3GPP TSG CN Plenary Meeting #25 **NP-040405**
8th – 10th August 2004 Palm Springs, US.

Source: TSG CN WG4

Title: Corrections on TEI6 Camel UUI InitialDP message

Agenda item: 9.21

Document for: APPROVAL

Spec	CR	Rev	Doc-2nd-Level N4-04	Phase	Subject	Cat	Ver_C
29.078	380		0928		Support of User-to-User Information (UUI) in CAMEL InitialDP operation	B	6.2.0
29.002	739		0929		Export of UU-Data data type	B	6.6.0
23.078	729	2	1183		Support of User-to-User Information (UUI) in CAMEL InitialDP operation	B	6.2.0

3GPP TSG CN WG4 Meeting #24 ***N4-040928***
Sophia Antipolis, FRANCE, 16th – 20th AUGUST 2004

EP Railways Telecommunications meeting #12

Sophia Antipolis, France

CR-Form-v7

CHANGE REQUEST

⌘ **29.078** **CR** **380** ⌘ **rev** **-** ⌘ Current version: **6.2.0** ⌘

*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 ☒

Title:	⌘	Support of User-to-User Information (UUI) in CAMEL InitialDP operation
Source:	⌘	CN4
Work item code:	⌘	TEI6
Date:	⌘	8/07/2004
Category:	⌘	**B**
Release:	⌘	Rel-6

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:	⌘	User-to-User Signalling Service 1(UUS1) is used to carry Function Numbers and other application-related data within GSM-R based networks. For IN-based Railway applications there is a need to pass this data to the SCP in the CAMEL InitialDP operation.
Summary of change:	⌘	Import the UU-Data data type from 29.002 (MAP). Add the uu-Data parameter after the ellipsis notation in the InitialDPArgExtension parameter. Add the mapping of the UU Indicators and UUI parameter between ISUP IAM and CAP InitialDP to Annex A
Consequences if not approved:	⌘	IN-based Railway services related to originating Function Numbers and other applications such as enhanced Location Dependent Addressing (eLDA) will be difficult to implement using CAMEL. Operators may have to use proprietary solutions that restrict multi-vendor interoperability.

Clauses affected:	⌘	6.1.1, 11.20.1.1, A.1

Other specs affected:	⌘	Y	N		⌘	
		X		Other core specifications		22.078, 23.078-729, 29.002-739
			X	Test specifications		
			X	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/specs/CR.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.

***** 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) version5(4)}

DEFINITIONS IMPLICIT TAGS ::= BEGIN

-- This module contains the operations and operation arguments used for the
-- gsmSSF – gsmSCF interface, for the control of circuit switched calls.

-- The table in subclause 2.1 lists the specifications that contain the modules
-- that are used by CAP.

IMPORTS

    errortypes,
    datatypes,
    operationcodes,
    classes,
    tc-Messages,
    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) version5(4)}

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

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

    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)}

    Ext-BasicServiceCode,
    IMEI,
    IMSI,
    ISDN-AddressString
FROM MAP-CommonDataTypes {itu-t(0) identified-organization(4) etsi(0) mobileDomain(0)
gsm-Network(1) modules(3) map-CommonDataTypes(18) version9(9)}

    CUG-Index,
    CUG-Interlock,
    CUG-Info,
    LocationInformation,
    MS-Classmark2,
    SubscriberState,
    SupportedCamelPhases,
    OfferedCamel4Functionalities
FROM MAP-MS-DataTypes {itu-t(0) identified-organization(4) etsi(0) mobileDomain(0)
gsm-Network(1) modules(3) map-MS-DataTypes(11) version9(9)}

    CallReferenceNumber,
    SuppressionOfAnnouncement,
    UU-Data
FROM MAP-CH-DataTypes {itu-t(0) identified-organization(4) etsi(0) mobileDomain(0)
gsm-Network(1) modules(3) map-CH-DataTypes(13) version9(9)}
```

```
    PARAMETERS-BOUND
FROM CAP-classes classes

    opcode-activityTest,
    opcode-applyCharging,
    opcode-applyChargingReport,
    opcode-assistRequestInstructions,
    opcode-callGap,
    opcode-callInformationReport,
    opcode-callInformationRequest,
    opcode-cancel,
    opcode-connect,
    opcode-connectToResource,
    opcode-continue,
    opcode-continueWithArgument,
    opcode-disconnectForwardConnection,
    opcode-dFCWithArgument,
    opcode-disconnectLeg,
    opcode-entityReleased,
    opcode-establishTemporaryConnection,
    opcode-eventReportBCSM,
    opcode-furnishChargingInformation,
    opcode-initialDP,
    opcode-initiateCallAttempt,
    opcode-moveLeg,
    opcode-playTone,
    opcode-releaseCall,
    opcode-requestReportBCSMEvent,
    opcode-resetTimer,
    opcode-sendChargingInformation,
    opcode-splitLeg
FROM CAP-operationcodes operationcodes
-- The CAP Operation identifiers for CAP V4 in Rel-6 are the same as the CAP Operation
-- identifiers for CAP V4 in Rel-5.

    AChBillingChargingCharacteristics {},
    AdditionalCallingPartyNumber {},
    AlertingPattern,
    AChChargingAddress {},
    AssistingSSPIPRoutingAddress {},
    BCSMEvent {},
    BCSM-Failure,
    BearerCapability {},
    Burst,
    CalledPartyNumber {},
    CalledPartyBCDNumber {},
    CallingPartyNumber {},
    CallResult {},
    CallSegmentID {},
    CallSegmentToCancel {},
    CallSegmentFailure {},
    Carrier,
    Cause {},
    CGEncountered,
    ChargeNumber {},
    ControlType,
    CorrelationID {},
    DestinationRoutingAddress {},
    EventSpecificInformationBCSM {},
    EventTypeBCSM,
    Extensions {},
    FCIBillingChargingCharacteristics {},
    GapCriteria {},
    GapIndicators,
    GapTreatment,
    GenericNumbers {},
    InvokeID,
    IPRoutingAddress {},
    IPSSPCapabilities {},
    leg1,
    leg2,
    LegOrCallSegment {},
    LocationNumber {},
    LowLayerCompatibility {},
    MonitorMode,
    NAOliInfo,
    OCSIApplicable,
    OriginalCalledPartyID {},
```

```
    ReceivingSideID,
    RedirectingPartyID {},
    RequestedInformationList {},
    RequestedInformationTypeList,
    ScfID {},
    SCIBillingChargingCharacteristics {},
    SendingSideID,
    ServiceInteractionIndicatorsTwo,
    TimeAndTimezone {},
    TimerID,
    TimerValue
FROM CAP-datatypes datatypes
-- For Rel-6, the CAP-datatypes module is updated to version5(4); Object Identifier 'datatypes'
-- is also updated to version5(4). As a result, the present module uses Rel-6 data type definitions.

    cancelFailed,
    eTCFailed,
    missingCustomerRecord,
    missingParameter,
    parameterOutOfRange,
    requestedInfoError,
    systemFailure,
    taskRefused,
    unexpectedComponentSequence,
    unexpectedDataValue,
    unexpectedParameter,
    unknownLegID,
    unknownCSID
FROM CAP-errortypes errortypes
-- For Rel-6, the CAP-errortypes module is updated to version5(4); Object Identifier
-- 'errortypes' is also updated to version5(4). As a result, the present module uses Rel-6
-- error type definitions.

;
```

*** Next Modified Section ***

```
initialDP {PARAMETERS-BOUND : bound} OPERATION ::= {
    ARGUMENT        InitialDPArg {bound}
    RETURN RESULT   FALSE
    ERRORS          {missingCustomerRecord |
                     missingParameter |
                     parameterOutOfRange |
                     systemFailure |
                     taskRefused |
                     unexpectedComponentSequence |
                     unexpectedDataValue |
                     unexpectedParameter}
    CODE            opcode-initialDP}
-- Direction: gsmSSF -> gsmSCF, Timer: Tidp
-- This operation is used after a TDP to indicate request for service.

InitialDPArg {PARAMETERS-BOUND : bound} ::= SEQUENCE {
    serviceKey                      [0] ServiceKey  ,
    calledPartyNumber               [2] CalledPartyNumber {bound}              OPTIONAL,
    callingPartyNumber              [3] CallingPartyNumber {bound}             OPTIONAL,
    callingPartysCategory           [5] CallingPartysCategory                  OPTIONAL,
    cGEncountered                   [7] CGEncountered                          OPTIONAL,
    iPSSPCapabilities               [8] IPSSPCapabilities {bound}              OPTIONAL,
    locationNumber                  [10] LocationNumber {bound}                OPTIONAL,
    originalCalledPartyID           [12] OriginalCalledPartyID {bound}         OPTIONAL,
    extensions                      [15] Extensions {bound}                    OPTIONAL,
    highLayerCompatibility          [23] HighLayerCompatibility                OPTIONAL,
    additionalCallingPartyNumber    [25] AdditionalCallingPartyNumber {bound}  OPTIONAL,
    bearerCapability                [27] BearerCapability {bound}              OPTIONAL,
    eventTypeBCSM                   [28] EventTypeBCSM                         OPTIONAL,
    redirectingPartyID              [29] RedirectingPartyID {bound}            OPTIONAL,
    redirectionInformation          [30] RedirectionInformation                OPTIONAL,
    cause                           [17] Cause {bound}                         OPTIONAL,
    serviceInteractionIndicatorsTwo [32] ServiceInteractionIndicatorsTwo       OPTIONAL,
    carrier                         [37] Carrier {bound}                       OPTIONAL,
    cug-Index                       [45] CUG-Index                             OPTIONAL,
    cug-Interlock                   [46] CUG-Interlock                         OPTIONAL,
    cug-OutgoingAccess              [47] NULL                                  OPTIONAL,
    iMSI                            [50] IMSI                                  OPTIONAL,
```

```
    subscriberState                 [51] SubscriberState                    OPTIONAL,
    locationInformation             [52] LocationInformation                OPTIONAL,
    ext-basicServiceCode            [53] Ext-BasicServiceCode               OPTIONAL,
    callReferenceNumber             [54] CallReferenceNumber                OPTIONAL,
    mscAddress                      [55] ISDN-AddressString                 OPTIONAL,
    calledPartyBCDNumber            [56] CalledPartyBCDNumber {bound}       OPTIONAL,
    timeAndTimezone                 [57] TimeAndTimezone {bound}            OPTIONAL,
    callForwardingSS-Pending        [58] NULL                               OPTIONAL,
    initialDPArgExtension           [59] InitialDPArgExtension {bound}      OPTIONAL,
    ...
    }

InitialDPArgExtension {PARAMETERS-BOUND : bound} ::= SEQUENCE {
    gmscAddress                     [0] ISDN-AddressString                  OPTIONAL,
    forwardingDestinationNumber     [1] CalledPartyNumber {bound}           OPTIONAL,
    ms-Classmark2                   [2] MS-Classmark2                       OPTIONAL,
    iMEI                            [3] IMEI                                OPTIONAL,
    supportedCamelPhases            [4] SupportedCamelPhases                OPTIONAL,
    offeredCamel4Functionalities    [5] OfferedCamel4Functionalities        OPTIONAL,
    bearerCapability2               [6] BearerCapability {bound}            OPTIONAL,
    ext-basicServiceCode2           [7] Ext-BasicServiceCode                OPTIONAL,
    highLayerCompatibility2         [8] HighLayerCompatibility              OPTIONAL,
    lowLayerCompatibility           [9] LowLayerCompatibility {bound}       OPTIONAL,
    lowLayerCompatibility2          [10] LowLayerCompatibility {bound}      OPTIONAL,
    ...,
    enhancedDialledServicesAllowed  [11] NULL                               OPTIONAL,
    uu-Data                         [12] UU-Data                            OPTIONAL
}
-- If iPSSPCapabilities is not present then this denotes that a colocated gsmSRF is not
-- supported by the gsmSSF. If present, then the gsmSSF supports a colocated gsmSRF capable
-- of playing announcements via elementaryMessageIDs and variableMessages, the playing of
-- tones and the collection of DTMF digits. Other supported capabilities are explicitly
-- detailed in the IPSSPCapabilities parameter itself.
-- Carrier is included at the discretion of the gsmSSF operator.
```

***** Next Modified Section *****

11.20 InitialDP procedure

11.20.1 General description

The gsmSSF uses this operation after detection of a TDP-R in the BCSM, to request the gsmSCF for instructions to complete the call.

11.20.1.1 Parameters

- serviceKey:
  This parameter indicates to the gsmSCF the requested IN service. It is used to address the required application/SLP within the gsmSCF; this parameter is not for SCP addressing.

- calledPartyNumber:
  This parameter contains the number used to identify the called party in the forward direction, i.e. see ETSI EN 300 356-1 [23]. This parameter shall be sent only in the Mobile Terminating, Mobile Forwarding and mobile originating on unsuccessful TDP cases.

- callingPartyNumber:
  This parameter carries the calling party number to identify the calling party or the origin of the call. See ETSI EN 300 356-1 [23] Calling Party Number signalling information.

- callingPartysCategory:
  Indicates the type of calling party (e.g. operator, pay phone, ordinary subscriber). See ETSI EN 300 356-1 [23] Calling Party Category signalling information.

- locationNumber:
  This parameter is used to convey the geographical area address for mobility services, see ITU-T Recommendation Q.762 [44]. It is used when "callingPartyNumber" does not contain any information about the geographical location of the calling party (e.g., origin dependent routeing when the calling party is a mobile subscriber).

- originalCalledPartyID:
  If the call has met call forwarding on the route to the gsmSSF, then this parameter carries the dialled digits. Refer to EN 300 356-1[23] Original Called Number signalling information.

- highLayerCompatibility:
  This parameter indicates the type of the high layer compatibility, which will be used to determine the ISDN - teleservice of a connected ISDN terminal. The highlayerCompatibility can also be transported by ISUP (e.g. within the ATP (see ITU-T Recommendation Q.763 [45]) parameter).

- additionalCallingPartyNumber:
  The calling party number provided by the access signalling system of the calling user, e.g. provided by a PBX.

- bearerCapability:
  This parameter indicates the type of the bearer capability connection or the transmission medium requirements to the user. It is a network option to select which of the two parameters to be used:

  - bearerCap:
    This parameter contains the value of the ISUP User Service Information parameter.

    The parameter "bearerCapability" shall be included in the "InitialDP" operation only in the case the ISUP User Service Information parameter is available at the gsmSSF.

    If User Service Information and User Service Information Prime are available at the gsmSSF, then the "bearerCap" shall contain the value of the User Service Information Prime parameter.

- eventTypeBCSM:
  This parameter indicates the armed BCSM DP event, resulting in the "InitialDP" operation.

- redirectingPartyID:
  This parameter indicates the last directory number the call was redirected from.

- redirectionInformation:
  This parameter contains forwarding related information, such as redirecting counter.
  See ITU-T Recommendation Q.763 [45] Redirection Information signalling information.

- iPSSPCapabilities:
  This parameter indicates which gsmSRF resources supported within the VMSC or GMSC the gsmSSF resides in are attached and available.

- serviceInteractionIndicatorsTwo:
  This parameter contains indicators that are used to resolve interactions between CAMEL based services and network based services.

- iMSI:
  This parameter contains the IMSI of the mobile subscriber for which the service is invoked.

- subscriberState:
  This parameter indicates the state of the mobile subscriber for which the service is invoked. The possible states are "busy", "idle" and "not reachable".

- locationInformation:
  This parameter indicates the location of the MS and the age of the information defining the location.

- ext-BasicServiceCode:
  This parameter indicates the Basic Service Code.

- callReferenceNumber:
  This parameter contains the call reference number assigned to the call by the CCF.

- mscAddress:
  This parameter contains the mscId assigned to the MSC.

- gmscAddress:
  This parameter contains the gmscId assigned to the GMSC.

- calledPartyBCDNumber:
  This parameter contains the number used to identify the called party in the forward direction. It may also include service selection information, including * and # characters.

- time&Timezone:
  This parameter contains the time that the gsmSSF was triggered, and the time zone that the invoking gsmSSF resides in.

- callForwardingSS-Pending:
  This parameter indicates that a forwarded-to-number was received and that the call will be forwarded due to the Call Forwarding supplementary service in the GMSC or in the VMSC, unless otherwise instructed by the gsmSCF.

- carrier:
  This parameter contains carrier information. It consists of the carrier selection field followed by the Carrier ID information associated with the calling subscriber of a mobile originating call, the called subscriber of a mobile terminating call or the forwarding subscriber of a mobile fowarded call.

  It contains the following embedded parameter:

  - carrierSelectionField:
    This parameter indicates how the selected carrier is provided (e.g. pre-subscribed).

  - carrierID:
    This parameter indicates the carrier to use for the call. It contains the digits of the carrier identification code.

- cug-Index:
  This parameter is used to select a CUG for an outgoing call at the user, or to indicate an incoming CUG call to the user.

- cug-Interlock:
  This parameter uniquely identifies a CUG within a network.

- cug-OutgoingAccess:
  This parameter indicates if the calling user has subscribed to the outgoing access inter-CUG accessibility subscription option.

- cGEncountered:
  This parameter indicates the type of call gapping the related call has been subjected to, if any.

- cause:
  This parameter indicates the release cause which triggered the event:

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

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

  - If the busy event is triggered by an ISUP release message, then the BusyCause shall 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 invocation in the GMSC or VMSC, then the BusyCause shall refer to the type of the call forwarding service in accordance with the mapping table in 3GPP TS 23.078 [7].

- forwardingDestinationNumber:
  This parameter contains the forwarding destination.

- ms-Classmark2:
  This parameter contains the MS Classmark 2 of the mobile subscriber for which the service is invoked.

- iMEI:
  This parameter contains the IMEI (with software version) of the mobile subscriber for which the service is invoked.

- supportedCamelPhases:
  This parameter indicates the CAMEL Phases supported in the GMSC or VMSC which sends this operation.

- offeredCamel4Functionalities:
  This parameter contains the offered CAMEL phase 4 functionalities.

- bearerCapability2:
  This parameter indicates the type of the bearer capability connection or the transmission medium requirements to the user.

- ext-BasicServiceCode2:
  This parameter indicates the Basic Service Code2.

- highLayerCompatibility2:
  This parameter indicates the high layer compatibility2 for a SCUDIF call.

- lowLayerCompatibility:
  This parameter indicates the low layer compatibility.

- lowLayerCompatibility2:
  This parameter indicates the low layer compatibility2 for a SCUDIF call.

- enhancedDialledServicesAllowed:
  This parameter indicates that the gsmSCF may use the Enhanced Dialled Services (EDS) for this call.

- UU-Data:
  This parameter contains user-to-user signalling service related information.

11.20.2 Invoking entity (gsmSSF)

11.20.2.1 Normal procedure

gsmSSF preconditions:

(1) An event fulfilling the criteria for the DP being executed has been detected.

(2) Call gapping and SS7 overload are not in effect for the call.

gsmSSF postconditions:

(1) If the DP was armed as a TDP-R and trigger conditions, if present, are fulfilled, then a control relationship between the gsmSCF and the gsmSSF is established. The gsmSSF FSM transits to the state "Waiting_for_Instructions".

The address of the gsmSCF shall be fetched from the valid CSI. The gsmSSF shall provide all available parameters to the gsmSCF.

If no triggering takes place, because trigger conditions were not fulfilled, then the gsmSSF shall proceed with call handling without CAMEL Service.

The gsmSSF application timer Tssf is loaded and started when the gsmSSF sends "InitialDP" for requesting instructions from the gsmSCF. It is used to prevent excessive call suspension time.

11.20.2.2 Error handling

If the gsmSCF is not accessible, then the call proceeds in accordance with the Default Call Handling parameter in the CSI.

When Tssf expires, then the gsmSSF shall abort the interaction with the gsmSCF by means of an abort to TC and shall call continue the call in accordance with the Default Call Handling parameter in the valid CSI.

If the calling party abandons after the sending of "InitialDP" and before the TC dialogue is established, then the gsmSSF shall abort the interaction with the gsmSCF by means of an abort to TC.

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.

***** Next Modified Section *****

Annex A (normative): Mapping between CAP and ISUP

A.1 InitialDP operation

Table A.1

ISUP message IAM (Note 1)	CAP Operation InitialDP
Called party number	CalledPartyNumber
Calling party number	CallingPartyNumber
Calling party's category	CallingPartysCategory
Location number	LocationNumber
Original called number	OriginalCalledPartyID
User teleservice information (1st priority) High layer compatibility IE contained in access transport (2nd priority) (Note 2)	HighLayerCompatibility
High layer compatibility IE contained in access transport (Note 2)	HighLayerCompatibility2
Low Layer compatibility IE contained in access transport (note 4)	LowLayerCompatibility
Low Layer compatibility IE contained in access transport (note 4)	LowLayerCompatibility2
Generic number "additional calling party number"	AdditionalCallingPartyNumber
User service information prime (1st priority) User service information (2nd priority) (Note 3)	BearerCapability
User service information (Note 3)	BearerCapability2
Redirecting number	RedirectingPartyID
Redirection information	RedirectionInformation
Call diversion treatment indicators	ServiceInteractionIndicatorsTwo.Call diversion treatment indicators
Conference treatment indicators	ServiceInteractionIndicatorsTwo.Conference treatment indicators
User-to-user indicators (Note 5)	UU-Data.UUIndicator
User-to-user information (Note 5)	UU-Data.UUI

NOTE 1: Optional parameters may be absent, i.e. they are only mapped only if these parameters are available at the DP.

NOTE 2: If two high layer compatibility information elements are contained in the access transport parameter, then the second information element, carrying the preferred HLC, is mapped to the CAP highLayerCompatibility parameter, and the first information element, carrying the less preferred HLC, is mapped to the CAP highLayerCompatibility2 parameter.

NOTE 3: If User service information prime and User service information are present, then one of the following two mapping rules shall be applied. The principles for the choice of mapping rule are specified in 3GPP TS 23.078 [7].

- One of User service information prime or User service information is mapped to Bearer Capability.
- User service information prime is mapped to BearerCapability and User service information is mapped to Bearer Capability2.

NOTE 4: If two low layer compatibility information elements are contained in the access transport parameter, then the first information element, carrying the preferred LLC, is mapped to the CAP lowLayerCompatibility parameter, and the second information element, carrying the less preferred LLC, is mapped to the CAP lowLayerCompatibility2 parameter.

NOTE 5: If present in ISUP IAM, user-to-user indicators and user-to-user information may optionally be mapped into the InitialDP Operation.

***** End of Document *****

3GPP TSG CN WG4 Meeting #24 ***N4-040929***
Sophia Antipolis, FRANCE, 16th – 20th AUGUST 2004

EP Railways Telecommunications meeting #12

Sophia Antipolis, France

CR-Form-v7

CHANGE REQUEST

⌘ **29.002** **CR** **739** ⌘ **rev** **-** ⌘ Current version: **6.6.0** ⌘

*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 ☒

Title:	⌘	Export of UU-Data data type
Source:	⌘	CN4
Work item code:	⌘	TEI6
Date:	⌘	8/07/2004
Category:	⌘	**B**
Release:	⌘	Rel-6

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Rel-6	*(Release 6)*

Reason for change:	⌘	User-to-User Signalling Service 1(UUS1) is used to carry Function Numbers and other application-related data within GSM-R based networks. For IN-based Railway applications there is a need to pass this data, using the MAP UU-Data data type, to the SCP in the CAMEL InitialDP operation.
Summary of change:	⌘	Export the UU-Data data type from 29.002.
Consequences if not approved:	⌘	IN-based Railway services related to originating Function Numbers and other applications such as enhanced Location Dependent Addressing (eLDA) will be difficult to implement using CAMEL. Operators may have to use proprietary solutions that restrict multi-vendor interoperability.

Clauses affected:	⌘	17.7.3			
Other specs affected:	⌘	Y / N	Other core specifications	⌘	22.078, 23.078-729, 29.078-380
		N / X	Test specifications		
		N / X	O&M Specifications		
Other comments:	⌘				

How to create CRs using this form:
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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.

***** First Modified Section *****

17.7.3 Call handling data types

```
MAP-CH-DataTypes {
   itu-t identified-organization (4) etsi (0) mobileDomain (0)
   gsm-Network (1) modules (3) map-CH-DataTypes (13) version9 (9)}

DEFINITIONS

IMPLICIT TAGS

::=

BEGIN

EXPORTS
   SendRoutingInfoArg,
   SendRoutingInfoRes,
   ProvideRoamingNumberArg,
   ProvideRoamingNumberRes,
   ResumeCallHandlingArg,
   ResumeCallHandlingRes,
   NumberOfForwarding,
   SuppressionOfAnnouncement,
   CallReferenceNumber,
   SetReportingStateArg,
   SetReportingStateRes,
   StatusReportArg,
   StatusReportRes,
   RemoteUserFreeArg,
   RemoteUserFreeRes,
   IST-AlertArg,
   IST-AlertRes,
   IST-CommandArg,
   IST-CommandRes,
   UU-Data
;

IMPORTS
   SubscriberInfo,
   SupportedCamelPhases,
   OfferedCamel4CSIs,
   CUG-Interlock,
   O-CSI,
   D-CSI,
   O-BcsmCamelTDPCriteriaList,
   T-BCSM-CAMEL-TDP-CriteriaList,
   IST-SupportIndicator,
   IST-AlertTimerValue,
   T-CSI,
   NumberPortabilityStatus
FROM MAP-MS-DataTypes {
   itu-t identified-organization (4) etsi (0) mobileDomain (0)
   gsm-Network (1) modules (3) map-MS-DataTypes (11) version9 (9)}

   ForwardingOptions,
   SS-List,
   CCBS-Feature
FROM MAP-SS-DataTypes {
   itu-t identified-organization (4) etsi (0) mobileDomain (0)
   gsm-Network (1) modules (3) map-SS-DataTypes (14) version9 (9)}

   ISDN-AddressString,
   ISDN-SubaddressString,
   FTN-AddressString,
   ExternalSignalInfo,
   Ext-ExternalSignalInfo,
   IMSI,
   LMSI,
   Ext-BasicServiceCode,
   AlertingPattern,
   NAEA-PreferredCI
FROM MAP-CommonDataTypes {
   itu-t identified-organization (4) etsi (0) mobileDomain (0)
   gsm-Network (1) modules (3) map-CommonDataTypes (18) version9 (9)}

   ExtensionContainer
FROM MAP-ExtensionDataTypes {
   itu-t identified-organization (4) etsi (0) mobileDomain (0)
   gsm-Network (1) modules (3) map-ExtensionDataTypes (21) version9 (9)}
;
```

```
CUG-CheckInfo ::= SEQUENCE {
     cug-Interlock                    CUG-Interlock,
     cug-OutgoingAccess               NULL                              OPTIONAL,
     extensionContainer               ExtensionContainer                OPTIONAL,
     ...}
```

```
NumberOfForwarding ::= INTEGER (1..5)
```

```
SendRoutingInfoArg ::= SEQUENCE {
     msisdn                           [0] ISDN-AddressString,
     cug-CheckInfo                    [1] CUG-CheckInfo                 OPTIONAL,
     numberOfForwarding               [2] NumberOfForwarding            OPTIONAL,
     interrogationType                [3] InterrogationType,
     or-Interrogation                 [4] NULL                          OPTIONAL,
     or-Capability                    [5] OR-Phase                      OPTIONAL,
     gmsc-OrGsmSCF-Address            [6] ISDN-AddressString,
     callReferenceNumber              [7] CallReferenceNumber           OPTIONAL,
     forwardingReason                 [8] ForwardingReason              OPTIONAL,
     basicServiceGroup                [9] Ext-BasicServiceCode          OPTIONAL,
     networkSignalInfo                [10] ExternalSignalInfo           OPTIONAL,
     camelInfo                        [11] CamelInfo                    OPTIONAL,
     suppressionOfAnnouncement        [12] SuppressionOfAnnouncement    OPTIONAL,
     extensionContainer               [13] ExtensionContainer           OPTIONAL,
     ...,
     alertingPattern                  [14] AlertingPattern              OPTIONAL,
     ccbs-Call                        [15] NULL                          OPTIONAL,
     supportedCCBS-Phase              [16]  SupportedCCBS-Phase         OPTIONAL,
     additionalSignalInfo             [17] Ext-ExternalSignalInfo       OPTIONAL,
     istSupportIndicator              [18] IST-SupportIndicator         OPTIONAL,
     pre-pagingSupported              [19] NULL                         OPTIONAL,
     callDiversionTreatmentIndicator  [20] CallDiversionTreatmentIndicator   OPTIONAL,
     longFTN-Supported                [21] NULL                         OPTIONAL,
     suppress-VT-CSI                  [22] NULL                         OPTIONAL,
     suppressIncomingCallBarring      [23] NULL                         OPTIONAL,
     gsmSCF-InitiatedCall             [24] NULL                         OPTIONAL,
     basicServiceGroup2               [25] Ext-BasicServiceCode         OPTIONAL,
     networkSignalInfo2               [26] ExternalSignalInfo           OPTIONAL
      }
```

```
SuppressionOfAnnouncement ::= NULL
```

```
InterrogationType ::= ENUMERATED {
     basicCall  (0),
     forwarding  (1)}
```

```
OR-Phase ::= INTEGER (1..127)
```

```
CallReferenceNumber ::= OCTET STRING (SIZE (1..8))
```

```
ForwardingReason ::= ENUMERATED {
     notReachable  (0),
     busy  (1),
     noReply  (2)}
```

```
SupportedCCBS-Phase ::= INTEGER (1..127)
-- exception handling:
-- Only value 1 is used.
-- Values in the ranges 2-127 are reserved for future use.
-- If received values 2-127 shall be mapped on to value 1.
```

```
CallDiversionTreatmentIndicator ::= OCTET STRING (SIZE(1))
--   callDiversionAllowed (xxxx xx01)
--   callDiversionNotAllowed (xxxx xx10)
--   network default is call diversion allowed
```

```
SendRoutingInfoRes ::= [3] SEQUENCE {
    imsi                              [9] IMSI                          OPTIONAL,
    -- IMSI must be present if SendRoutingInfoRes is not segmented.
    -- If the TC-Result-NL segmentation option is taken the IMSI must be
    -- present in one segmented transmission of SendRoutingInfoRes.
    extendedRoutingInfo               ExtendedRoutingInfo               OPTIONAL,
    cug-CheckInfo                     [3] CUG-CheckInfo                 OPTIONAL,
    cugSubscriptionFlag               [6] NULL                          OPTIONAL,
    subscriberInfo                    [7] SubscriberInfo                OPTIONAL,
    ss-List                           [1] SS-List                       OPTIONAL,
    basicService                      [5] Ext-BasicServiceCode          OPTIONAL,
    forwardingInterrogationRequired   [4] NULL                          OPTIONAL,
    vmsc-Address                      [2] ISDN-AddressString            OPTIONAL,
    extensionContainer                [0] ExtensionContainer            OPTIONAL,
    ... ,
    naea-PreferredCI                  [10] NAEA-PreferredCI             OPTIONAL,
    -- naea-PreferredCI is included at the discretion of the HLR operator.
    ccbs-Indicators                   [11] CCBS-Indicators              OPTIONAL,
    msisdn                            [12] ISDN-AddressString           OPTIONAL,
    numberPortabilityStatus           [13] NumberPortabilityStatus      OPTIONAL,
    istAlertTimer                     [14] IST-AlertTimerValue          OPTIONAL,
    supportedCamelPhasesInVMSC        [15] SupportedCamelPhases         OPTIONAL,
    offeredCamel4CSIsInVMSC           [16] OfferedCamel4CSIs            OPTIONAL,
    routingInfo2                      [17] RoutingInfo                  OPTIONAL,
    ss-List2                          [18] SS-List                      OPTIONAL,
    basicService2                     [19] Ext-BasicServiceCode         OPTIONAL,
    allowedServices                   [20] AllowedServices              OPTIONAL,
    unavailabilityCause               [21] UnavailabilityCause          OPTIONAL
    }
```

```
AllowedServices ::= BIT STRING {
    firstServiceAllowed               (0),
    secondServiceAllowed              (1) } (SIZE (2..8))
    --   firstService is the service indicated in the networkSignalInfo
    --   secondService is the service indicated in the networkSignalInfo2
    --   Other bits than listed above shall be discarded
```

```
UnavailabilityCause ::= ENUMERATED {
    bearerServiceNotProvisioned       (1),
    teleserviceNotProvisioned         (2),
    absentSubscriber                  (3),
    busySubscriber                    (4),
    callBarred                        (5),
    cug-Reject                        (6),
    ...}
    --   exception handling:
    --   Reception of other values than the ones listed shall result in the service
    --   being unavailable for that call.
```

```
CCBS-Indicators ::= SEQUENCE {
    ccbs-Possible                     [0]  NULL                         OPTIONAL,
    keepCCBS-CallIndicator            [1]  NULL                         OPTIONAL,
    extensionContainer                [2]  ExtensionContainer           OPTIONAL,
    ...}
```

```
RoutingInfo ::= CHOICE {
    roamingNumber                     ISDN-AddressString,
    forwardingData                    ForwardingData}
```

```
ForwardingData ::= SEQUENCE {
    forwardedToNumber                 [5] ISDN-AddressString            OPTIONAL,
    -- When this datatype is sent from an HLR which supports CAMEL Phase 2
    -- to a GMSC which supports CAMEL Phase 2 the GMSC shall not check the
    -- format of the number
    forwardedToSubaddress             [4] ISDN-SubaddressString         OPTIONAL,
    forwardingOptions                 [6] ForwardingOptions             OPTIONAL,
    extensionContainer                [7] ExtensionContainer            OPTIONAL,
    ...,
    longForwardedToNumber             [8] FTN-AddressString             OPTIONAL}
```

```
ProvideRoamingNumberArg ::= SEQUENCE {
     imsi                                [0] IMSI,
     msc-Number                          [1] ISDN-AddressString,
     msisdn                              [2] ISDN-AddressString            OPTIONAL,
     lmsi                                [4] LMSI                          OPTIONAL,
     gsm-BearerCapability                [5] ExternalSignalInfo            OPTIONAL,
     networkSignalInfo                   [6] ExternalSignalInfo            OPTIONAL,
     suppressionOfAnnouncement           [7] SuppressionOfAnnouncement     OPTIONAL,
     gmsc-Address                        [8] ISDN-AddressString            OPTIONAL,
     callReferenceNumber                 [9] CallReferenceNumber           OPTIONAL,
     or-Interrogation                    [10] NULL                         OPTIONAL,
     extensionContainer                  [11] ExtensionContainer           OPTIONAL,
     ... ,
     alertingPattern                     [12] AlertingPattern              OPTIONAL,
     ccbs-Call                           [13] NULL                         OPTIONAL,
     supportedCamelPhasesInInterrogatingNode  [15] SupportedCamelPhases    OPTIONAL,
     additionalSignalInfo                [14] Ext-ExternalSignalInfo       OPTIONAL,
     orNotSupportedInGMSC                [16] NULL                         OPTIONAL,
     pre-pagingSupported                 [17] NULL                         OPTIONAL,
     longFTN-Supported                   [18] NULL                         OPTIONAL,
     suppress-VT-CSI                     [19] NULL                         OPTIONAL,
     offeredCamel4CSIsInInterrogatingNode [20] OfferedCamel4CSIs           OPTIONAL
      }
```

```
ProvideRoamingNumberRes ::= SEQUENCE {
     roamingNumber                       ISDN-AddressString,
     extensionContainer                  ExtensionContainer                OPTIONAL,
     ...}
```

```
ResumeCallHandlingArg ::= SEQUENCE {
     callReferenceNumber                 [0] CallReferenceNumber           OPTIONAL,
     basicServiceGroup                   [1] Ext-BasicServiceCode          OPTIONAL,
     forwardingData                      [2] ForwardingData                OPTIONAL,
     imsi                                [3] IMSI                          OPTIONAL,
     cug-CheckInfo                       [4] CUG-CheckInfo                 OPTIONAL,
     o-CSI                               [5] O-CSI                         OPTIONAL,
     extensionContainer                  [7] ExtensionContainer            OPTIONAL,
     ccbs-Possible                       [8]  NULL                         OPTIONAL,
     msisdn                              [9]  ISDN-AddressString           OPTIONAL,
     uu-Data                             [10] UU-Data                      OPTIONAL,
     allInformationSent                  [11] NULL                         OPTIONAL,
     ...,
     d-csi                               [12] D-CSI                        OPTIONAL,
     o-BcsmCamelTDPCriteriaList          [13] O-BcsmCamelTDPCriteriaList   OPTIONAL,
     basicServiceGroup2                  [14] Ext-BasicServiceCode         OPTIONAL
      }
```

```
UU-Data ::= SEQUENCE {
     uuIndicator                         [0] UUIndicator                   OPTIONAL,
     uui                                 [1] UUI                           OPTIONAL,
     uusCFInteraction                    [2] NULL                          OPTIONAL,
     extensionContainer                  [3] ExtensionContainer            OPTIONAL,
     ...}
```

```
UUIndicator ::= OCTET STRING (SIZE (1))
     -- Octets are coded according to ETS 300 356
```

```
UUI  ::= OCTET STRING (SIZE (1..131))
     -- Octets are coded according to ETS 300 356
```

```
ResumeCallHandlingRes ::= SEQUENCE {
     extensionContainer                  ExtensionContainer                OPTIONAL,
     ...}
```

```
CamelInfo ::= SEQUENCE {
     supportedCamelPhases                SupportedCamelPhases,
     suppress-T-CSI                      NULL                              OPTIONAL,
     extensionContainer                  ExtensionContainer                OPTIONAL,
     ... ,
     offeredCamel4CSIs                   [0] OfferedCamel4CSIs             OPTIONAL }
```

```
ExtendedRoutingInfo ::= CHOICE {
     routingInfo                         RoutingInfo,
     camelRoutingInfo                    [8] CamelRoutingInfo}
```

```
CamelRoutingInfo ::= SEQUENCE {
     forwardingData                    ForwardingData                    OPTIONAL,
     gmscCamelSubscriptionInfo         [0] GmscCamelSubscriptionInfo,
     extensionContainer                [1] ExtensionContainer            OPTIONAL,
     ...}
```

```
GmscCamelSubscriptionInfo ::= SEQUENCE {
     t-CSI                             [0] T-CSI OPTIONAL,
     o-CSI                             [1] O-CSI OPTIONAL,
     extensionContainer                [2] ExtensionContainer            OPTIONAL,
     ...,
     o-BcsmCamelTDP-CriteriaList       [3] O-BcsmCamelTDPCriteriaList    OPTIONAL,
     t-BCSM-CAMEL-TDP-CriteriaList     [4]  T-BCSM-CAMEL-TDP-CriteriaList OPTIONAL,
     d-csi                             [5]  D-CSI                        OPTIONAL}
```

```
SetReportingStateArg ::= SEQUENCE {
     imsi                              [0]  IMSI                         OPTIONAL,
     lmsi                              [1]  LMSI                         OPTIONAL,
     ccbs-Monitoring                   [2]  ReportingState               OPTIONAL,
     extensionContainer                [3]  ExtensionContainer           OPTIONAL,
     ...}
```

```
ReportingState ::= ENUMERATED {
     stopMonitoring                    (0),
     startMonitoring                   (1),
     ...}
     -- exception handling:
     -- reception of values 2-10 shall be mapped to 'stopMonitoring'
     -- reception of values > 10 shall be mapped to 'startMonitoring'
```

```
SetReportingStateRes ::= SEQUENCE{
     ccbs-SubscriberStatus             [0]  CCBS-SubscriberStatus        OPTIONAL,
     extensionContainer                [1]  ExtensionContainer           OPTIONAL,
     ...}
```

```
CCBS-SubscriberStatus ::= ENUMERATED {
     ccbsNotIdle                       (0),
     ccbsIdle                          (1),
     ccbsNotReachable                  (2),
     ...}
     --  exception handling:
     --  reception of values 3-10 shall be mapped to 'ccbsNotIdle'
     --  reception of values 11-20 shall be mapped to 'ccbsIdle'
     --  reception of values > 20 shall be mapped to 'ccbsNotReachable'
```

```
StatusReportArg ::= SEQUENCE{
     imsi                              [0]  IMSI,
     eventReportData                   [1]  EventReportData              OPTIONAL,
     callReportdata                    [2]  CallReportData               OPTIONAL,
     extensionContainer                [3]  ExtensionContainer           OPTIONAL,
     ...}
```

```
EventReportData ::= SEQUENCE{
     ccbs-SubscriberStatus             [0]  CCBS-SubscriberStatus        OPTIONAL,
     extensionContainer                [1]  ExtensionContainer           OPTIONAL,
     ...}
```

```
CallReportData ::= SEQUENCE{
     monitoringMode                    [0]  MonitoringMode               OPTIONAL,
     callOutcome                       [1]  CallOutcome                  OPTIONAL,
     extensionContainer                [2]  ExtensionContainer           OPTIONAL,
     ...}
```

```
MonitoringMode ::= ENUMERATED {
     a-side                            (0),
     b-side                            (1),
     ...}
     --   exception handling:
     --  reception of values 2-10 shall be mapped 'a-side'
     --  reception of values > 10 shall be mapped to 'b-side'
```

```
CallOutcome ::= ENUMERATED {
    success                          (0),
    failure                          (1),
    busy                             (2),
    ...}
    --   exception handling:
    --  reception of values 3-10 shall be mapped to 'success'
    --  reception of values 11-20 shall be mapped to 'failure'
    --  reception of values > 20 shall be mapped to 'busy'
```

```
StatusReportRes ::= SEQUENCE {
    extensionContainer               [0]  ExtensionContainer          OPTIONAL,
    ...}
```

```
RemoteUserFreeArg ::= SEQUENCE{
    imsi                             [0]  IMSI,
    callInfo                         [1]  ExternalSignalInfo,
    ccbs-Feature                     [2]  CCBS-Feature,
    translatedB-Number               [3]  ISDN-AddressString,
    replaceB-Number                  [4]  NULL                        OPTIONAL,
    alertingPattern                  [5]  AlertingPattern             OPTIONAL,
    extensionContainer               [6]  ExtensionContainer          OPTIONAL,
    ...}
```

```
RemoteUserFreeRes ::= SEQUENCE{
    ruf-Outcome                      [0]  RUF-Outcome,
    extensionContainer               [1]  ExtensionContainer          OPTIONAL,
    ...}
```

```
RUF-Outcome ::= ENUMERATED{
    accepted (0),
    rejected (1),
    noResponseFromFreeMS (2), -- T4 Expiry
    noResponseFromBusyMS (3), -- T10 Expiry
    udubFromFreeMS (4),
    udubFromBusyMS (5),
    ...}
    -- exception handling:
    -- reception of values 6-20 shall be mapped to 'accepted'
    -- reception of values 21-30 shall be mapped to 'rejected'
    -- reception of values 31-40 shall be mapped to 'noResponseFromFreeMS'
    -- reception of values 41-50 shall be mapped to 'noResponseFromBusyMS'
    -- reception of values 51-60 shall be mapped to 'udubFromFreeMS'
    -- reception of values > 60 shall be mapped to 'udubFromBusyMS'
```

```
IST-AlertArg ::= SEQUENCE{
    imsi                             [0]  IMSI,
    extensionContainer               [1]  ExtensionContainer          OPTIONAL,
    ...}
```

```
IST-AlertRes ::= SEQUENCE{
    istAlertTimer                    [0]  IST-AlertTimerValue         OPTIONAL,
    istInformationWithdraw           [1]  NULL                        OPTIONAL,
    callTerminationIndicator         [2]  CallTerminationIndicator    OPTIONAL,
    extensionContainer               [3]  ExtensionContainer          OPTIONAL,
    ...}
```

```
IST-CommandArg ::= SEQUENCE{
    imsi                             [0]  IMSI,
    extensionContainer               [1]  ExtensionContainer          OPTIONAL,
    ...}
```

```
IST-CommandRes ::= SEQUENCE{
    extensionContainer               ExtensionContainer               OPTIONAL,
    ...}
```

```
CallTerminationIndicator ::= ENUMERATED {
    terminateCallActivityReferred    (0),
    terminateAllCallActivities       (1),
    ...}
    -- exception handling:
    -- reception of values 2-10 shall be mapped to ' terminateCallActivityReferred '
    -- reception of values > 10 shall be mapped to ' terminateAllCallActivities '

    -- In MSCs not supporting linkage of all call activities, any value received shall
    -- be interpreted as ' terminateCallActivityReferred '
```

END

***** End of Document *****

3GPP TSG CN WG4 Meeting #24 **N4-041183**
Sophia Antipolis, FRANCE, 16th – 20th AUGUST 2004

EP Railways Telecommunications meeting #12

Sophia Antipolis, France

CR-Form-v7

CHANGE REQUEST

⌘ **23.078** **CR** **729** ⌘ **rev** **2** ⌘ Current version: **6.2.0** ⌘

*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 ☒

Title:	⌘	Support of User-to-User Information (UUI) in CAMEL InitialDP operation
Source:	⌘	CN4
Work item code:	⌘	TEI6
Date:	⌘	18/08/2004
Category:	⌘	**B**
Release:	⌘	Rel-6

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:	⌘	User-to-User Signalling Service 1(UUS1) is used to carry Function Numbers and other application-related data within GSM-R based networks. For IN-based Railway applications there is a need to pass this data to the SCP in the CAMEL InitialDP operation.
Summary of change:	⌘	Add the User-to-User Service activation request and User-to-User Information parameters to the InitialDP operation
Consequences if not approved:	⌘	IN-based Railway services related to originating Function Numbers and other applications such as enhanced Location Dependent Addressing (eLDA) will be difficult to implement using CAMEL. Operators may have to use proprietary solutions that restrict multi-vendor interoperability.

Clauses affected:	⌘	2, 4.6.1.8.2

Other specs affected: ⌘	Y	N		⌘
	X		Other core specifications	22.078, 29.078, 29.002
		X	Test specifications	
		X	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/specs/CR.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.

***** First Modified Section *****

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document.*

[1] 3GPP TR 21.905: "3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Vocabulary for 3GPP Specifications".

[2] 3GPP TS 22.004: "3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; General on supplementary ".

[3] 3GPP TS 22.024: "3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Description of Charge Advice Information (CAI)".

[4] 3GPP TS 22.041: "3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Operator Determined Barring (ODB)".

[5] 3GPP TS 22.071: "3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Location Services (LCS); Service description, Stage 1".

[6] 3GPP TS 22.078: "3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Customised Applications for Mobile network Enhanced Logic (CAMEL); Service description, Stage 1".

[7] 3GPP TS 23.003: "3rd Generation Partnership Project; Technical Specification Group Core Network; Numbering, addressing and identification".

[8] 3GPP TS 23.008: "3rd Generation Partnership Project; Technical Specification Group Core Network; Organization of subscriber data".

[9] 3GPP TS 23.011: "3rd Generation Partnership Project; Technical Specification Group Core Network; Technical realization of Supplementary Services".

[10] 3GPP TS 23.012: "3rd Generation Partnership Project; Technical Specification Group Core Network; Location management procedures".

[11] 3GPP TS 23.015: "3rd Generation Partnership Project; Technical Specification Group Core Network; Technical realization of Operator Determined Barring (ODB)".

[12] 3GPP TS 23.018: "3rd Generation Partnership Project; Technical Specification Group Core Network; Basic call handling; Technical realization".

[13] 3GPP TS 23.032: "3rd Generation Partnership Project; Technical Specification Group Core Network; Universal Geographical Area Description (GAD)".

[14] 3GPP TS 23.040: "3rd Generation Partnership Project; Technical Specification Group Terminals; Technical realization of the Short Message Service (SMS)".

[15] 3GPP TS 23.060: "3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; General Packet Radio Service (GPRS); Service description; Stage 2".

[16] 3GPP TS 23.072: "3rd Generation Partnership Project; Technical Specification Group Core Network; Call Deflection (CD) Supplementary Service; Stage 2".

[17] 3GPP TS 23.066: "3rd Generation Partnership Project; Technical Specification Group Core Network; Support of Mobile Number Portability (MNP); Technical realization; Stage 2".

[18] 3GPP TS 23.073: "3rd Generation Partnership Project; Technical Specification Group Core Network; Support of Localised Service Area (SoLSA); Stage 2".

[19] 3GPP TS 23.079: "3rd Generation Partnership Project; Technical Specification Group Core Network; Support of Optimal Routeing (SOR); Technical realization".

[20] 3GPP TS 23.082: "3rd Generation Partnership Project; Technical Specification Group Core Network; Call Forwarding (CF) supplementary services; Stage 2".

[21] 3GPP TS 23.084: "3rd Generation Partnership Project; Technical Specification Group Core Network; Multi Party (MPTY) supplementary service; Stage 2".

[22] 3GPP TS 23.085: "3rd Generation Partnership Project; Technical Specification Group Core Network; Closed User Group (CUG) supplementary service; Stage 2".

[23] 3GPP TS 23.088: "3rd Generation Partnership Project; Technical Specification Group Core Network; Call Barring (CB) Supplementary Services; Stage 2".

[24] 3GPP TS 23.090: "3rd Generation Partnership Project; Technical Specification Group Core Network; Unstructured Supplementary Service Data (USSD); Stage 2".

[25] 3GPP TS 23.091: "3rd Generation Partnership Project; Technical Specification Group Core Network; Explicit Call Transfer (ECT) supplementary service; Stage 2".

[26] 3GPP TS 23.093: "3rd Generation Partnership Project; Technical Specification Group Core Network; Technical realization of Completion of Calls to Busy Subscriber (CCBS); Stage 2".

[27] 3GPP TS 23.172: "3rd Generation Partnership Project; Technical Specification Group Core Network; Technical realization of Circuit Switched (CS) multimedia service; UDI/RDI fallback and service modification; Stage 2".

[28] 3GPP TS 23.271: "3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Functional stage 2 description of LCS".

[29] 3GPP TS 23.278: "3rd Generation Partnership Project; Technical Specification Group Core Network; Customised Applications for Mobile network Enhanced Logic (CAMEL) - IP Multimedia System (IMS) interworking; Stage 2".

[30] 3GPP TS 24.008: "3rd Generation Partnership Project; Technical Specification Group Core Network; Mobile radio interface layer 3 specification; Core Network Protocols; Stage 3".

[31] 3GPP TS 24.011: “3rd Generation Partnership Project; Technical Specification Group Core Network; Point - to - Point (PP) Short Message Service (SMS); support on mobile radio interface”.

[32] 3GPP TS 25.305: "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Stage 2 Functional Specification of UE Positioning in UTRAN".

[33] 3GPP TS 25.413: "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; UTRAN Iu interface RANAP signalling".

[34] 3GPP TS 29.002: "3rd Generation Partnership Project; Technical Specification Group Core Network; Mobile Application Part (MAP) specification".

[35] 3GPP TS 29.007: "3rd Generation Partnership Project; Technical Specification Group Core Network; General requirements on interworking between the Public Land Mobile Network (PLMN) and the Integrated Services Digital Network (ISDN) or Public Switched Telephone Network (PSTN)".

[36] 3GPP TS 29.078: "3rd Generation Partnership Project; Technical Specification Group Core Network; Customised Applications for Mobile network Enhanced Logic (CAMEL) Phase 4 CAMEL Application Part (CAP) specification".

[37] 3GPP TS 32.250: "3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Telecommunication Management; Charging management; Circuit Switched (CS) domain charging".

[38] 3GPP TS 32.251: "3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Telecommunication Management; Charging management; Packet Switched (PS) domain charging".

[39] 3GPP TS 48.008: "3rd Generation Partnership Project; Technical Specification Group GSM EDGE Radio Access Network; Mobile-services Switching Centre - Base Station System (MSC - BSS) interface; Layer 3 specification".

[40] ETSI EN 300 356-1 (V3.2.2): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 1: Basic services[ITU-T Recommendations Q.761 to Q.764 (1997), modified]".

[41] ETSI EN 301 070-1 (V1.2.2): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 interactions with the Intelligent Network Application Part (INAP); Part 1: Protocol specification [ITU-T Recommendation Q.1600 (1997), modified]".

[42] GSM TR 03.47: "Example protocol stacks for interconnecting; Service Centre(s) (SC) and Mobile-services Switching Centre(s) (MSC)".

[43] ITU-T Recommendation Q.763, December 1999: "Signalling System No. 7 - ISDN user part formats and codes".

[44] ITU-T Recommendation Q.1224, September 1997: "Distributed Functional Plane for Intelligent Network Capability Set 2".

[xx] 3GPP TS 23.087: "3rd Generation Partnership Project; Technical Specification Group Core Network; User-to-User Signalling (UUS) Supplementary Service - Stage 2".

***** Next Modified Section *****

4.6.1.8 Initial DP

4.6.1.8.1 Description

This IF is generated by the gsmSSF when a trigger is detected at a DP in the BCSM, to request instructions from the gsmSCF.

4.6.1.8.2 Information Elements

(Note: IEs in the NC columns in this IF may need further study.)

Information element name	MO	MF	MT	VT	NC	NP	Description
Additional Calling Party Number	C	C	C	C	-	C	This IE contains the calling party number provided by the access signalling system of the calling user or received from the gsmSCF due to the previous CAMEL processing.
Bearer Capability	M	C	C	C	-	C	This IE indicates the type of the bearer capability connection to the user. If Bearer Capability 2 is present, then it indicates the preferred bearer capability for a SCUDIF (as defined in 3GPP TS 23.172 [27]) call.
Called Party Number	C	M	M	M	-	M	This IE contains the number used to identify the called party in the forward direction. For MO and MF calls this IE is used in the case of TDP Route_Select_Failure (this is the destination number used to route the call) and in the case of TDP Busy and TDP No Reply (this is the MSISDN when the destination number used for the call is an MSRN, or in the case of unsuccessful call establishment received from the HLR via the MAP interface, otherwise it is the number used to route the call). For VT calls when there is no forwarding pending this is the MSISDN received in the Provide Roaming Number; if the MSISDN is not available, the basic MSISDN is used. For the MT and VT call case when there is call forwarding or call deflection pending, this is the MSISDN, i.e. not the forwarded-to or deflected-to number. If the Initial DP IF is sent at TDP Route_Select_Failure or TDP Analysed_Information then the *NatureOfAddress indicator* may contain a national-specific value. For some national-specific *NatureOfAddress indicator* values the length of the digit part of the destination address may be zero.

Information element name	MO	MF	MT	VT	NC	NP	Description
Called Party BCD Number	C	-	-	-	-	-	This IE contains the number used to identify the called party in the forward direction. It is used for an MO call in all cases except in the case of TDP Route_Select_Failure. For the TDP Collected_Information, the number contained in this IE shall be identical to the number received over the access network. It may e.g. include service selection information, such as ∗ and # digits, or carrier selection information dialled by the subscriber. For the TDP Analysed_Information, the number contained in this IE shall be the dialled number received over the network access or received from a gsmSCF in a Connect IF, Service selection information, such as * and # digits may be present (see subclause **Error! Reference source not found.**); carrier selection information dialled by the subscriber is not present.
Calling Party Number	M	C	C	C	-	C	This IE carries the calling party number to identify the calling party or the origin of the call.
Calling Partys Category	M	C	C	C	-	C	This IE indicates the type of calling party (e.g., operator, pay phone, ordinary subscriber).
CallGap Encountered	C	C	C	C	-	C	This IE indicates the type of gapping which has been applied to the related call. This IE shall be present only if a call gapping context is applicable to the Initial DP IF.
Call Reference Number	M	M	M	M	-	M	This IE may be used by the gsmSCF for inclusion in a network optional gsmSCF call record. It has to be coupled with the identity of the MSC which allocated it in order to define unambiguously the identity of the call. For MO calls, the call reference number is set by the serving VMSC and included in the MO call record. For MT calls, the call reference number is set by the GMSC and included in the RCF call record in the GMSC and in the MT call record in the terminating MSC. For VT calls, the call reference number is set by the GMSC and included in the RCF call record in the GMSC and in the MT call record in the terminating MSC. For MF calls, the call reference number is set by the GMSC and included in the CF record in the forwarding MSC. For the setting of the Call Reference Number for NP calls, see the corresponding call case above (MO, MT, VT or MF).
Cause	C	C	C	C	-	-	This IE indicates the cause specific to the armed BCSM DP event. This IE is applicable to DP Route_Select_Failure and DP T_Busy. The cause may be used by the gsmSCF to decide how to continue the call handling.
Event Type BCSM	M	M	M	M	-	M	This IE indicates the armed BCSM DP event, resulting in the Initial DP IF.
Ext-Basic Service Code	C	C	C	C	-	C	This IE indicates the type of basic service, i.e. teleservice or bearer service. If Bearer Capability 2 is present, then it indicates the basic service which corresponds to the preferred bearer capability for a SCUDIF (as defined in 3GPP TS 23.172 [27]) call.

Information element name	MO	MF	MT	VT	NC	NP	Description
High Layer Compatibility	C	C	C	C	-	C	This IE indicates the type of the high layer compatibility, which will be used to determine the ISDN-teleservice of a connected ISDN terminal.
IMSI	M	M	M	M	-	S	This IE identifies the mobile subscriber. For the NP case, the IMSI is mandatory if the new party is initiated in an MO, MF, MT, or VT call, otherwise it shall be absent.
IP SSP Capabilities	C	C	C	C	-	C	This IE indicates which SRF resources are supported within the gsmSSF and are available. If this IE is absent, it indicates that no gsmSRF is attached and available.
Location Information	M	-	C	M	-	-	This IE is described in a table below.
Location Number	M	C	C	C	-	-	For mobile originated calls this IE represents the location of the calling party. For all other call scenarios this IE contains the location number received in the incoming ISUP signalling.
MSC Address	M	M	M	M	-	M	For MO calls, the MSC Address carries the international E.164 address of the serving VMSC. For MT calls, the MSC Address carries the international E.164 address of the GMSC. For VT calls, the MSC Address carries the international E.164 address of the serving VMSC. For MF calls, the MSC Address carries the international E.164 address of the forwarding MSC. For NP case, see the corresponding call case above (MO, MT, VT or MF).
GMSC Address	-	M	-	M	-	S	For MF calls, the GMSC Address carries the international E.164 address of the GMSC. For VT calls, the GMSC Address carries the international E.164 address of the GMSC. For NP calls, the GMSC Address is mandatory if the new party is initiated in an MF call or in a VT call, otherwise it shall be absent. The GMSC Address carries the international E.164 address of the GMSC.
Carrier	S	S	S	S	-	S	This IE is described in a table below. This IE may be present when the VPLMN and the HPLMN of the subscriber are both North American. For MO calls, this IE shall identify any carrier that was explicitly selected by the calling subscriber. If no carrier was explicitly selected, this IE shall contain the calling subscriber's subscribed carrier. For MT and VT calls, the IE shall contain the carrier subscribed to by the called subscriber. For MF calls, the IE shall contain the carrier subscribed to by the forwarding subscriber.
Original Called Party ID	C	C	C	C	-	-	This IE carries the dialled digits if the call has met call forwarding on the route to the gsmSSF. This IE shall also be sent if it was received from the gsmSCF due to previous CAMEL processing.
Redirecting Party ID	C	C	C	C	-	-	This IE indicates the directory number the call was redirected from. This IE shall also be sent if it was received from the gsmSCF due to previous CAMEL processing.
Redirection Information	C	C	C	C	-	-	This IE contains forwarding related information, such as the redirection counter.

Information element name	MO	MF	MT	VT	NC	NP	Description
Service Key	M	M	M	M	-	M	This IE indicates to the gsmSCF the requested CAMEL Service. It is used to address the required application within the gsmSCF.
Subscriber State	-	-	C	C	-	-	This IE indicates the status of the MS. The states are: - CAMEL Busy: The MS is engaged on a transaction for a mobile originating or terminated circuit-switched call. - Network Determined Not Reachable: The network can determine from its internal data that the MS is not reachable. - Assumed Idle: The state of the MS is neither "CAMEL Busy" nor "Network Determined Not Reachable". - Not provided from VLR.
Time And Timezone	M	M	M	M	-	M	This IE contains the time that the gsmSSF was triggered, and the time zone in which gsmSSF resides.
Call Forwarding SS Pending	-	-	C	C	-	-	If the Initial DP IF is sent from the GMSC, then this IE shall be present in the following cases: - The GMSC has received an FTN in the 1st Send Routeing Info ack IF from the HLR. - The GMSC has received an FTN in the 2nd Send Routeing Info ack IF from the HLR and no relationship with the gsmSCF exists at that moment. - The GMSC has received the Resume Call Handling IF from the VMSC and no relationship with the gsmSCF exists at that moment. If the Initial DP IF is sent from the VMSC, then this IE shall be present in the following cases: - Conditional call forwarding is invoked and no relationship with the gsmSCF exists at that moment. - Call Deflection is invoked and no relationship with the gsmSCF exists at that moment.
Forwarding Destination Number	-	-	C	C	-	-	This IE contains the Forwarded-to-Number or the Deflected-to-Number. It shall be present if the Call Forwarding SS Pending IE is present, otherwise it shall be absent.
Service Interaction Indicators Two	C	C	C	C	-	C	The IE is described in a table below. This IE is present if it is received in the ISUP message or due to previous CAMEL processing.
CUG Index	C	-	-	-	-	C	See 3GPP TS 23.085 [22] for details of this IE.
CUG Interlock Code	C	C	C	C	-	C	This IE shall be set according to 3GPP TS 23.085 [22] unless modified by the gsmSCF via the Connect or Continue With Argument IFs.
Outgoing Access Indicator	C	C	C	C	-	C	This IE shall be set according to the 3GPP TS 23.085 [22] unless modified by the gsmSCF via the Connect or Continue With Argument IFs.
MS Classmark 2	C	-	-	-	-	-	This IE contains the MS classmark 2, which is sent by the MS when it requests access to setup the MO call or responds to paging in the CS domain.
IMEI (with software version)	C	-	-	-	-	-	This IE contains the IMEISV (as defined in 3GPP TS 23.003 [7]) of the ME in use by the served subscriber.

Information element name	MO	MF	MT	VT	NC	NP	Description
Supported CAMEL Phases	M	M	M	M	M	M	This IE indicates the CAMEL Phases supported by the GMSC or the VMSC.
Offered CAMEL4 Functionalities	M	M	M	M	M	M	This IE is described in a table below. This IE indicates the CAMEL phase 4 functionalities offered by the GMSC or the VMSC.
Bearer Capability 2	C	C	C	C	-	-	This IE indicates the type of the bearer capability connection to the user. If Bearer Capability 2 is present, then it indicates the less preferred bearer capability for a SCUDIF (as defined in 3GPP TS 23.172 [27]) call.
Ext-Basic Service Code 2	C	C	C	C	-	-	This IE indicates the type of basic service, i.e. teleservice or bearer service. If bearer Capability 2 is present, then it indicates the basic service which corresponds to the less preferred bearer capability for a SCUDIF call.
Enhanced Dialled Services Allowed	S	S	-	-	S	S	This IE indicates that the gsmSCF may use the Enhanced Dialled Services (EDS). This IE shall be included if and only if all of following four conditions are fulfilled: - this IF is sent due to triggering on DP Analysed_Information; and - the EDS functionality is offered for this call (as indicated in the Offered CAMEL4 Functionalities); and - there is no more than one outgoing leg within this call; and - there is no other CAMEL dialogue active for the leg for which this IF is sent.
User-to-User Service activation request	O	O	O	O	-	-	This IE may be sent if it is received in a call control message. See 3GPP TS 23.087 [xx], 3GPP TS 24.008 [30], and ETSI EN 300 356-1 [40] for details of this IE.
User-to-User Information	O	O	O	O	-	-	This IE may be sent if it is received in a call control message. See 3GPP TS 23.087 [xx], 3GPP TS 24.008 [30], and ETSI EN 300 356-1 [40] for details of this IE.

Offered CAMEL4 Functionalities contains the following information elements:

Information element name	Status	Description
Initiate Call Attempt	S	This IE indicates that the gsmSCF may send to the gsmSSF the Initiate Call Attempt IF.
Split Leg	S	This IE indicates that the gsmSCF may send to the gsmSSF the Split Leg IF.
Move Leg	S	This IE indicates that the gsmSCF may send to the gsmSSF the Move Leg IF.
Disconnect Leg	S	This IE indicates that the gsmSCF may send to the gsmSSF the Disconnect Leg IF.
Entity Released	S	This IE indicates that the gsmSSF will send to the gsmSCF the Entity Released IF, when appropriate.
DFC With Argument	S	This IE indicates that the gsmSCF may send to the gsmSSF the Disconnect Forward Connection With Argument IF.
Play Tone	S	This IE indicates that the gsmSCF may send to the gsmSSF the Play Tone IF.
DTMF Mid Call	S	This IE indicates that the gsmSCF may instruct the gsmSSF to arm the O_MidCall or T_MidCall DP. The gsmSCF may instruct the gsmSSF to automatically re-arm the DP, when encountered.
Charging Indicator	S	This IE indicates that the Charge Indicator IE may be present in the Event Report BCSM IF reporting the O_Answer or T_Answer DP.
Alerting DP	S	This IE indicates that the gsmSCF may instruct the gsmSSF to arm the O_Term_Seized or Call_Accepted DP.
Location At Alerting	S	This IE indicates that the Location Information IE shall be present (if available) in the Event Report BCSM IF reporting the O_Term_Seized or Call_Accepted DP.
Change Of Position DP	S	This IE indicates that the gsmSCF may instruct the gsmSSF to arm the

Information element name	Status	Description
		O_Change_Of_Position or T_Change_Of_Position DPs. The gsmSCF may instruct the gsmSSF to automatically re-arm the DP, when encountered.
OR Interactions	S	This IE indicates that the gsmSCF may send to the gsmSSF the Basic OR Interrogation Requested IE in the Connect or Continue With Argument IF. This IE indicates that the Route Not Permitted IE may be present in the Event Report BCSM IF reporting the O_Abandon DP.
Warning Tone Enhancements	S	This IE indicates that the gsmSCF may send to the gsmSSF the Burstlist IE (within the Audible Indicator IE) in an Apply Charging IF.
CF Enhancements	S	This IE indicates that the Forwarding Destination Number IE may be present in the Event Report BCSM IF reporting the T_Busy or T_No_Answer DP.
Criteria for Change Of Position DP	S	This IE indicates that the gsmSCF may send to the gsmSSF in the Request Report BCSM Event IF criteria for reporting the report of O_Change_Of_Position or T_Change_Of_Position.
Subscribed Enhanced Dialled Services	S	This IE indicates that Subscribed Enhanced Dialled Services is offered.
Serving Network Enhanced Dialled Services	S	This IE indicates that Serving Network Enhanced Dialled Services is offered.
Service Change DP	S	This IE indicates that the gsmSCF may instruct the gsmSSF to arm the O_Service_Change or T_Service_Change DPs. The gsmSCF may instruct the gsmSSF to automatically re-arm the DP, when encountered.

Location Information is defined in 3GPP TS 23.018 [12]. The following differences apply:

Information element name	MO	MF	MT	VT	NC	NP	Description
Location Number	-	-	C	C	-	-	See 3GPP TS 23.018 [12].
Service area ID	C,E	-	C,E	C,E	-	-	See 3GPP TS 23.018 [12].
Cell ID	C,E	-	C,E	C,E	-	-	See 3GPP TS 23.018 [12].
Geographical information	C	-	C	C	-	-	See 3GPP TS 23.018 [12].
Geodetic information	C	-	C	C	-	-	See 3GPP TS 23.018 [12].
VLR number	M	-	C	M	-	-	See 3GPP TS 23.018 [12].
Age Of location information	M	-	C	C	-	-	See 3GPP TS 23.018 [12].
Current Location Retrieved	-	-	-	-	-	-	Not applicable
Location area ID	C,E	-	C,E	C,E	-	-	See 3GPP TS 23.003 [7].
Selected LSA Identity	S	-	S	S	-	-	This IE indicates the LSA identity associated with the current position of the MS. It shall be present if the LSA ID in the subscriber data matches the LSA ID of the current cell. In the case of multiple matches the LSA ID with the highest priority shall be present. See 3GPP TS 23.073 [18]. This IE shall be present if available and SoLSA is supported, otherwise it shall be absent.

Carrier contains the following information elements:

Information element name	MO	MF	MT	VT	NC	NP	Description
Carrier Identification Code	M	M	M	M	-	M	This IE uniquely identifies a North American long distance carrier.
Carrier Selection Information	M	M	M	M	-	M	This IE indicates the way the carrier was selected, i.e.: - dialled - subscribed

Service Interaction Indicators Two contains the following information elements:

Information element name	MO	MF	MT	VT	NC	NP	Description
Forward Service Interaction Indicator	C	C	C	C	-	C	This IE is described in a table below.
HOLD Treatment Indicator	C	-	-	C	-	C	This IE indicates whether the CAMEL subscriber can invoke HOLD for the call.
CW Treatment Indicator	C	-	-	C	-	C	This IE indicates whether CW can be

Information element name	MO	MF	MT	VT	NC	NP	Description
							applied for a call to the CAMEL subscriber whilst this call is ongoing.
ECT Treatment Indicator	C	-	-	C	-	C	This IE indicates whether the call leg can become part of an ECT call initiated by the CAMEL subscriber.

Forward Service Interaction Indicator contains the following information elements:

Information element name	MO	MF	MT	VT	NC	NP	Description
Conference Treatment Indicator	C	C	C	C	-	C	This IE indicates whether the call leg can become part of a MPTY call initiated by the called subscriber.
Call Diversion Treatment Indicator	C	C	C	C	-	C	This IE indicates whether the call can be forwarded using the Call Forwarding or Call Deflection supplementary services.

*** End of Document ***