC	CAMEL 2				R97	6.b.0	03.78	approved
N2-020707	other	SDL source files for TS 03.078 for R98	MCC	CAMEL 2				R98	7.8.0	03.78	approved
N2-020708	CR	Description of MT SM delivery via two serving nodes	Vodafone	TEI_5	CN 4 CR	1	F	Rel-5	5.2.0	29.002	revised to next meeting
N2-020709	CR	Correction of handling of MT-SMS in the SGSN	Vodafone	CAMEL 4			F	Rel-5	5.2.0	29.002	revised to N4-021050
N2-020710	CR	ERB when VT call is reported in DP T_Busy due to Call Deflection	Siemens AG	CAMEL 3	438		F	R99	3.D.0	23.078	rejected
N2-020711	CR	ERB when VT call is reported in DP T_Busy due to Call Deflection	Siemens AG	CAMEL 3	439		A	Rel-4	4.5.0	23.078	rejected
N2-020712	CR	ERB when VT call is reported in DP T_Busy due to Call Deflection	Siemens AG	CAMEL 3	440		A	Rel-5	5.0.0	23.078	rejected
N2-020713	CR	ERB when VT call is reported in DP T_Busy due to Call Deflection	Siemens AG	CAMEL 3	268		F	R99	3.C.0	29.078	rejected
N2-020714	CR	ERB when VT call is reported in DP T_Busy due to Call Deflection	Siemens AG	CAMEL 3	269		A	Rel-4	4.5.0	29.078	rejected
N2-020715	CR	ERB when VT call is reported in DP T_Busy due to Call Deflection	Siemens AG	CAMEL 3	270		A	Rel-5	5.0.0	29.078	revised to N2-020741
N2-020716	CR	Inconsistent description on ACR: time information	Siemens AG	CAMEL 3	441		F	R99	3.D.0	23.078	revised to N2-020742
N2-020717	CR	Inconsistent description on ACR: time information	Siemens AG	CAMEL 3	442		A	Rel-4	4.5.0	23.078	revised to N2-020743
N2-020718	CR	Inconsistent description on ACR: time information	Siemens AG	CAMEL 3	443		A	Rel-5	5.0.0	23.078	revised to N4-020744
N2-020719	CR	Secondary PDP context for DP change of position context	Siemens AG	CAMEL 3	444		F	R99	3.D.0	23.078	rejected
N2-020720	CR	Secondary PDP context for DP change of position context	Siemens AG	CAMEL 3	445		A	Rel-4	4.5.0	23.078	rejected
N2-020721	CR	Secondary PDP context for DP change of position context	Siemens AG	CAMEL 3	446		A	Rel-5	5.0.0	23.078	revised to N2-020747

N2-020722	CR	Detail description for applicability of call cases	Siemens AG	CAMEL 4	447		F	Rel-5	5.0.0	23.078	revised to N2-020757
N2-020723	CR	Location information for MF call	Siemens AG	CAMEL 4	448		F	Rel-5	5.0.0	23.078	revised to next meeting
N2-020724	CR	Correction of handling of MT-SMS in the SGSN	Vodafone	CAMEL 4	449		F	Rel-5	5.0.0	23.078	revised to N2-020795
N2-020725	CR	ASN.1 and stage 3 procedures for CAP Connect and ContinueWithArgument	Lucent Technologies	IMS-CAMEL			F	Rel-5	(new)	29.278	revised to N2-020800
N2-020726	CR	Stage 2 IF descriptions for Connect and ContinueWithArgument	Lucent Technologies	IMS-CAMEL			F	Rel-5	2.0.0	23.278	revised to N2-020799
N2-020727	DISC	Partial Implementations of CAMEL Phase 4	T-Mobile D								noted
N2-020728	DISC	Partial Implementations of CAMEL Phase 4: Open Issues	T-Mobile D								revised to N2-020778
N2-020729	CR	Optional CallBarringFeatureList parameter in ATMod	Nortel	CAMEL 3			F	R99	3.13.0	29.002	revised to N2-020738
N2-020730	CR	Optional CallBarringFeatureList parameter in ATMod	Nortel	CAMEL 3			A	Rel-4	4.8.0	29.002	revised to N2-020739
N2-020731	CR	Optional CallBarringFeatureList parameter in ATMod	Nortel	CAMEL 4			A	Rel-5	5.2.0	29.002	revised to N2-020740
N2-020732	LS OUT	Reply to "LS on Network Integration Testing"	CN2 Chairman								revised to N2-020796
N2-020733	Info	CR to 23.008 on the Organisation of CAMEL IMS Data	Lucent Technologies	IMS-CAMEL		1	B	Rel-5	V5.1.0	23.008	Endorsed by CN2
N2-020734	CR	Handling of partial implementations of CAMEL phase 4	Alcatel	CAMEL 4	416	1	C	Rel-5	5.0.0	23.078	revised to N2-020775
N2-020735	CR	Handling of partial implementations of CAMEL phase 4	Alcatel	CAMEL 4		1	C	Rel-5	5.2.0	29.002	revised to N2-020776
N2-020736	CR	Handling of partial implementations of CAMEL phase 4	Alcatel	CAMEL 4	258	1	C	Rel-5	5.0.0	29.078	revised to N2-020777
N2-020737	LS OUT	Reply to "Questions raised at CAMEL IREG"	CN2								approved
N2-020738	CR	Optional CallBarringFeatureList parameter in ATMod	Nortel	CAMEL 3			F	R99	3.13.0	29.002	rejected
N2-020739	CR	Optional CallBarringFeatureList parameter in ATMod	Nortel	CAMEL 3			A	Rel-4	4.8.0	29.002	rejected
N2-020740	CR	Optional CallBarringFeatureList parameter in ATMod	Nortel	CAMEL 4			A	Rel-5	5.2.0	29.002	rejected
N2-020741	CR	ERB when VT call is reported in DP T_Busy due to Call Deflection	Siemens AG	CAMEL 4	270	1	F	Rel-5	5.0.0	29.078	approved

N2-020742	CR	Inconsistent description on ACR: time information	Siemens AG	CAMEL 3	441	1	F	R99	3.D.0	23.078	approved
N2-020743	CR	Inconsistent description on ACR: time information	Siemens AG	CAMEL 3	442	1	A	Rel-4	4.5.1	23.078	approved
N2-020744	CR	Inconsistent description on ACR: time information	Siemens AG	CAMEL 3	443	1	A	Rel-5	5.0.0	23.078	approved
N2-020745	CR	Correction of 29.078 CANCEL-gprs	Alcatel	CAMEL 3	262	1	F	R99	3.12.0	29.078	approved
N2-020746	CR	Correction of 29.078 CANCEL-gprs	Alcatel	CAMEL 3	263	1	A	Rel-4	4.5.0	29.078	approved
N2-020747	CR	Secondary PDP context for DP change of position context	Siemens AG	CAMEL 4	446	1	F	Rel-5	5.0.0	23.078	approved
N2-020748	CR	Removal of ReleaseCall from Assisting gsmSSF	Nokia	CAMEL 3	254	1	F	R99	3.12.0	29.078	approved
N2-020749	CR	Removal of ReleaseCall from Assisting gsmSSF	Nokia	CAMEL 3	255	1	A	Rel-4	4.5.0	29.078	approved
N2-020750	CR	Removal of ReleaseCall from Assisting gsmSSF	Nokia	CAMEL 3	256	1	A	Rel-5	5.0.0	29.078	approved
N2-020751	CR	Correction in CAMEL_MO_Dialled_Services procedure	Alcatel	CAMEL 3	433	1	F	R99	3.13.0	23.078	approved
N2-020752	CR	Correction in CAMEL_MO_Dialled_Services procedure	Alcatel	CAMEL 3	434	1	A	Rel-4	4.5.1	23.078	approved
N2-020753	CR	Correction in CAMEL_MO_Dialled_Services procedure	Alcatel	CAMEL 3	435	1	A	Rel-5	5.0.0	23.078	approved
N2-020754	CR	CAMEL3 inter-working with Rel-4 GPRS barring	Nokia	CAMEL 3	411	1	F	Rel-4	4.5.1	23.078	approved
N2-020755	CR	CAMEL3 inter-working with Rel-4 GPRS barring	Nokia	CAMEL 3	450		A	Rel-5	5.0.0	23.078	approved
N2-020756	DISC	CAMEL4 open issue list	CN2 chairman								noted
N2-020757	CR	Detail description for applicability of call cases	Siemens AG	CAMEL 4	447	1	F	Rel-5	5.0.0	23.078	revised to N2-020793
N2-020758	TS	TS 29.278 v0.1.0	Lucent Technologies	IMS-CAMEL			F	Rel-5	(new)	29.278	approved
N2-020759	CR	Stage 2 IF description for Initial DP for IMS.	Lucent Technologies	IMS-CAMEL			F	Rel-5	2.0.0	23.278	revised to N2-020764
N2-020760	CR	InitialDP CAP operation procedures for IMS (Stage 3)	Lucent Technologies	IMS-CAMEL			F	Rel-5	(new)	29.278	revised to N2-020762
N2-020761	CR	Ordering D-CSI destination number triggering criterion	Nortel	CAMEL 4	437	1	C	Rel-5	5.0.0	23.078	postponed to next meeting

N2-020762	CR	InitialDP CAP operation procedures for IMS (Stage 3)	Lucent Technologies	IMS-CAMEL			F	Rel-5 (new)	29.278	approved	
N2-020763	CR	Handling of partial implementations of CAMEL phase 4	Vodafone	CAMEL 4	451		C	Rel-5	5.0.0	23.078	withdrawn
N2-020764	CR	Stage 2 IF description for Initial DP for IMS.	Lucent Technologies	IMS-CAMEL		1	F	Rel-5	2.0.0	23.278	approved
N2-020765	CR	IF description for IM-SSF-gsmSCF interface (stage 2)	Lucent Technologies	IMS-CAMEL			F	Rel-5	2.0.0	23.278	approved
N2-020766	CR	IM-SSF procedure for sending multiple ATSI to HSS	Lucent Technologies	IMS-CAMEL			F	Rel-5	2.0.0	23.278	approved
N2-020767	DISC	CPH: Open Issues & Decisions	Vodafone					Rel-5			noted
N2-020768	CR	CPH clarification on overall SDL architecture	Nokia	CAMEL 4	412	1	B	Rel-5	5.0.0	23.078	approved
N2-020769	CR	Clarification on re-connecting held parties in a CPH configuration	Vodafone	CAMEL 4			F	Rel-5	5.7.0	22.078	revised to N2-020798
N2-020770	CR	Disconnect of penultimate leg in CSID1	Vodafone	CAMEL 4	415	1	F	Rel-5	5.0.0	23.078	approved
N2-020771	CR	No use of Call Segment ID for the direct gsmSCF - gsmSRF case	Alcatel	CAMEL 4	419	1	F	Rel-5	5.0.0	23.078	approved
N2-020772	DISC	Definition of LocationInformation GPRS in 29.078								29.078	postponed to the next
N2-020773	CR	Correction of Location Information GPRS definition	Nortel	CAMEL 3	271		F	R99	3.12.0	29.078	postponed to the next
N2-020774	CR	Correction of Location Information GPRS definition	Nortel	CAMEL 3	272		A	Rel-4	4.5.0	29.078	postponed to the next
N2-020775	CR	Handling of partial implementations of CAMEL phase 4	Alcatel	CAMEL 4	416	2	C	Rel-5	5.0.0	23.078	revised to N2-020786
N2-020776	CR	Handling of partial implementations of CAMEL phase 4	Alcatel	CAMEL 4		2	C	Rel-5	5.2.0	29.002	revised to N2-020787
N2-020777	CR	Handling of partial implementations of CAMEL phase 4	Alcatel	CAMEL 4	258	2	C	Rel-5	5.0.0	29.078	approved
N2-020778	DISC	Partial Implementations of CAMEL Phase 4: Open Issues	T-Mobile D								noted
N2-020779	CR	Introduction of CPH Definitions	Vodafone	CAMEL 4	432	1	D	Rel-5	5.0.0	23.078	approved
N2-020780	CR	CAMEL SDL procedures for MT for unregistered subscriber	Lucent TechnologiesAnd	IMS-CAMEL			F	Rel-5	2.0.0	23.278	approved
N2-020781	CR	Cancellation of old IM-SSF address for re-registration with a new S-CSCF name	Lucent Technologies	IMS-CAMEL		1	F	Rel-5	2.0.0	23.278	approved

N2-020782	CR	TC-U-Abort before the TC dialogue is established	Nokia	CAMEL 4	257	1	F	Rel-5	5.0.0	29.078	approved
N2-020783	CR	Playing of Warning Tones	Alcatel	CAMEL 4	418	1	B	Rel-5	5.0.0	23.078	revised to N2-020794
N2-020784	CR	Playing of Warning Tones	Alcatel	CAMEL 4	260	1	B	Rel-5	5.0.0	29.078	approved
N2-020785	CR	Cleanup of the LocationInformation table for the call accepted DP	Alcatel	CAMEL 4	420	1	D	Rel-5	5.0.0	23.078	approved
N2-020786	CR	Handling of partial implementations of CAMEL phase 4	Alcatel	CAMEL 4	416	3	C	Rel-5	5.0.0	23.078	approved
N2-020787	CR	Handling of partial implementations of CAMEL phase 4	Alcatel	CAMEL 4		2	C	Rel-5	5.2.0	29.002	CN2 endorsed
N2-020788	CR	Handling of partial implementations of CAMEL phase 4	Alcatel	CAMEL 4			C	Rel-5	5.1.0	23.008	CN2 endorsed
N2-020789	WP	Comments to the work plan	CN2 chairman								approved
N2-020790	other	List of approved CRs to be sent to CN#17 for approval	MCC								for information
N2-020791	WID	Revised WID for PRESNC	Lucent Technologies /	PRESNC				Rel-6			for information
N2-020792	CR	CSA_gsmSSF: Handling signals in states such as DL_ack	Vodafone	CAMEL 4	426	1	F	Rel-5	5.0.0	23.078	approved
N2-020793	CR	Detail description for applicability of call cases	Siemens AG	CAMEL 4	447	2	F	Rel-5	5.0.0	23.078	approved
N2-020794	CR	Playing of Warning Tones	Alcatel	CAMEL 4	418	2	B	Rel-5	5.0.0	23.078	approved
N2-020795	CR	Correction of handling of MT-SMS in the SGSN	Vodafone	CAMEL 4	449	1	F	Rel-5	5.0.0	23.078	postponed to next meeting
N2-020796	LS OUT	Reply to "LS on Network Integration Testing"	CN2 Chairman								approved
N2-020797	CR	Move Leg and Split Leg Error - Task Refused	Vodafone	CAMEL 4	267	1	F	Rel-5	5.0.0	29.078	approved
N2-020798	CR	Clarification on re-connecting held parties in a CPH configuration	Vodafone	CAMEL 4			F	Rel-5	5.7.0	22.078	endorsed by CN2
N2-020799	CR	Stage 2 IF descriptions for Connect and ContinueWithArgument	Lucent Technologies	IMS-CAMEL			F	Rel-5	2.0.0	23.278	approved
N2-020800	CR	ASN.1 and stage 3 procedures for CAP Connect and ContinueWithArgument	Lucent Technologies	IMS-CAMEL			F	Rel-5	(new)	29.278	approved
N2-020801	TS/INFO	Draft TS 23.278 v 2.1.0	Lucent							23.278	approved

