3GPP TSG CN Plenary Meeting #13 **NP-010474**
Beijing, China, 19th –21st September 2001

Source: **CN5 (OSA)**

Title: **CRs 29.998-4-1 Rel-4**

Agenda item: **8.5**

Document for: **Approval**

Doc-1st-Level	Doc-2nd-Level	Spec	CR	Rev	Phase	Subject	Cat	Version-Current	Version-New	Meeting-2nd-Level	Workitem
NP-010474	N5-010838	29.998-4-1	002		Rel-4	Updates and corrections to data mapping to CAP	F	4.1.0	4.2.0	N5-12	OSA1

3GPP TSG_CN5 Meeting #13 **N5-010838**
Munich, GERMANY,11th – 14th September 2001

CR-Form-v4

CHANGE REQUEST

⌘ **29.998-4-1** **CR** **002** ⌘ ev **-** ⌘ Current version: **4.1.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☐ Radio Access Network ☐ Core Network **X**

Title:	⌘	Updates and corrections to data mapping to CAP
Source:	⌘	CN5
Work item code:	⌘	OSA1
Date:	⌘	14/09/2001
Category:	⌘	**F**
Release:	⌘	REL-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change:	⌘	Some changes made to the specification 29.198-x have not been reflected in this document. Also changes made in e-mail procedures after CN5#12 in N5-010709 (CR-015) to the specification 29.198-4 must be reflected in 29.998-4-1.
Summary of change:	⌘	References to interworking indicators in the API have been deleted, because the indicators were removed already from Rel99. In callEventNotify appInterface has been renamed as appCall. setCallChargePlan parameters have been updated.
Consequences if not approved:	⌘	Erroneous technical report

Clauses affected:	⌘	4.1.9, 4.2.1, 4.2.13
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

4.1.9 callEventNotify

callEventNotify notifies the application of the arrival of a call-related event.

Figure 4-9: Call Flow for callEventNotify

Table 4-14: Normal Operation

Pre-conditions	Call notifications have been enabled using the *enableCallNotification* method on the Call Manager interface
1	A call arrives at the gsmSSF causing initial triggering to the gsmSCF CAP ***InitialDP***
2	The gsmSCF recognizes the need for an API service and passes the triggering information to the SCS
3	The SCS identifies the application responsible for handling the call and invokes the ***callEventNotify*** method

Table 4-15: Parameter Mapping

From: CAP InitialDP	To: *callEventNotify*
	callReference
	eventInfo (TpCallEventInfo) :
calledPartyNumber calledPartyBCDNumber BCD	destinationAddress
calling Party Number	originatingAddress
originalCalledPartyID	originalDestinationAddress
redirectingPartyID	redirectingAddress
	callAppInfo (TpCallAppInfoSet) :
	CallAppAlertingMechanism
	CallAppNetworkAccessType
	~~CallAppInterworkingIndicators~~
ext-BasicServiceCode (1st priority)	CallAppBearerService CallAppTeleService
highLayerCompatibility (2nd priority)	CallAppTeleService
bearerCapability (2nd priority)	CallAppBearerService
callingPartysCategory	CallAppPartyCategory
	CallAppPresentationAddress
	CallAppGenericInfo
additionalCallingPartyNumber	CallAppAdditionalAddress
eventTypeBCSM	callEventName (see Table 4-14 below)
	callNotificationType
	assignmentID
	appCall ~~Interface~~
serviceKey	<Note: mapped to the method invocation>
cGEncountered	
iPSSPCapabilities	
locationNumber	
redirectionInformation	
iMSI	
subscriberState	
locationInformation	
callReferenceNumber	
serviceInteractionIndicatorsTwo	
mscAddress	
timeAndTimezone	
gsm-ForwardingPending	
initialDPargExtension :	
naCarrierInformation	
gmscAddress	
cause	
cug-Index	
cug-Interlock	
cug-OutgoingAccess	

Table 4-16: eventTypeBCSM mapping to callEventName

From: CAP InitialDP parameter eventTypeBCSM	To: callEventNotify parameter callEventName in eventInfo
<no mapping available>	P_EVENT_NAME_UNDEFINED
<no mapping available>	P_EVENT_GCCS_OFFHOOK_EVENT
collectedInfo, termAttemptAuthorized	P_EVENT_GCCS_ADDRESS_COLLECTED_EVENT
analyzedInformation	P_EVENT_GCCS_ADDRESS_ANALYSED_EVENT
tBusy	P_EVENT_GCCS_CALLED_PARTY_BUSY
tBusy (see Note)	P_EVENT_GCCS_CALLED_PARTY_UNREACHABLE
tNoAnswer	P_EVENT_GCCS_NO_ANSWER_FROM_CALLED_PARTY
routeSelectFailure	P_EVENT_GCCS_ROUTE_SELECT_FAILURE
<no mapping available>	P_EVENT_GCCS_ANSWER_FROM_CALL_PARTY
NOTE: Depending on the value of the *cause* parameter in the *initialDPArg extensions* parameter of the InitialDP operation	

4.2 Call

The generic call interface represents the interface to the generic call SCF. It provides a structure to allow simple and complex call behaviour.

4.2.1 routeReq

routeReq is an asynchronous method which requests routing of the call (and inherently attached parties) to the destination party, via a passive call leg

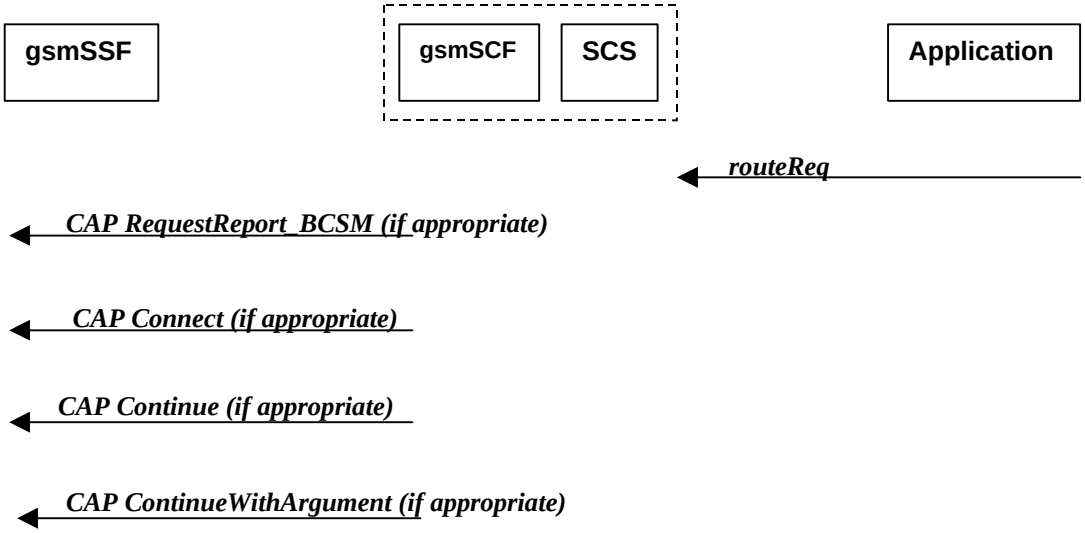

Figure 4-10: Call Flow for routeReq

Table 4-17: Normal Operation

Three alternatives have been identified

1. The application changes the destination number

Pre-conditions	The application has been notified of a new call and the call object exists. The *setCallChargePlan* **and** *getCallInfoReq* **methods may have been invoked**
1	The application invokes the ***routeReq*** method
2	The SCS sends an equivalent internal message to the gsmSCF
3	The gsmSCF sends a CAP ***RequestReportBSCM*** if the application needs to be informed about the outcome of the request
4	The gsmSCF sends a CAP ***Connect*** message

Table 4-18: Parameter Mapping

From: routeReq	To: CAP RequestReportBCSMEvent
callSessionID	
responseRequested (TpCallReportRequestSet) :	bcsmEvent :
MonitorMode (TpCallMonitorMode)	**monitorMode**
CallReportType (TpCallReportType)	**eventTypeBCSM**
AdditionalReportCriteria (TpCallReportAdditionalCriteria) **:**	dPSpecificCriteria :
noAnswerDuration	applicationTimer
serviceCode	
	legID (see Note)
targetAddress	
originatingAddress	
originalDestinationAddress	
redirectingAddress	
appInfo	
callLegSessionID	
NOTE: The legID for both the originating and the terminating leg are required for the disconnect event.	

Table 4-19:

From: routeReq	To: CAP Connect
callSessionID	
responseRequested	
targetAddress	destinationRoutingAddress
originatingAddress	
originalDestinationAddress	originalCalledPartyID
redirectingAddress	redirectingPartyID
appInfo (TpCallAppInfoSet) :	
CallAppAlertingMechanism	alertingPattern
CallAppNetworkAccessType	
~~CallAppInterworkingIndicators~~	~~serviceInteractionIndicatorsTwo~~
CallAppTeleService	
CallAppBearerService	
CallAppPartyCategory	callingPartysCategory
PresentationAddress	genericNumbers (see Note)
CallAppGenericInfo	
CallAppAdditionalAddress	genericNumbers
callLegSessionID	
	serviceInteractionIndicatorsTwo
	redirectionInformation
	suppressionOfAnnouncement
	oCSIApplicable
	na-Info :
	naCarrierInformation
	naOliInfo
	naChargeNumber
	connectArgExtension :
	cug-Interlock
	cug-OutgoingAccess
	nonCug-Call
NOTE: Operator specific function if CallAppAdditionalAddress is not used to map the genericNumbers parameter.	

Table 4-20:

2. The application does not modify the destination address and does not provide any Application Information

Pre-conditions	The application has been notified of a new call and the call object exists. The *setCallChargePlan* **and** *getCallInfoReq* **methods may have been invoked**
1	The application invokes the ***routeReq*** method
2	The SCS sends an equivalent internal message to the gsmSCF
3	The gsmSCF sends a CAP ***RequestReportBSCM*** if the application needs to be informed about the outcome of the request
4	The gsmSCF sends a CAP ***Continue*** message

Table 4-21: Parameter Mapping

From: routeReq	To: CAP RequestReportBCSMEvent
callSessionID	
responseRequested (TpCallReportRequestSet) :	bcsmEvent :
MonitorMode (TpCallMonitorMode)	**monitorMode**
CallReportType (TpCallReportType)	**eventTypeBCSM**
AdditionalReportCriteria (TpCallReportAdditionalCriteria **:**	**dPSpecificCriteria** :
noAnswerDuration	applicationTimer
serviceCode	
	legID (see Note)
targetAddress	
originatingAddress	
originalDestinationAddress	
redirectingAddress	
appInfo	
callLegSessionID	
NOTE: The legID for both the originating and the terminating leg are required for the disconnect event.	

Table 4-22:

From: routeReq	To: CAP Continue
callSessionID	
responseRequested	
targetAddress	
originatingAddress	
originalDestinationAddress	
redirectingAddress	
appInfo	
callLegSessionID	

Table 4-23:

3. The application does not modify the destination party number but modifies Application information

Pre-conditions	The application has been notified of a new call and the call object exists. The *setCallChargePlan* **and** *getCallInfoReq* **methods may have been invoked**
1	The application invokes the ***routeReq*** method
2	The SCS sends an equivalent internal message to the gsmSCF
3	The gsmSCF sends a CAP ***RequestReportBSCM*** if the application needs to be informed about the outcome of the request
4	The gsmSCF sends a CAP ***ContinueWithArgument*** message

Table 4-24: Parameter Mapping

From: routeReq	To: CAP RequestReportBCSMEvent
callSessionID	
responseRequested (TpCallReportRequestSet) :	bcsmEvent :
MonitorMode (TpCallMonitorMode)	**monitorMode**
CallReportType (TpCallReportType)	**eventTypeBCSM**
AdditionalReportCriteria (TpCallReportAdditionalCriteria) **:**	**dPSpecificCriteria** :
noAnswerDuration	applicationTimer
serviceCode	
	legID (see Note)
targetAddress	
originatingAddress	
originalDestinationAddress	
redirectingAddress	
appInfo	
callLegSessionID	
NOTE: The legID for both the originating and the terminating leg are required for the disconnect event.	

Table 4-25:

From: routeReq	To: CAP ContinueWithArgument
callSessionID	
responseRequested	
targetAddress	
originatingAddress	
originalDestinationAddress	
redirectingAddress	
appInfo :	
CallAppAlertingMechanism	alerting Pattern
CallAppNetworkAccessType	
~~CallAppInterworkingIndicators~~	~~serviceInteractionIndicatorsTwo~~
CallAppTeleService	
CallAppBearerService	
CallAppPartyCategory	callingPartysCategory
PresentationAddress	genericNumbers (see Note)
CallAppGenericInfo	
CallAppAdditionalAddress	genericNumbers
callLegSessionID	
	serviceInteractionIndicatorsTwo
	suppressionOfAnnouncement
	na-Info :
	naCarrierInformation
	naOliInfo
	naChargeNumber
	continueWithArgumentArgExtension :
	cug-Interlock
	cug-OutgoingAccess
	nonCug-Call
NOTE: Operator specific function if CallAppAdditionalAddress is not used to map the genericNumbers parameter.	

4.2.13 setCallChargePlan

setCallChargePlan is a method that allows the application to include charging information in network generated CDR.

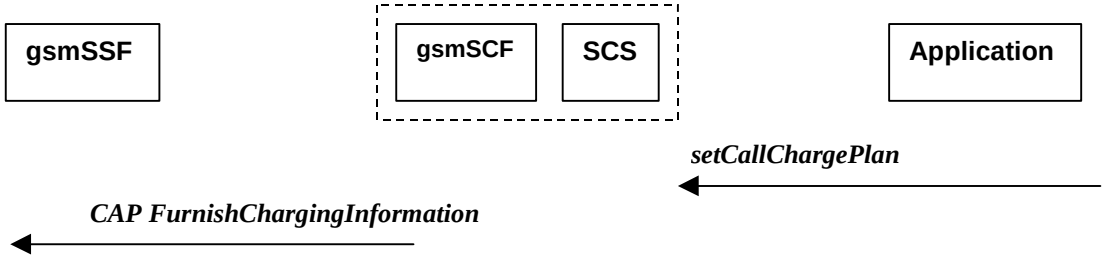

Figure 4-22: Call Flow for setCallChargePlan

Table 4-50: Normal Operation

Pre-conditions	
1	The application invokes the ***setCallChargePlan***
2	The SCS sends an equivalent internal message to the gsmSCF
3	The gsmSCF sends a CAP ***FurnishChargingInformation*** message to the SSP

Table 4-51: Parameter Mapping

From: setCallChargePlan	To: CAP FurnishChargingInformation
callSessionID	
callChargePlan ChargeOrderType ~~(choice)~~ ~~ChargePerTime~~ ~~InitialCharge~~ ~~CurrentChargePerMinute~~ ~~NextChargePerMinute~~ ~~NetworkCharge~~ TransparentCharge ChargePlan~~Currency~~ AdditionalInfo	FCIBillingChargingCharacteristics fCIBCCCAMELsequence1 freeFormatData
callChargePlan PartyToCharge	FCIBillingChargingCharacteristics fCIBCCCAMELsequence1 partyToCharge
	FCIBillingChargingCharacteristics fCIBCCCAMELsequence1 appendFreeFormatData

An alternative scenario would be to map ***setCallChargePlan*** method to the CAP ***ApplyCharging*** protocol operation.