Source:	**CN2**
Title:	**CRs on Rel-5 Work Item CAMEL4, CR Pack 1**
Agenda item:	**8.3**
Document for:	**APPROVAL**

Introduction:

This document contains 7 CRs on Rel-5 WI CAMEL4 (TS 29.078). These CRs have been agreed by TSG CN WG2 and are forwarded to TSG CN Plenary meeting #19 for approval.

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
29.078	298	1	N2-030118	Rel-5	Correction to Call Information Request	F	5.2.0
29.078	301		N2-030036	Rel-5	ASN.1 syntax basic corrections	F	5.2.0
29.078	302		N2-030062	Rel-5	ASN operation package definition for PlayTone	F	5.2.0
29.078	304	1	N2-030110	Rel-5	Correction to ASN.1 syntax for CWA	F	5.2.0
29.078	305	1	N2-030147	Rel-5	Response to ApplyChargingGPRS at WFI at DP that terminates a relationship	F	5.2.0
29.078	306	2	N2-030156	Rel-5	Missing parameter (Charge Indicator)	F	5.2.0
29.078	307		N2-030094	Rel-5	Adding unknownCSId Error to Continue With Argument	F	5.2.0

CR-Form-v7

CHANGE REQUEST

⌘ **29.078** CR **301** ⌘**rev** ⌘ Current version: **5.2.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network **X**

Title: ⌘	ASN.1 syntax basic corrections	
Source: ⌘	Alcatel	
Work item code:⌘	CAMEL4	**Date:** ⌘ 29/01/2003
Category: ⌘	**F**	**Release:** ⌘ Rel-5

Use <u>one</u> 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 <u>one</u> 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)
 Rel-6 (Release 6)

Reason for change: ⌘	Small syntactic errors are in the current 29.078 ASN.1 modules.
	Details:
	- The ASN.1 datatype LocationInformationGPRS is using the ASN.1 datatype RAIdentity from MAP. However RAIdentity is not yet imported into 29.078.
Summary of change:⌘	Correction of all syntactic errors.
Consequences if not approved: ⌘	Syntax errors and spelling errors in the ASN.1 which the implementers must fix manually.

Clauses affected: ⌘	ASN.1 module of clauses 5.

	Y	N		
Other specs affected: ⌘		X	Other core specifications	⌘
		X	Test specifications	
		X	O&M Specifications	

Other comments: ⌘	Note: The text between the 29.078 clause headers 5 is the modified modules. The marked up changes are applicable to the 29.078 text.

—Modified module —

---

5   Common CAP Types

```
-- 5             Common CAP Types
-- 5.1           Data types
CAP-datatypes {itu-t(0) identified-organization(4) etsi(0) mobileDomain(0) umts-network(1)
modules(3) cap-datatypes(52) version4(3)}

DEFINITIONS IMPLICIT TAGS ::= BEGIN

IMPORTS

   Duration,
   Integer4,
   Interval,
   LegID,
   ServiceKey
FROM CS1-DataTypes {itu-t(0) identified-organization(4) etsi(0) inDomain(1) in-network(1)
modules(0) cs1-datatypes(2) version1(0)}

   BothwayThroughConnectionInd,
   CriticalityType,
   MiscCallInfo
FROM CS2-datatypes {itu-t(0) identified-organization(4) etsi(0) inDomain(1) in-network(1)
cs2(20) modules(0) in-cs2-datatypes(0) version1(0)}

   IMSI,
   ISDN-AddressString,
   Ext-BasicServiceCode,
   NAEA-CIC
FROM MAP-CommonDataTypes {itu-t(0) identified-organization(4) etsi(0) mobileDomain(0)
gsm-Network(1) modules(3) map-CommonDataTypes(18) version8(8)}

   Ext-QoS-Subscribed,
   GeographicalInformation,
   GSN-Address,
   LocationInformation,
   LSAIdentity,
   QoS-Subscribed,
   RAIdentity,
   SubscriberState,
   GPRSChargingID
FROM MAP-MS-DataTypes {itu-t(0) identified-organization(4) etsi(0) mobileDomain(0)
gsm-Network(1) modules(3) map-MS-DataTypes(11) version8(8)}

   CallReferenceNumber,
   SuppressionOfAnnouncement
FROM MAP-CH-DataTypes {itu-t(0) identified-organization(4) etsi(0) mobileDomain(0)
gsm-Network(1) modules(3) map-CH-DataTypes(13) version8(8)}

   tc-Messages,
   classes
FROM CAP-object-identifiers {itu-t(0) identified-organization(4) etsi(0) mobileDomain(0)
umts-network(1) modules(3) cap-object-identifiers(100) version4(3)}

   TCInvokeIdSet
FROM TCAPMessages tc-Messages

   EXTENSION,
   PARAMETERS-BOUND,
   SupportedExtensions
FROM CAP-classes classes

   ExtensionContainer
FROM MAP-ExtensionDataTypes {itu-t(0) identified-organization(4) etsi(0) mobileDomain(0)
gsm-Network(1) modules(3) map-ExtensionDataTypes(21) version8(8)}

;

...
```

```
LocationInformationGPRS      ::= SEQUENCE {
    cellGlobalIdOrServiceAreaIdOrLAI[0] OCTET STRING (SIZE(5..7))   OPTIONAL,
    routeingAreaIdentity                [1] RAIdentity               OPTIONAL,
    geographicalInformation             [2] GeographicalInformation  OPTIONAL,
    sgsn-Number                         [3] ISDN-AddressString       OPTIONAL,
    selectedLSAIdentity                 [4] LSAIdentity              OPTIONAL,
    extensionContainer                  [5] ExtensionContainer       OPTIONAL,
    ...,
    sai-Present                         [6] NULL                     OPTIONAL
}
-- cellGlobalIdOrServiceAreaIdOrLAI shall contain the value part of the
-- CellGlobalIdOrServiceAreaIdFixedLength type or the LAIFixedLength type (i.e. excluding tags
-- and lengths) as defined in 3GPP TS 29.002 [13].
-- sai-Present indicates that the cellGlobalIdOrServiceAreaIdOrLAI parameter contains
-- a Service Area Identity.

...

END
```

— End of CR —

CR-Form-v7

CHANGE REQUEST

⌘ **29.078** CR **302** ⌘rev **-** ⌘ Current version: **5.2.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network **X**

Title: ⌘	ASN operation package definition for PlayTone	
Source: ⌘	Nokia	
Work item code:⌘	CAMEL4	***Date:*** ⌘ 02/01/2003
Category: ⌘	**F**	***Release:*** ⌘ Rel-5

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)
Rel-6 (Release 6)

Reason for change: ⌘	PlayTone does not belong to any operation package. Every operation shall belong to an operation package, otherwise it is missing from the application context. The existing *Charging package* can not be used because PlayTone operation is not tied to ApplyCharging operation.
Summary of change:⌘	New operation package is introduced for CAPv4 PlayTone operation.
Consequences if not approved: ⌘	PlayTone operation is missing from the application context, and can not be used.

Clauses affected: ⌘	

	Y	N	
Other specs affected: ⌘		X	Other core specifications ⌘
		X	Test specifications
		X	O&M Specifications

Other comments: ⌘	29.278 does not need similar change because this is a CAPv4 operation.

-- First Modified Section --

5.3   Operation codes

```
CAP-operationcodes {itu-t(0) identified-organization(4) etsi(0) mobileDomain(0) umts-network(1)
modules(3) cap-operationcodes(53) version4(3)}

DEFINITIONS ::= BEGIN

IMPORTS

    ros-InformationObjects
FROM CAP-object-identifiers {itu-t(0) identified-organization(4) etsi(0) mobileDomain(0)
umts-network(1) modules(3) cap-object-identifiers(100) version4(3)}

    Code
FROM Remote-Operations-Information-Objects ros-InformationObjects

;

-- the operations are grouped by the identified operation packages.

-- gsmSCF activation Package
    opcode-initialDP                          Code ::= local: 0
-- gsmSCF/gsmSRF activation of assist Package
    opcode-assistRequestInstructions          Code ::= local: 16
-- Assist connection establishment Package
    opcode-establishTemporaryConnection       Code ::= local: 17
-- Generic disconnect resource Package
    opcode-disconnectForwardConnection        Code ::= local: 18
    opcode-dFCWithArgument                    Code ::= local: 86
-- Non-assisted connection establishment Package

    opcode-connectToResource                  Code ::= local: 19
-- Connect Package (elementary gsmSSF function)
    opcode-connect                            Code ::= local: 20
-- Call handling Package (elementary gsmSSF function)
    opcode-releaseCall                        Code ::= local: 22
-- BCSM Event handling Package
    opcode-requestReportBCSMEvent             Code ::= local: 23
    opcode-eventReportBCSM                    Code ::= local: 24
-- gsmSSF call processing Package
    opcode-continue                           Code ::= local: 31
-- gsmSCF call initiation Package
    opcode-initiateCallAttempt                Code ::= local: 32
-- Timer Package
    opcode-resetTimer                         Code ::= local: 33
-- Billing Package
    opcode-furnishChargingInformation         Code ::= local: 34
-- Charging Package
    opcode-applyCharging                      Code ::= local: 35
    opcode-applyChargingReport                Code ::= local: 36
    opcode-playTone                           Code ::= local: 97
-- Traffic management Package
    opcode-callGap                            Code ::= local: 41
-- Call report Package
    opcode-callInformationReport              Code ::= local: 44
    opcode-callInformationRequest             Code ::= local: 45
-- Signalling control Package
    opcode-sendChargingInformation            Code ::= local: 46
-- Specialized resource control Package
    opcode-playAnnouncement                   Code ::= local: 47
    opcode-promptAndCollectUserInformation    Code ::= local: 48
    opcode-specializedResourceReport          Code ::= local: 49
-- Cancel Package
    opcode-cancel                             Code ::= local: 53
-- Activity Test Package
    opcode-activityTest                       Code ::= local: 55
-- CPH Response Package
    opcode-continueWithArgument               Code ::= local: 88
    opcode-disconnectLeg                      Code ::= local: 90
    opcode-moveLeg                            Code ::= local: 93
    opcode-splitLeg                           Code ::= local: 95
-- Exception Inform Package
    opcode-entityReleased                     Code ::= local: 96
```

```
-- Play Tone Package
    opcode-playTone                            Code ::= local: 97

-- Sms Activation Package
    opcode-initialDPSMS                        Code ::= local: 60
-- Sms Billing Package
    opcode-furnishChargingInformationSMS       Code ::= local: 61
-- Sms Connect Package
    opcode-connectSMS                          Code ::= local: 62
-- Sms Event Handling Package
    opcode-requestReportSMSEvent               Code ::= local: 63
    opcode-eventReportSMS                      Code ::= local: 64
-- Sms Processing Package
    opcode-continueSMS                         Code ::= local: 65
-- Sms Release Package
    opcode-releaseSMS                          Code ::= local: 66
-- Sms Timer Package
    opcode-resetTimerSMS                       Code ::= local: 67

-- Gprs Activity Test Package
    opcode-activityTestGPRS                    Code ::= local: 70
-- Gprs Charging Package
    opcode-applyChargingGPRS                   Code ::= local: 71
    opcode-applyChargingReportGPRS             Code ::= local: 72
-- Gprs Cancel Package
    opcode-cancelGPRS                          Code ::= local: 73
-- Gprs Connect Package
    opcode-connectGPRS                         Code ::= local: 74
-- Gprs Processing Package
    opcode-continueGPRS                        Code ::= local: 75
-- Gprs Exception Information Package
    opcode-entityReleasedGPRS                  Code ::= local: 76
-- Gprs Billing Package
    opcode-furnishChargingInformationGPRS      Code ::= local: 77
-- Gprs Scf Activation Package
    opcode-initialDPGPRS                       Code ::= local: 78
-- Gprs Release Package
    opcode-releaseGPRS                         Code ::= local: 79
-- Gprs Event Handling Package
    opcode-eventReportGPRS                     Code ::= local: 80
    opcode-requestReportGPRSEvent              Code ::= local: 81
-- Gprs Timer Package
    opcode-resetTimerGPRS                      Code ::= local: 82
-- Gprs Charge Advice Package
    opcode-sendChargingInformationGPRS         Code ::= local: 83

END
```

-- Next Modified Section --

5.6   Object IDentifiers (IDs)

```
-- gsmSSF/gsmSCF Operation Packages
id-package-scfActivation                         OBJECT IDENTIFIER ::= {id-package 11}
id-package-gsmSRF-scfActivationOfAssist          OBJECT IDENTIFIER ::= {id-package 15}
id-package-assistConnectionEstablishment         OBJECT IDENTIFIER ::= {id-package 16}
id-package-genericDisconnectResource             OBJECT IDENTIFIER ::= {id-package 17}
id-package-nonAssistedConnectionEstablishment    OBJECT IDENTIFIER ::= {id-package 18}
id-package-connect                               OBJECT IDENTIFIER ::= {id-package 19}
id-package-callHandling                          OBJECT IDENTIFIER ::= {id-packageE 20}
id-package-bcsmEventHandling                     OBJECT IDENTIFIER ::= {id-package 21}
id-package-ssfCallProcessing                     OBJECT IDENTIFIER ::= {id-packageE 24}
id-package-scfCallInitiation                     OBJECT IDENTIFIER ::= {id-package 25}
id-package-timer                                 OBJECT IDENTIFIER ::= {id-package 26}
id-package-billing                               OBJECT IDENTIFIER ::= {id-package 27}
id-package-charging                              OBJECT IDENTIFIER ::= {id-package 28}
id-package-trafficManagement                     OBJECT IDENTIFIER ::= {id-package 29}
id-package-callReport                            OBJECT IDENTIFIER ::= {id-package 32}
id-package-signallingControl                     OBJECT IDENTIFIER ::= {id-package 33}
id-package-activityTest                          OBJECT IDENTIFIER ::= {id-package 34}
id-package-cancel                                OBJECT IDENTIFIER ::= {id-packageE 36}
id-package-cphResponse                           OBJECT IDENTIFIER ::= {id-package 37}
id-package-exceptionInform                       OBJECT IDENTIFIER ::= {id-package 38}
id-package-playTone                              OBJECT IDENTIFIER ::= {id-package 39}

-- gsmSRF/gsmSCF Operation Packages
id-package-specializedResourceControl            OBJECT IDENTIFIER ::= {id-package 42}
id-package-gsmSRF-scfCancel                      OBJECT IDENTIFIER ::= {id-package 43}

-- gprsSSF/gsmSCF Operation Packages
id-package-gprsContinue                          OBJECT IDENTIFIER ::= {id-package3 49}
id-package-gprsExceptionInformation              OBJECT IDENTIFIER ::= {id-package3 50}
id-package-gprsScfActivation                     OBJECT IDENTIFIER ::= {id-package3 51}
id-package-gprsConnect                           OBJECT IDENTIFIER ::= {id-package3 52}
id-package-gprsRelease                           OBJECT IDENTIFIER ::= {id-package3 53}
id-package-gprsEventHandling                     OBJECT IDENTIFIER ::= {id-package3 54}
id-package-gprsTimer                             OBJECT IDENTIFIER ::= {id-package3 55}
id-package-gprsBilling                           OBJECT IDENTIFIER ::= {id-package3 56}
id-package-gprsCharging                          OBJECT IDENTIFIER ::= {id-package3 57}
id-package-gprsActivityTest                      OBJECT IDENTIFIER ::= {id-package3 58}
id-package-gprsCancel                            OBJECT IDENTIFIER ::= {id-package3 59}
id-package-gprsChargeAdvice                      OBJECT IDENTIFIER ::= {id-package3 60}

-- gprsSSF/gsmSCF or gsmSSF/gsmSCF Operation Packages
id-package-smsActivation                         OBJECT IDENTIFIER ::= {id-package 61}
id-package-smsConnect                            OBJECT IDENTIFIER ::= {id-package 62}
id-package-smsContinue                           OBJECT IDENTIFIER ::= {id-package 63}
id-package-smsRelease                            OBJECT IDENTIFIER ::= {id-package 64}
id-package-smsEventHandling                      OBJECT IDENTIFIER ::= {id-package 65}
id-package-smsBilling                            OBJECT IDENTIFIER ::= {id-package 66}
id-package-smsTimer                              OBJECT IDENTIFIER ::= {id-package 67}
```

6.1.2 gsmSSF/gsmSCF packages, contracts and ACs

6.1.2.1 gsmSSF/gsmSCF ASN.1 module

….

```
    id-ac-CAP-gsmSSF-scfGenericAC,
    id-ac-CAP-gsmSSF-scfAssistHandoffAC,
    id-ac-CAP-scf-gsmSSFGenericAC,
    id-CAPSsfToScfGeneric,
    id-CAPAssistHandoffssfToScf,
    id-CAPScfToSsfGeneric,
    id-as-gsmSSF-scfGenericAS,
    id-as-scf-gsmSSFGenericAS,
    id-as-assistHandoff-gsmSSF-scfAS,
    id-package-scfActivation,
    id-package-gsmSRF-scfActivationOfAssist,
    id-package-assistConnectionEstablishment,
    id-package-genericDisconnectResource,
    id-package-nonAssistedConnectionEstablishment,
    id-package-connect,
    id-package-callHandling,
    id-package-bcsmEventHandling,
    id-package-ssfCallProcessing,
    id-package-scfCallInitiation,
    id-package-timer,
    id-package-billing,
    id-package-charging,
    id-package-trafficManagement,
    id-package-callReport,
    id-package-signallingControl,
    id-package-activityTest,
    id-package-cancel,
    id-package-cphResponse,
    id-package-exceptionInform,
    id-package-playTone,
    classes,
    ros-InformationObjects,
    tc-Messages,
    tc-NotationExtensions,
    gsmSSF-gsmSCF-Operations,
    gsmSCF-gsmSRF-Operations,
    gsmSCF-gsmSRF-Protocol
FROM CAP-object-identifiers {itu-t(0) identified-organization(4) etsi(0) mobileDomain(0)
umts-network(1) modules(3) cap-object-identifiers(100) version4(3)}
```

….

```
capSsfToScfGeneric CONTRACT ::= {
-- dialogue initiated by gsmSSF with InitialDP Operation
    INITIATOR CONSUMER OF       {exceptionInformPackage {cAPSpecificBoundSet} |
                                scfActivationPackage {cAPSpecificBoundSet}}
    RESPONDER CONSUMER OF       {activityTestPackage |
                                assistConnectionEstablishmentPackage {cAPSpecificBoundSet} |
                                bcsmEventHandlingPackage {cAPSpecificBoundSet} |
                                billingPackage {cAPSpecificBoundSet} |
                                callHandlingPackage {cAPSpecificBoundSet} |
                                callReportPackage {cAPSpecificBoundSet} |
                                cancelPackage {cAPSpecificBoundSet} |
                                chargingPackage {cAPSpecificBoundSet} |
                                connectPackage {cAPSpecificBoundSet} |
                                cphResponsePackage {cAPSpecificBoundSet} |
                                genericDisconnectResourcePackage {cAPSpecificBoundSet} |
                                nonAssistedConnectionEstablishmentPackage {cAPSpecificBoundSet} |
                                playTonePackage {cAPSpecificBoundSet} |
                                signallingControlPackage {cAPSpecificBoundSet} |
                                specializedResourceControlPackage {cAPSpecificBoundSet} |
                                ssfCallProcessingPackage {cAPSpecificBoundSet} |
                                timerPackage {cAPSpecificBoundSet} |
                                trafficManagementPackage {cAPSpecificBoundSet} |
                                scfCallInitiationPackage {cAPSpecificBoundSet}}
    ID                          id-CAPSsfToScfGeneric}
```

```
capScfToSsfGeneric CONTRACT ::= {
-- dialogue initiated by gsmSCF with InitiateCallAttempt, Generic Case
    INITIATOR CONSUMER OF       {activityTestPackage |
                                assistConnectionEstablishmentPackage {cAPSpecificBoundSet} |
                                bcsmEventHandlingPackage {cAPSpecificBoundSet} |
                                billingPackage {cAPSpecificBoundSet} |
                                callHandlingPackage {cAPSpecificBoundSet} |
                                callReportPackage {cAPSpecificBoundSet} |
                                cancelPackage {cAPSpecificBoundSet} |
                                chargingPackage {cAPSpecificBoundSet} |
                                connectPackage {cAPSpecificBoundSet} |
                                cphResponsePackage {cAPSpecificBoundSet} |
                                genericDisconnectResourcePackage {cAPSpecificBoundSet} |
                                nonAssistedConnectionEstablishmentPackage {cAPSpecificBoundSet} |
                                playTonePackage {cAPSpecificBoundSet} |
                                scfCallInitiationPackage {cAPSpecificBoundSet} |
                                signallingControlPackage {cAPSpecificBoundSet} |
                                specializedResourceControlPackage {cAPSpecificBoundSet} |
                                ssfCallProcessingPackage {cAPSpecificBoundSet} |
                                timerPackage {cAPSpecificBoundSet}}
    RESPONDER CONSUMER OF       {exceptionInformPackage {cAPSpecificBoundSet}}
    ID                          id-CAPScfToSsfGeneric}


-- Operation Packages

scfActivationPackage {PARAMETERS-BOUND : bound} OPERATION-PACKAGE ::= {
    CONSUMER INVOKES    {initialDP {bound}}
    ID                  id-package-scfActivation}

gsmSRF-scfActivationOfAssistPackage {PARAMETERS-BOUND : bound} OPERATION-PACKAGE ::= {
    CONSUMER INVOKES    {assistRequestInstructions {bound}}
    ID                  id-package-gsmSRF-scfActivationOfAssist}

assistConnectionEstablishmentPackage {PARAMETERS-BOUND : bound} OPERATION-PACKAGE ::= {
    CONSUMER INVOKES    {establishTemporaryConnection {bound}}
    ID                  id-package-assistConnectionEstablishment}

genericDisconnectResourcePackage {PARAMETERS-BOUND : bound} OPERATION-PACKAGE ::= {
    CONSUMER INVOKES    {disconnectForwardConnection |
                        disconnectForwardConnectionWithArgument {bound}}
    ID                  id-package-genericDisconnectResource}

nonAssistedConnectionEstablishmentPackage {PARAMETERS-BOUND : bound} OPERATION-PACKAGE ::= {
    CONSUMER INVOKES    {connectToResource {bound}}
    ID                  id-package-nonAssistedConnectionEstablishment}

connectPackage {PARAMETERS-BOUND : bound} OPERATION-PACKAGE ::= {
    CONSUMER INVOKES    {connect {bound}}
    ID                  id-package-connect}

callHandlingPackage {PARAMETERS-BOUND : bound} OPERATION-PACKAGE ::= {
    CONSUMER INVOKES    {releaseCall {bound}}
    ID                  id-package-callHandling}

bcsmEventHandlingPackage {PARAMETERS-BOUND : bound} OPERATION-PACKAGE ::= {
    CONSUMER INVOKES    {requestReportBCSMEvent {bound}}
    SUPPLIER INVOKES    {eventReportBCSM {bound}}
    ID                  id-package-bcsmEventHandling}

ssfCallProcessingPackage {PARAMETERS-BOUND : bound} OPERATION-PACKAGE ::= {
    CONSUMER INVOKES    {continueWithArgument {bound} | continue}
    ID                  id-package-ssfCallProcessing}

scfCallInitiationPackage {PARAMETERS-BOUND : bound} OPERATION-PACKAGE ::= {
    CONSUMER INVOKES    {initiateCallAttempt {bound}}
    ID                  id-package-scfCallInitiation}

timerPackage {PARAMETERS-BOUND : bound} OPERATION-PACKAGE ::= {
    CONSUMER INVOKES    {resetTimer {bound}}
    ID                  id-package-timer}

billingPackage {PARAMETERS-BOUND : bound} OPERATION-PACKAGE ::= {
    CONSUMER INVOKES    {furnishChargingInformation {bound}}
    ID                  id-package-billing}
```

```
chargingPackage {PARAMETERS-BOUND : bound} OPERATION-PACKAGE ::= {
    CONSUMER INVOKES    {applyCharging {bound}}
    SUPPLIER INVOKES    {applyChargingReport {bound}}
    ID                  id-package-charging}

trafficManagementPackage {PARAMETERS-BOUND : bound} OPERATION-PACKAGE ::= {
    CONSUMER INVOKES    {callGap {bound}}
    ID                  id-package-trafficManagement}

callReportPackage {PARAMETERS-BOUND : bound} OPERATION-PACKAGE ::= {
    CONSUMER INVOKES    {callInformationRequest {bound}}
    SUPPLIER INVOKES    {callInformationReport {bound}}
    ID                  id-package-callReport}

signallingControlPackage {PARAMETERS-BOUND : bound} OPERATION-PACKAGE ::= {
    CONSUMER INVOKES    {sendChargingInformation {bound}}
    ID                  id-package-signallingControl}

activityTestPackage OPERATION-PACKAGE ::= {
    CONSUMER INVOKES    {activityTest}
    ID                  id-package-activityTest}

cancelPackage {PARAMETERS-BOUND : bound} OPERATION-PACKAGE ::= {
    CONSUMER INVOKES    {cancel {bound}}
    ID                  id-package-cancel}

cphResponsePackage {PARAMETERS-BOUND : bound} OPERATION-PACKAGE ::= {
    CONSUMER INVOKES    {continueWithArgument {bound} |
                        disconnectLeg {bound} |
                        moveLeg {bound} |
                        splitLeg {bound}}
    ID                  id-package-cphResponse}

exceptionInformPackage {PARAMETERS-BOUND : bound} OPERATION-PACKAGE ::= {
    CONSUMER INVOKES    {entityReleased {bound}}
    ID                  id-package-exceptionInform}

playTonePackage {PARAMETERS-BOUND : bound} OPERATION-PACKAGE ::= {
    CONSUMER INVOKES    {playTone {bound}}
    ID                  id-package-playTone}


SsfToScfGenericInvokable OPERATION ::= {
    activityTest |
    applyCharging {cAPSpecificBoundSet} |
    applyChargingReport {cAPSpecificBoundSet} |
    callInformationReport {cAPSpecificBoundSet} |
    callInformationRequest {cAPSpecificBoundSet} |
    cancel {cAPSpecificBoundSet} |
    connect {cAPSpecificBoundSet} |
    continueWithArgument {cAPSpecificBoundSet} |
    connectToResource {cAPSpecificBoundSet} |
    disconnectForwardConnection |
    disconnectForwardConnectionWithArgument {cAPSpecificBoundSet} |
    disconnectLeg {cAPSpecificBoundSet} |
    entityReleased {cAPSpecificBoundSet} |
    establishTemporaryConnection {cAPSpecificBoundSet} |
    eventReportBCSM {cAPSpecificBoundSet} |
    furnishChargingInformation {cAPSpecificBoundSet} |
    initialDP {cAPSpecificBoundSet} |
    initiateCallAttempt {cAPSpecificBoundSet} |
    moveLeg {cAPSpecificBoundSet} |
    releaseCall {cAPSpecificBoundSet} |
    requestReportBCSMEvent {cAPSpecificBoundSet} |
    resetTimer {cAPSpecificBoundSet} |
    sendChargingInformation {cAPSpecificBoundSet} |
    splitLeg {cAPSpecificBoundSet} |
    playAnnouncement {cAPSpecificBoundSet} |
    playTone {cAPSpecificBoundSet} |
    promptAndCollectUserInformation {cAPSpecificBoundSet} |
    specializedResourceReport
    }

SsfToScfGenericReturnable OPERATION ::= {
    activityTest |
    applyCharging {cAPSpecificBoundSet} |
    applyChargingReport {cAPSpecificBoundSet} |
```

```
    callGap {cAPSpecificBoundSet} |
    callInformationRequest {cAPSpecificBoundSet} |
    cancel {cAPSpecificBoundSet} |
    connect {cAPSpecificBoundSet} |
    connectToResource {cAPSpecificBoundSet} |
    continue |
    continueWithArgument {cAPSpecificBoundSet} |
    disconnectForwardConnection |
    disconnectForwardConnectionWithArgument {cAPSpecificBoundSet} |
    disconnectLeg {cAPSpecificBoundSet} |
    entityReleased {cAPSpecificBoundSet} |
    establishTemporaryConnection {cAPSpecificBoundSet} |
    furnishChargingInformation {cAPSpecificBoundSet} |
    initialDP {cAPSpecificBoundSet} |
    initiateCallAttempt {cAPSpecificBoundSet} |
    moveLeg {cAPSpecificBoundSet} |
    releaseCall {cAPSpecificBoundSet} |
    requestReportBCSMEvent {cAPSpecificBoundSet} |
    resetTimer {cAPSpecificBoundSet} |
    sendChargingInformation {cAPSpecificBoundSet} |
    splitLeg {cAPSpecificBoundSet} |
    playAnnouncement {cAPSpecificBoundSet} |
    playTone {cAPSpecificBoundSet} |
    promptAndCollectUserInformation {cAPSpecificBoundSet}
    }

assistHandoff-gsmSSF-scfAbstractSyntax ABSTRACT-SYNTAX ::= {
    AssistHandoffsSF-gsmSCF-PDUs
    IDENTIFIED BY   id-as-assistHandoff-gsmSSF-scfAS}

AssistHandoffsSF-gsmSCF-PDUs ::= TCMessage {{AssistHandoffssfToScfInvokable},
                                    {AssistHandoffssfToScfReturnable}}

AssistHandoffssfToScfInvokable OPERATION ::= {
    activityTest |
    assistRequestInstructions {cAPSpecificBoundSet} |
    cancel {cAPSpecificBoundSet} |
    connectToResource {cAPSpecificBoundSet} |
    disconnectForwardConnection |
    disconnectForwardConnectionWithArgument {cAPSpecificBoundSet} |
    playAnnouncement {cAPSpecificBoundSet} |
    promptAndCollectUserInformation {cAPSpecificBoundSet} |
    resetTimer {cAPSpecificBoundSet} |
    specializedResourceReport
    }

AssistHandoffssfToScfReturnable OPERATION ::= {
    activityTest |
    assistRequestInstructions {cAPSpecificBoundSet} |
    cancel {cAPSpecificBoundSet} |
    connectToResource {cAPSpecificBoundSet} |
    disconnectForwardConnection |
    disconnectForwardConnectionWithArgument {cAPSpecificBoundSet} |
    playAnnouncement {cAPSpecificBoundSet} |
    promptAndCollectUserInformation {cAPSpecificBoundSet} |
    resetTimer {cAPSpecificBoundSet}
    }

scf-gsmSSFGenericAbstractSyntax ABSTRACT-SYNTAX ::= {
    GenericSCF-gsmSSF-PDUs
    IDENTIFIED BY   id-as-scf-gsmSSFGenericAS}

GenericSCF-gsmSSF-PDUs ::= TCMessage {{ScfToSsfGenericInvokable}, {ScfToSsfGenericReturnable}}

ScfToSsfGenericInvokable OPERATION ::= {
    activityTest |
    applyCharging {cAPSpecificBoundSet} |
    applyChargingReport {cAPSpecificBoundSet} |
    callInformationRequest {cAPSpecificBoundSet} |
    cancel {cAPSpecificBoundSet} |
    connect {cAPSpecificBoundSet} |
    connectToResource {cAPSpecificBoundSet} |
    continue |
    continueWithArgument {cAPSpecificBoundSet} |
    disconnectForwardConnection |
    disconnectForwardConnectionWithArgument {cAPSpecificBoundSet} |
    disconnectLeg {cAPSpecificBoundSet} |
    establishTemporaryConnection {cAPSpecificBoundSet} |
```

```
    furnishChargingInformation {cAPSpecificBoundSet} |
    initiateCallAttempt {cAPSpecificBoundSet} |
    moveLeg {cAPSpecificBoundSet} |
    playTone {cAPSpecificBoundSet} |
    releaseCall {cAPSpecificBoundSet} |
    requestReportBCSMEvent {cAPSpecificBoundSet} |
    resetTimer {cAPSpecificBoundSet} |
    sendChargingInformation {cAPSpecificBoundSet} |
    splitLeg {cAPSpecificBoundSet} |
    playAnnouncement {cAPSpecificBoundSet} |
    promptAndCollectUserInformation {cAPSpecificBoundSet}
    }

ScfToSsfGenericReturnable OPERATION ::= {
    activityTest |
    applyCharging {cAPSpecificBoundSet} |
    applyChargingReport {cAPSpecificBoundSet} |
    callInformationReport {cAPSpecificBoundSet} |
    callInformationRequest {cAPSpecificBoundSet} |
    cancel {cAPSpecificBoundSet} |
    connect {cAPSpecificBoundSet} |
    connectToResource {cAPSpecificBoundSet} |
    disconnectForwardConnection |
    disconnectForwardConnectionWithArgument {cAPSpecificBoundSet} |
    disconnectLeg {cAPSpecificBoundSet} |
    entityReleased {cAPSpecificBoundSet} |
    establishTemporaryConnection {cAPSpecificBoundSet} |
    eventReportBCSM {cAPSpecificBoundSet} |
    furnishChargingInformation {cAPSpecificBoundSet} |
    initiateCallAttempt {cAPSpecificBoundSet} |
    moveLeg {cAPSpecificBoundSet} |
    requestReportBCSMEvent {cAPSpecificBoundSet} |
    resetTimer {cAPSpecificBoundSet} |
    sendChargingInformation {cAPSpecificBoundSet} |
    splitLeg {cAPSpecificBoundSet} |
    playAnnouncement {cAPSpecificBoundSet} |
    playTone {cAPSpecificBoundSet} |
    promptAndCollectUserInformation {cAPSpecificBoundSet} |
    specializedResourceReport
    }

END
```

CHANGE REQUEST

⌘	**29.078 CR**	**307**	⌘**rev**		⌘	Current version:	**5.2.0**	⌘

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network **X**

Title: ⌘	Adding unknownCSId Error to Continue With Argument	
Source: ⌘	Ericsson	
Work item code:⌘	CAMEL4	*Date:* ⌘ 04/03/2003
Category: ⌘	F	*Release:* ⌘ Rel-5

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)

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)
Rel-6 (Release 6)

Reason for change: ⌘	The error "unknownCSID" is missing from the definition of ContinueWithArgument Operation.	
Summary of change:⌘	Add "unknownCSID" to the list of Errors for the ContinueWithArgument Operation definition.	
Consequences if not approved: ⌘	CAP V4 entities won't be able to provide adequate error indication to the sending entity, when the received CSId is unknown. Other operations that can provide a CS ID have this capability.	

Clauses affected: ⌘	6	

	Y	N			
Other specs affected: ⌘		X	Other core specifications	⌘	
		X	Test specifications		
		X	O&M Specifications		

Other comments: ⌘		

5 Common CAP Types

5.1 Data types

...

```
LegOrCallSegment {PARAMETERS-BOUND : bound} ::= CHOICE {
    callSegmentID                   [0] CallSegmentID {bound},
    legID                           [1] LegID
    }
```

...

6 Circuit Switched Call Control

6.1 gsmSSF/CCF - gsmSCF Interface

6.1.1 Operations and arguments

…

< unmodified ASN.1 >

…

```
continueWithArgument {PARAMETERS-BOUND : bound} OPERATION ::= {
    ARGUMENT        ContinueWithArgumentArg {bound}
    RETURN RESULT   FALSE
    ERRORS          {missingParameter |
                    parameterOutOfRange |
                    unexpectedComponentSequence |
                    unexpectedDataValue |
                    unexpectedParameter |
                    unknownLegID |
                    unknownCSID}
    CODE            opcode-continueWithArgument}
-- Direction: gsmSCF -> gsmSSF, Timer: T_cwa
-- This operation is used to request the gsmSSF to proceed with call processing at the
-- DP at which it previously suspended call processing to await gsmSCF instructions
-- (i.e. proceed to the next point in call in the BCSM). The gsmSSF continues call
-- processing with the modified call setup information as received from the gsmSCF.

ContinueWithArgumentArg {PARAMETERS-BOUND : bound} ::= SEQUENCE {
    legOrCallSegment                [0] LegOrCallSegment {bound}            OPTIONAL,
    alertingPattern                 [1] AlertingPattern                     OPTIONAL,
    extensions                      [6] Extensions {bound}                  OPTIONAL,
    serviceInteractionIndicatorsTwo [7] ServiceInteractionIndicatorsTwo     OPTIONAL,
    callingPartysCategory           [12] CallingPartysCategory              OPTIONAL,
    genericNumbers                  [16] GenericNumbers {bound}             OPTIONAL,
    cug-Interlock                   [17] CUG-Interlock                      OPTIONAL,
    cug-OutgoingAccess              [18] NULL                               OPTIONAL,
    chargeNumber                    [50] ChargeNumber {bound}               OPTIONAL,
    carrier                         [52] Carrier {bound}                    OPTIONAL,
    suppressionOfAnnouncement       [55] SuppressionOfAnnouncement          OPTIONAL,
    naOliInfo                       [56] NAOliInfo                          OPTIONAL,
    bor-InterrogationRequested      [57] NULL                               OPTIONAL,
    suppress-O-CSI                  [58] NULL                               OPTIONAL,
    continueWithArgumentArgExtension [59] ContinueWithArgumentArgExtension  OPTIONAL,
    ...
    }

ContinueWithArgumentArgExtension ::= SEQUENCE {
    suppress-D-CSI                  [0] NULL                                OPTIONAL,
    suppress-N-CSI                  [1] NULL                                OPTIONAL,
    suppressOutgoingCallBarring     [2] NULL                                OPTIONAL,
    ...
    }
```

…

< unmodified ASN.1 >

…

CHANGE REQUEST

⌘	**29.078 CR**	**304**	⌘ **rev**	**1**	⌘	Current version:	**5.2.0**	⌘

Proposed change affects: UICC apps ⌘ ☐   ME ☐   Radio Access Network ☐   Core Network **X**

Title: ⌘	Correction to ASN.1 syntax for CWA	
Source: ⌘	Ericsson	
Work item code: ⌘	CAMEL4	***Date:*** ⌘ 10/02/2003
Category: ⌘ **F**		***Release:*** ⌘ Rel-5

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)*

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)*
Rel-6   *(Release 6)*

Reason for change: ⌘	CAP V4 has introduced the parameter "legOrCallSegment" in the ContinueWithArgument (CWA) Operation. This parameter is placed at the first position in ContinueWithArgumentArg (CWA Arg), with tag [0].

Other parameters added to CWA Arg in CAP v4 (e.g.bor-InterrogationRequest, suppress-O-CSI, suppress-D-CSI, suppress-N-CSI, etc.) have either been added with the highest possible tag number or as parameters within the CWA Arg Extension.

The current position of the legOrCallSegment parameter in CWA Arg leads, however, to higher implementation and testing cost. Functional entities that support CAP V3 expect the first parameter in CWA Arg to be "alertingPattern". When upgrading these entities to CAP V4, the implementation must now expect legOrCallSegment in the first position of CWA Arg, instead of alertingPattern.

The present CR therefore proposes to place legOrCallSegment in the CWA Arg Extension, after the parameter "suppressOutgoingCallBarring". This will reduce implementation and testing costs. |
Summary of change: ⌘	Place legOrCallSegment in the CWA Arg Extension, after the parameter suppressOutgoingCallBarring.
Consequences if not approved: ⌘	Higher implementation and testing costs for the implementing of CAP V4.
Clauses affected: ⌘	6.1.1

		Y	N		
Other specs	⌘		X	Other core specifications	⌘
affected:			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

6 Circuit Switched Call Control

6.1 gsmSSF/CCF - gsmSCF Interface

6.1.1 Operations and arguments

```
CAP-gsmSSF-gsmSCF-ops-args {itu-t(0) identified-organization(4) etsi(0) mobileDomain(0)
umts-network(1) modules(3) cap-gsmSSF-gsmSCF-ops-args(101) version4(3)}

DEFINITIONS IMPLICIT TAGS ::= BEGIN

...


continueWithArgument {PARAMETERS-BOUND : bound} OPERATION ::= {
    ARGUMENT        ContinueWithArgumentArg {bound}
    RETURN RESULT   FALSE
    ERRORS          {missingParameter |
                    parameterOutOfRange |
                    unexpectedComponentSequence |
                    unexpectedDataValue |
                    unexpectedParameter |
                    unknownLegID}
    CODE            opcode-continueWithArgument}
-- Direction: gsmSCF -> gsmSSF, Timer: T_Cwa
-- This operation is used to request the gsmSSF to proceed with call processing at the
-- DP at which it previously suspended call processing to await gsmSCF instructions
-- (i.e. proceed to the next point in call in the BCSM). The gsmSSF continues call
-- processing with the modified call setup information as received from the gsmSCF.

ContinueWithArgumentArg {PARAMETERS-BOUND : bound} ::= SEQUENCE {
    legOrCallSegment                    [0] LegOrCallSegment {bound}              OPTIONAL,
    alertingPattern                     [1] AlertingPattern                       OPTIONAL,
    extensions                          [6] Extensions {bound}                    OPTIONAL,
    serviceInteractionIndicatorsTwo     [7] ServiceInteractionIndicatorsTwo       OPTIONAL,
    callingPartysCategory               [12] CallingPartysCategory                OPTIONAL,
    genericNumbers                      [16] GenericNumbers {bound}               OPTIONAL,
    cug-Interlock                       [17] CUG-Interlock                        OPTIONAL,
    cug-OutgoingAccess                  [18] NULL                                 OPTIONAL,
    chargeNumber                        [50] ChargeNumber {bound}                 OPTIONAL,
    carrier                             [52] Carrier {bound}                      OPTIONAL,
    suppressionOfAnnouncement           [55] SuppressionOfAnnouncement            OPTIONAL,
    naOliInfo                           [56] NAOliInfo                            OPTIONAL,
    bor-InterrogationRequested          [57] NULL                                 OPTIONAL,
    suppress-O-CSI                      [58] NULL                                 OPTIONAL,
    continueWithArgumentArgExtension    [59] ContinueWithArgumentArgExtension     OPTIONAL,
    ...
    }

ContinueWithArgumentArgExtension ::= SEQUENCE {
    suppress-D-CSI                      [0] NULL                                  OPTIONAL,
    suppress-N-CSI                      [1] NULL                                  OPTIONAL,
    suppressOutgoingCallBarring         [2] NULL                                  OPTIONAL,
    legOrCallSegment                    [3] LegOrCallSegment {bound}              OPTIONAL,
    ...
    }
```

CHANGE REQUEST

⌘	**29.078** CR	**298**	⌘**rev**	**1**	⌘	Current version:	**5.2.0**	⌘

Proposed change affects: UICC apps⌘ ☐   ME ☐ Radio Access Network ☐ Core Network **X**

Title: ⌘	Correction to Call Information Request	
Source: ⌘	Ericsson	
Work item code:⌘	CAMEL4	***Date:*** ⌘ 11/02/2003
Category: ⌘	F	***Release:*** ⌘ Rel-5

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)*

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)*
Rel-6 *(Release 6)*

Reason for change: ⌘	In TS 23.078, the information element "Leg ID" is marked as Mandatory for the Call Information Request and the Call Information Report procedures. The procedure descriptions in TS 29.078 imply, however, that the parameter legId may be absent from the CallInformationRequest argument and from the CallInformationReport argument. This inconsistency shall be corrected. The CallInformationRequest Operation and the CallInformationReport Operation shall always carry the LegId, so the wording in the respective procedure descriptions in TS 29.078 shall be corrected accordingly. The LegId parameter in CallInformationRequest and CallInformationReport shall have an ASN.1 default value, whereby the default shall be "leg 2".
Summary of change:⌘	(1) Correct the wording in the procedure descriptions for CallInformationRequest and CallInformationReport. Remove the sentence starting with "If absent…". (2) Define an ASN.1 default value for LegId parameter in CallInformationRequest and CallInformationReport.
Consequences if not approved: ⌘	- Ambiguity for gsmSCF designers, gsmSSF designers and Service Logic designers; - Compatibility problems between equipment from different vendors.
Clauses affected: ⌘	6, 11.6, 11.7

Y	N

Other specs affected:	⌘		X	Other core specifications	⌘	
			X	Test specifications		
			X	O&M Specifications		
Other comments:	⌘	Refer to the highlighted text in the "*For Information*" section of the present CR.				

4.6.1.3   Call Information Report

4.6.1.3.1   Description

This IF is used to send specific call information for a single call to the gsmSCF as requested by the gsmSCF in a previous Call Information Request IF.

4.6.1.3.2   Information Elements

Information element name	Status	Description
Requested Information List	M	This IE specifies the requested information.
Leg ID	M	This IE indicates the party in the call for which information shall be collected.

…

4.6.2.4   Call Information Request

4.6.2.4.1   Description

This IF is used to request the gsmSSF to record specific information about a single call and report it to the gsmSCF (with a Call Information Report IF).

4.6.2.4.2   Information Elements

Information element name	Status	Description
Requested Information Type List	M	This IE is described in a table below. This IE specifies a list of specific items of information which are requested.
Leg ID	M	This IE indicates the party in the call for which the information shall be collected.

Requested Information Type List contains the following information elements:

Information element name	Status	Description
Call Attempt Elapsed Time	O	This IE indicates that the Call Attempt Elapsed Time is requested in the Call Information Report. Call Attempt Elapsed Time is the duration between the end of the CAMEL processing initiating call setup (Connect, Continue or Continue With Argument IF) and the received answer indication from the called party side. For the Calling Party, the value of Call Attempt Elapsed Time in the Call Information Report shall be set to 0.
Call Stop Time	O	This IE indicates that the Call Stop Time is requested in the Call Information Report. Call Stop Time is the time stamp when the connection is released.
Call Connected Elapsed Time	O	This IE indicates that the Call Connected Elapsed Time is requested in the Call Information Report. Call Connected Elapsed Time is the duration between the received answer indication from the called party side and the release of the connection. For a Calling Party, it indicates the duration between the sending of the Initial DP IF and the release of that party.
Release Cause	O	This IE indicates that the Release Cause for the call is requested in the Call Information Report.

```
ReceivingSideID ::= CHOICE {
    receivingSideID                 [1] LegType
    }
-- used to identify LegID in operations sent from gsmSSF to gsmSCF


SendingSideID ::= CHOICE {
    sendingSideID                   [0] LegType}
-- used to identify LegID in operations sent from gsmSCF to gsmSSF
```

*** First Modified Section ***

6 Circuit Switched Call Control

6.1 gsmSSF/CCF - gsmSCF Interface

6.1.1 Operations and arguments

```
CAP-gsmSSF-gsmSCF-ops-args {itu-t(0) identified-organization(4) etsi(0) mobileDomain(0)
umts-network(1) modules(3) cap-gsmSSF-gsmSCF-ops-args(101) version4(3)}


...

callInformationReport {PARAMETERS-BOUND : bound} OPERATION ::= {
    ARGUMENT        CallInformationReportArg {bound}
    RETURN RESULT   FALSE
    ALWAYS RESPONDS FALSE
    CODE            opcode-callInformationReport}
-- Direction: gsmSSF -> gsmSCF, Timer: Tcirp
-- This operation is used to send specific call information for a single call party to the gsmSCF as
-- requested by the gsmSCF in a previous CallInformationRequest.

CallInformationReportArg {PARAMETERS-BOUND : bound} ::= SEQUENCE {
    requestedInformationList        [0] RequestedInformationList {bound},
    extensions                      [2] Extensions {bound}                       OPTIONAL,
    legID                           [3] ReceivingSideID                          OPTIONAL,
    legID                           [3] ReceivingSideID DEFAULT receivingSideID:leg2,
    ...
    }



callInformationRequest {PARAMETERS-BOUND : bound} OPERATION ::= {
    ARGUMENT        CallInformationRequestArg {bound}
    RETURN RESULT   FALSE
    ERRORS          {missingParameter |
                    parameterOutOfRange |
                    requestedInfoError |
                    systemFailure |
                    taskRefused |
                    unexpectedComponentSequence |
                    unexpectedDataValue |
                    unexpectedParameter |
                    unknownLegID}
    CODE            opcode-callInformationRequest}
-- Direction: gsmSCF -> gsmSSF, Timer: Tcirq
-- This operation is used to request the gsmSSF to record specific information about a single
-- call party and report it to the gsmSCF (with a CallInformationReport operation).

CallInformationRequestArg {PARAMETERS-BOUND : bound}::= SEQUENCE {
```

```
    requestedInformationTypeList     [0] RequestedInformationTypeList,
    extensions                       [2] Extensions {bound}                    OPTIONAL,
    legID                            [3] SendingSideID                         OPTIONAL,
    legID                            [3] SendingSideID DEFAULT sendingSideID:leg2,
    ...
    }
-- OPTIONAL denotes network operator optional.
```

...

*** *First Modified Section* ***

11.6　CallInformationReport procedure

11.6.1　General description

The gsmSSF uses this operation to send specific call information for a single call party to the gsmSCF as requested by the gsmSCF in previous "CallInformationRequest" operation. The report shall be sent at the end of a call party connection which is indicated by one of the events specified below.

11.6.1.1　Parameters

- requestedInformationList:
  The gsmSSF sends the appropriate types and values to the gsmSCF in accordance with the requested information.

- legID:
  This parameter indicates the party in the call for which the information has been collected. When absent, it indicates the "outgoing" leg, this can be a leg created by Connect, Continue or ContinueWithArgument.

11.6.2　Invoking entity (gsmSSF)

11.6.2.1　Normal procedure

gsmSSF preconditions:

(1) The indicated or default party is released from the call or call setup towards the indicated or default party is terminated prematurely.

(2) Requested call information has been collected.

(3) "CallInformationReport" is pending due to a previously received "CallInformationRequest" operation.

(4) A control or a monitor relationship exists between the gsmSCF and the gsmSSF.

gsmSSF postconditions:

(1) If there are no armed EDPs or pending reports, then the gsmSSF FSM shall transit to the state "Idle"; otherwise, the gsmSSF FSM shall remain in the same state.

If the gsmSSF FSM executes a state transition caused by one of the following events, then:

- release for the indicated or default leg;

- abandon for the indicated or default leg;

- Called party Busy or Not Reachable for the indicated or default leg;

- gsmSSF No_Answer timer expiration for the indicated or default leg;

- route select failure for the indicated or default leg;

- release of call initiated by the gsmSCF (ReleaseCall),

and "CallInformationRequest" is pending for the indicated or default legs, then one "CallInformationReport" operation shall be sent to the gsmSCF, containing all information requested for that leg.

If a "CallInformationReport" has been sent to the gsmSCF, then no "CallInformationReport" is pending on that leg, i.e. if a further "CallInformationReport" on that leg is required, for example in the case of follow-on call, then this has to be explicitly requested by the gsmSCF.

If an event causing the "CallInformationReport" is also detected by an armed EDP-R, then immediately after "CallInformationReport" the corresponding "EventReportBCSM" shall be sent.

If an event causing the "CallInformationReport" is also detected by an armed EDP-N, then immediately before "CallInformationReport" the corresponding "EventReportBCSM" shall be sent.

11.6.2.2   Error handling

Operation related error handling is not applicable, due to class 4 operation.

*** *Next Modified Section* ***

11.7   CallInformationRequest procedure

11.7.1   General description

The gsmSCF uses this operation to request the gsmSSF to record specific information about a single call party and report it to the gsmSCF using the "CallInformationReport" operation.

11.7.1.1   Parameters

- requestedInformationTypeList:
  This parameter specifies a list of specific items of information which is requested. The list may contain the following parameters:

  - callAttemptElapsedTime:
    This parameter indicates the duration between the end of CAP processing of operations initiating call setup ("Connect","Continue" or "ContinueWithArgument") and the received answer indication from the called party. If the callAttemptElapsedTime is requested for the calling party, then a value of "0" shall be reported by the gsmSSF.

    In the case of unsuccessful call setup, the network event indicating the unsuccessful call setup stops the measurement of "callAttemptElapsedTime".

  - callStopTime:
    This parameter indicates the time stamp when the connection is released.

  - callConnectedElapsedTime:
    This parameter indicates the duration between the received answer indication from the called party and the release of that connection. For the calling party it indicates the duration between the sending of InitialDP and the release of that party.

  - releaseCause:
    This parameter indicates the release cause for the call.

  - legID:
    This parameter indicates the party in the call for which the information shall be collected and at the end of connection of which the report shall be sent. When absent, it shall apply to the "outgoing" leg, this can be a leg created by Connect, Continue or ContinueWithArgument.

11.7.2 Responding entity (gsmSSF)

11.7.2.1 Normal procedure

gsmSSF preconditions:

(1) A control relationship exists between gsmSSF and gsmSCF.

(2) The gsmSSF FSM is in the state "Waiting_for_Instructions".

gsmSSF postconditions:

(1) Requested call information is retained by the gsmSSF.

(2) No gsmSSF FSM state transition.

The gsmSSF allocates a record for the indicated or default party and stores the requested information if already available and prepares the recording of information items, that will become available later like for example "callStopTimeValue".

Call information may be requested for any call party (identified by a legID).

11.7.2.2 Error handling

Generic error handling for the operation related errors are described in clause 10 and the TC services which are used for reporting operation errors are described in clause 14.

*** *End of Document* ***

CHANGE REQUEST

| ⌘ | **29.078 CR** | **305** | ⌘**rev** | **1** | ⌘ | Current version: | **5.2.0** | ⌘ |

Proposed change affects: UICC apps⌘ ☐　　ME ☐ Radio Access Network ☐　Core Network **X**

Title:	⌘	Response to ApplyChargingGPRS at WFI at DP that terminates a relationship

Source:	⌘	Ericsson

Work item code: ⌘	CAMEL4	***Date:*** ⌘	13/02/2003

Category:	⌘	F	***Release:*** ⌘	Rel-5

	Use <u>one</u> of the following categories:	Use <u>one</u> of the following releases:
	F (correction)	2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)	R96 (Release 1996)
	B (addition of feature),	R97 (Release 1997)
	C (functional modification of feature)	R98 (Release 1998)
	D (editorial modification)	R99 (Release 1999)
		Rel-4 (Release 4)
		Rel-5 (Release 5)
		Rel-6 (Release 6)

| ***Reason for change:*** | ⌘ | In the 23.078 SDL flows (fig 6.17-7 and fig 6.17-16), the report procedure at PDP Context Disconnection sets the ***context active*** indicatior to FALSE and, after that, invokes the Handle_ACR procedure, which issues an ApplyChargingReportGPRS operation for each report that is registered as pending at the SGSN. Thus these reports will indicate active=FALSE. No ApplyChargingReportGPRS operation is issued if not registered as pending.

The SCP may issue an ApplyChargingGPRS operation at any time, provided the preconditions are fulfilled. If the SCP issues an ApplyChargingGPRS operation that is invoked at the SGSN after the SGSN has executed the report procedure at PDP Context Disconnection, then the SGSN has already proceeded to a point beyond the last chance for reporting for that PDP Context.

For EDP-R reporting, the SDL specifies that ApplyChargingReportGPRS, indicating active=false, shall be sent from SGSN prior to the EventReportGPRS for PDP Context Disconnection.

Thus it's not possible, in the case described, for the SGSN to both
Maintain the specified sequence of CAP operations (23.078 fig 6.17-7 and fig 6.17-16); and
Send ApplyChargingReportGPRS, indicating active=false in response to the late ApplyChargingGPRS operation.

There is at present no means to convey to the SCP that the ApplyChargingGPRS operation will not yield any ApplyChargingReportGPRS operation. An error indication is required to convey to the SCP that this situation has occurred. |
|---|---|---|

	The situation for GPRS Session control is similar.
Summary of change: ⌘	Add an additional clause for the TaskRefused error in the procedure description of ApplyChargingGPRS.
Consequences if not approved: ⌘	The SCP may experience a lack of last ApplyChargingGPRS report, without getting any error indication, in the case described .

Clauses affected:	⌘	13.2				
		Y	**N**			
Other specs affected:	⌘	**X**		Other core specifications	⌘	23.078 CR 534
			X	Test specifications		
			X	O&M Specifications		
Other comments:	⌘					

13.2 ApplyChargingGPRS procedure

13.2.1 General description

The gsmSCF uses this operation for interacting with the gprsSSF function "CSE control of GPRS session or PDP Context duration and volume". The ApplyChargingGPRSReport operation provides the feedback from the gprsSSF to the gsmSCF. The charging scenarios supported by this operation are those given in 3GPP TS 22.078 [3] for "CSE control of GPRS session and PDP Context duration and volume".

If this procedure is used within a PDP Context dialogue, then the charging instruction shall pertain to the PDP Context only. Data volume threshold and duration threshold may be defined separately.

If this procedure is used within a GPRS Session dialogue, then the charging instruction may pertain to the GPRS Session or to a single PDP Context. Charging for a PDP Context may be on duration and/or volume. Charging for a GPRS Session may be on duration only.

    NOTE: Charging for a PDP Context on duration and volume requires two ApplyChargingGPRS operations.

13.2.1.1 Parameters

- chargingCharacteristics:
  This parameter is a choice between parameters required for "CSE control of a GPRS session or a PDP Context duration or volume":

    - maxTransferredVolume:
      This parameter specifies the maximum volume that may be transferred before a ApplyChargingReportGPRS shall be sent to the gsmSCF.

    - maxElapsedTime:
      This parameter specifies the maximum period of time before a ApplyChargingReportGPRS shall be sent to the gsmSCF.

- tariffSwitchInterval:
  This parameter indicates the time duration until the next tariff switch. The measurement of the elapsed tariff switch period shall start immediately after successful execution of this operation.

- pDPID:
  This parameter identifies the PDP Context, within the GPRS Session dialogue, to which the charging instruction applies.

13.2.2 Responding entity (gprsSSF)

13.2.2.1 Normal procedure

gprsSSF preconditions:

    (1) A control relationship exists between the gsmSCF and the GPRS Session or PDP Context to which the operation applies.

    (2) The gprsSSF FSM is in one of the following states: "Waiting_for_Instructions" or "Monitoring".

gprsSSF postconditions:

    (1) No gprsSSF FSM state transition.

On receipt of this operation, the gprsSSF shall set the charging data using the information elements included in the operation.

13.2.2.2   Error handling

"TaskRefused": In addition to the generic error handling noted below, this error shall be indicated when:

- a previously received GPRS Session or PDP Context period or volume duration is pending;

- a tariffSwitchInterval is indicated when a previously received tariffSwitchInterval is pending;

- the gprsSSF has received an ApplyChargingGPRS operation for a PDP Context that is already disconnected;

- the gprsSSF has received an ApplyChargingGPRS operation for the GPRS Session when the subscriber is already detached.

Generic error handling for the operation related errors is described in clause 10 and the TC services used for reporting operation errors are described in clause 14.

*** End of Document ***

CR-Form-v7

CHANGE REQUEST

| ⌘ | **29.078** CR **306** | ⌘**rev** **2** ⌘ | Current version: | **5.2.0** | ⌘ |

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network **X**

Title:	⌘	Missing parameter (Charge Indicator)

Source:	⌘	Siemens AG

Work item code:	⌘	CAMEL4	***Date:*** ⌘	14/02/2003

Category:	⌘	**F**	***Release:*** ⌘	Rel-5

Use one of the following categories:	*Use one of the following releases:*
F *(correction)*	*2 (GSM Phase 2)*
A *(corresponds to a correction in an earlier release)*	*R96 (Release 1996)*
B *(addition of feature),*	*R97 (Release 1997)*
C *(functional modification of feature)*	*R98 (Release 1998)*
D *(editorial modification)*	*R99 (Release 1999)*
Detailed explanations of the above categories can	*Rel-4 (Release 4)*
be found in 3GPP TR 21.900.	*Rel-5 (Release 5)*
	Rel-6 (Release 6)

Reason for change:	⌘	Charge Indicator was added in Event Report BCSM for O/T_Answer in the stage 2. However, it has been missing in the stage 3.
Summary of change:	⌘	Add the parameter as described in ITU-T Recommendation Q.763.
Consequences if not approved:	⌘	This information could not be sent to the gsmSCF - incomplete and inconsistent specification series in CAMEL4 Rel-5.

Clauses affected:	⌘	5.1, 11.18

		Y	**N**	
Other specs affected:	⌘		**X**	Other core specifications ⌘
			X	Test specifications
			X	O&M Specifications

Other comments:	⌘	

*** For Information (3GPP TS 23.078 Rel-5) ***

4.6.1.6 Event Report BCSM

4.6.1.6.1 Description

This IF is used to notify the gsmSCF of a call-related event (i.e., BCSM events as answer and disconnect) previously requested by the gsmSCF in a Request Report BCSM Event IF.

4.6.1.6.2 Information Elements

Information element name	MO	MF	MT	VT	NC	NP	Description
Event Type BCSM	M	M	M	M	M	M	This IE specifies the type of event that is reported.
Event Specific Information BCSM	C	C	C	C	C	C	This IE indicates the call related information specific to the event.
Leg ID	M	M	M	M	M	M	This IE indicates the party in the call for which the event is reported.
Misc Call Info	M	M	M	M	M	M	This IE indicates the DP type.

If the Event Type BCSM IE contains either O_Answer or T_Answer, then the Event Specific Information BCSM IE contains the following information elements:

Information element name	MO	MF	MT	VT	NC	NP	Description
Destination Address	M	M	M	M	M	M	This IE specifies the destination address for the call leg. The *NatureOfAddress indicator* may contain a national-specific value. For some national-specific *NatureOfAddress indicator* values the length of the digit part of destination address may be zero.
OR	-	C	C	-	-	-	This IE indicates that the call was subject to basic Optimal Routeing as specified in 3GPP TS 23.079 [**Error! Reference source not found.**].
Forwarded Call	-	M	C	C	-	-	This IE indicates that the call has been subject to a Call Forwarding supplementary service.
Charge Indicator	S	S	S	S	S	S	This IE specifies the value which will be stored in the Call Data Record. See ITU-T Recommendation Q.763 [**Error! Reference source not found.**].

*** For Information (ITU-T Recommendation Q 763 12/1999) ***

3.5 Backward call indicators

The format of the backward call indicators parameter field is shown in Figure 7.

	8	7	6	5	4	3	2	1
1	H	G	F	E	D	C	B	A
2	P	O	N	M	L	K	J	I

Figure 7/Q.763 – Backward call indicators parameter field

The following codes are used in the backward call indicators parameter field:

bits <u>BA</u> :   *Charge indicator* (Note 1)

    0 0   no indication

    0 1   no charge

    1 0   charge

    1 1   spare

NOTE 1 – The interpretation of these bits depends only on the charging exchange.

*** First Modified Part ***

---

5 Common CAP Types

5.1 Data types

```
...
ChargeIndicator ::= OCTET STRING (SIZE (1))
--  As specified in ITU-T Recommendation Q.763 as follows:
--      no indication    'xxxx xx00'B
--      no charge        'xxxx xx01'B
--      charge           'xxxx xx10'B
--      spare            'xxxx xx11'B
--  Sending entity shall fill the upper six bits with '0's.
--  Receiving entity shall ignore the upper six bits.

EventSpecificInformationBCSM {PARAMETERS-BOUND : bound} ::= CHOICE {
    routeSelectFailureSpecificInfo      [2] SEQUENCE {
        failureCause                        [0] Cause {bound}                   OPTIONAL,
        ...
        },
    oCalledPartyBusySpecificInfo        [3] SEQUENCE {
        busyCause                           [0] Cause {bound}                   OPTIONAL,
        ...
        },
    oNoAnswerSpecificInfo               [4] SEQUENCE {
        -- no specific info defined --
        ...
        },
    oAnswerSpecificInfo                 [5] SEQUENCE {
        destinationAddress                  [50] CalledPartyNumber {bound}      OPTIONAL,
        or-Call                             [51] NULL                           OPTIONAL,
        forwardedCall                       [52] NULL                           OPTIONAL,
        chargeIndicator                     [53] ChargeIndicator                OPTIONAL,
        ...
        },
    oMidCallSpecificInfo                [6] SEQUENCE {
        midCallEvents                       [1] CHOICE {
            dTMFDigitsCompleted                 [3] Digits {bound},
            dTMFDigitsTimeOut                   [4] Digits {bound}
            }                                                                   OPTIONAL,
        ...
        },
    oDisconnectSpecificInfo             [7] SEQUENCE {
        releaseCause                        [0] Cause {bound}                   OPTIONAL,
        ...
        },
    tBusySpecificInfo                   [8] SEQUENCE {
        busyCause                           [0] Cause {bound}                   OPTIONAL,
        callForwarded                       [50] NULL                           OPTIONAL,
        routeNotPermitted                   [51] NULL                           OPTIONAL,
        forwardingDestinationNumber         [52] CalledPartyNumber {bound}      OPTIONAL,
        ...
```

```
        },
    tNoAnswerSpecificInfo            [9] SEQUENCE {
        callForwarded                    [50] NULL                            OPTIONAL,
        forwardingDestinationNumber      [52] CalledPartyNumber {bound}       OPTIONAL,
        ...
        },
    tAnswerSpecificInfo              [10] SEQUENCE {
        destinationAddress               [50] CalledPartyNumber {bound}       OPTIONAL,
        or-Call                          [51] NULL                            OPTIONAL,
        forwardedCall                    [52] NULL                            OPTIONAL,
        chargeIndicator                  [53] ChargeIndicator                 OPTIONAL,
        ...
        },
    tMidCallSpecificInfo             [11] SEQUENCE {
        midCallEvents                    [1] CHOICE {
            dTMFDigitsCompleted              [3] Digits {bound},
            dTMFDigitsTimeOut                [4] Digits {bound}
            }                                                                 OPTIONAL,
        ...
        },
    tDisconnectSpecificInfo          [12] SEQUENCE {
        releaseCause                     [0] Cause {bound}                    OPTIONAL,
        ...
        },
    oTermSeizedSpecificInfo          [13] SEQUENCE {
        locationInformation              [50] LocationInformation             OPTIONAL,
        ...
        },
    callAcceptedSpecificInfo         [20] SEQUENCE {
        locationInformation              [50] LocationInformation             OPTIONAL,
        ...
        },
    oAbandonSpecificInfo             [21] SEQUENCE {
        routeNotPermitted                [50] NULL                            OPTIONAL,
        ...
        },
    oChangeOfPositionSpecificInfo    [50] SEQUENCE {
        locationInformation              [50] LocationInformation             OPTIONAL,
        ...
        },
    tChangeOfPositionSpecificInfo    [51] SEQUENCE {
        locationInformation              [50] LocationInformation             OPTIONAL,
        ...
        }
    }
-- Indicates the call related information specific to the event.
```

*** Next Modified Part ***

11.18   EventReportBCSM procedure

11.18.1 General description

The gsmSSF uses this operation to notify the gsmSCF of a call related event previously requested by the gsmSCF in a "RequestReportBCSMEvent" operation.

11.18.1.1 Parameters

- eventTypeBCSM:
  This parameter specifies the type of event that is reported.

- eventSpecificInformationBCSM:
  This parameter indicates the call related information specific to the event.

  For Route_Select_Failure it shall contain the "FailureCause", if available.

  For O_Busy it shall contain the "BusyCause", if available.

  - If the busy event is triggered by an ISUP release message, then the BusyCause is a copy of the ISUP release cause, for example: Subscriber absent, 20 or User busy, 17.

- If the busy event is trigerred by a MAP error, for example: Absent subscriber, received from the HLR, then the MAP cause is mapped to the corresponding ISUP release cause.

NOTE 1: If no BusyCause is received, then the gsmSCF shall assume busy.

For T_Busy it may contain the following parameters, if available.

- CallForwarded:
  This parameter indicates that the busy event is triggered by call forwarding at the GMSC or VMSC.

- ForwardingDestinationNumber:
  This parameter indicates the forwarding destination.

- RouteNotPermitted:
  This parameter indicates that the busy event is triggered because call forwarding was not invoked in this GMSC due to the rules of Basic Optimal Routeing.

- BusyCause:

  - If the busy event is triggered by an ISUP release message, then the BusyCause is a copy of the ISUP release cause, for example: Subscriber absent, 20 or User busy, 17.

  - If the busy event is triggered by a MAP error, for example: Absent subscriber, received from the HLR, then the MAP cause is mapped to the corresponding ISUP release cause.

  - If the busy event is triggered by call forwarding or call deflection invocation in the GMSC or VMSC, then the BusyCause will refer to the release cause in accordance with the mapping table in 3GPP TS 23.078 [7].

NOTE 2: If no BusyCause is received, then the gsmSCF shall assume busy.

  - If the busy event is triggered by call forwarding at the GMSC, then the BusyCause reflects the forwarding reason (Subscriber Absent, 20 or User busy, 17). The eventSpecificInformationBCSM shall in that case also contain the CallForwarded indication.

For O_No_Answer it shall be empty.

For T_No_Answer it may contain the CallForwarded indication and the ForwardingDestinationNumber.

  - If the No_Answer event is triggered by an ISUP release message or expiry of the CAMEL timer TNRy, then the eventSpecificInformationBCSM shall be empty.

  - If the No_Answer event is triggered by call forwarding at the GMSC or VMSC, then the eventSpecificInformationBCSM shall contain the CallForwarded indication and the ForwardingDestinationNumber.

For O_Answer or T_Answer it shall contain the following information, if available:

- The destination address for the call;

- The OR indicator, in the case that the call was subject to Basic Optimal Routeing, as specified in 3GPP TS 23.079 [8];

- The forwarding indicator, in the case that the Call Forwarding Supplementary Service was invoked:

- The charge indicator.

For O_Mid_Call and T_Mid_Call it shall contain the detected digit string, in accordance with the criterion defined in the RequestReportBCSMEvent operation.

For Call_Accepted, O_Term_Seized, O_Change_Of_Position and T_Change_Of_Position it shall contain the following information:

- locationInformation:
  This parameter indicates the location of the MS.

For O_Disconnect and T_Disconnect it shall contain the "releaseCause", if available.

For O_Abandon" it may contain the following parameter, if available.

- routeNotPermitted:
  This parameter indicates that the O-Abondon event is triggered because call set up shall not be invoked in this MSC due to the rules of Basic Optimal Routeing.

- legID:
  This parameters indicates the party in the call for which the event is reported. The gsmSSF shall use the option "receivingSideID" only.

- receivingSideID:
  If not included, then the following defaults are assumed:

  "legID" = 1 for the events O_Abandon and T_Abandon,

  "legID" = 2 for the events Route_Select_Failure, O_Busy, O_No_Answer, O_Answer, T_Busy, O_Term_Seized, Call_Accepted, T_No_Answer and T_Answer.

  The "legID" parameter shall always be included for the events O_Disconnect and T_Disconnect.

- miscCallInfo:
  This parameter indicates Detection Point (DP) related information.

- messageType:
  This parameter indicates whether the message is a request, i.e. resulting from a "RequestReportBCSMEvent" with monitorMode = interrupted, or a notification, i.e. resulting from a "RequestReportBCSMEvent" with "monitorMode" = "notifyAndContinue".