3GPP TSG CN Plenary Meeting #21   **NP-030369**
17th - 19th September 2003. Frankfurt, Germany.

Source: TSG CN WG2

Title: CRs on Rel-5 Work Item CAMEL4

Agenda item: 8.3

Document for: APPROVAL

Introduction:

This document contains 3 CRs on **Rel-5 Work Item CAMEL4.** These CRs have been agreed by TSG CN WG2 and are forwarded to TSG CN Plenary meeting for approval.

WG_tdoc	Title	Spec	CR	Rev	Cat	Rel	C_Ver
N2-030458	Correction to InitialDP for SCUDIF	23.078	620	1	F	Rel-5	5.4.0
N2-030470	Correction to InitialDP for SCUDIF	29.078	330	2	F	Rel-5	5.4.0
N2-030471	Introduction of extensibility mechanism in Release 5	29.078	331	1	F	Rel-5	5.4.0

CR-Form-v7

CHANGE REQUEST

⌘	**23.078** CR **620**	⌘**rev** **1** ⌘	Current version:	**5.4.0** ⌘

*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: ⌘	Correction to InitialDP for SCUDIF	
Source: ⌘	NTT DoCoMo, NEC	
Work item code: ⌘	CAMEL4	***Date:*** ⌘ 10/08/2003
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: ⌘	Since only single bearer information is set in initialDP to gsmSCF in the present CAMEL SPEC, gsmSCF cannot grasp the bearer information and basic service correctly in case of SCUDIF calls. In order to provide the service control function associated with SCUDIF, it is necessary to notify two bearer information and two basic service code to gsmSCF. For example, the following cases can be considered. (a)When a certain billing rate is applied for SCUDIF calls. (b)A service which is not applied for data calls can be restricted in advance by obtaining the second bearer information in advance.
Summary of change: ⌘	bearer capability2 and Ext-Basic Service Code2 are added to InitialDP.
Consequences if not approved: ⌘	Since SCUDIF calls cannot be recognized by gsmSCF, it cannot offer the service control correctly.

Clauses affected: ⌘	2, 4.6.1.8.2,

	Y	N		
Other specs ⌘	X		Other core specifications ⌘	TS29.078
affected:		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 ******   │
└───┘

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

[18]   3GPP TS 23.079: "3rd Generation Partnership Project; Technical Specification Group Core Network; Support of Optimal Routeing (SOR); Technical realization".

[19]   3GPP TS 23.082: "3rd Generation Partnership Project; Technical Specification Group Core Network; Call Forwarding (CF) supplementary services; Stage 2".

[20]   3GPP TS 23.084: "3rd Generation Partnership Project; Technical Specification Group Core Network; Multi Party (MPTY) supplementary service; Stage 2".

[21]   3GPP TS 23.085: "3rd Generation Partnership Project; Technical Specification Group Core Network; Closed User Group (CUG) supplementary service; Stage 2".

[22]   3GPP TS 23.088: "3rd Generation Partnership Project; Technical Specification Group Core Network; Call Barring (CB) Supplementary Services; Stage 2".

[23]   3GPP TS 23.090: "3rd Generation Partnership Project; Technical Specification Group Core Network; Unstructured Supplementary Service Data (USSD); Stage 2".

[24]   3GPP TS 23.091: "3rd Generation Partnership Project; Technical Specification Group Core Network; Explicit Call Transfer (ECT) supplementary service; Stage 2".

[25]   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".

[26]   3GPP TS 23.271: "3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Functional stage 2 description of LCS".

[27]   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".

[28]   3GPP TS 24.008: "3rd Generation Partnership Project; Technical Specification Group Core Network; Mobile radio interface layer 3 specification; Core Network Protocols; Stage 3".

[29]   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".

[30]   3GPP TS 25.305: "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Stage 2 Functional Specification of UE Positioning in UTRAN".

[31]   3GPP TS 25.413: "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; UTRAN Iu interface RANAP signalling".

[32]   3GPP TS 29.002: "3rd Generation Partnership Project; Technical Specification Group Core Network; Mobile Application Part (MAP) specification".

[33]   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".

[34]   3GPP TS 32.005: "3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Telecommunication Management; Charging and billing; 3G call and event data for the Circuit Switched (CS) domain".

[35]   3GPP TS 32.015: "3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Telecommunication Management; Charging and billing; 3G call and event data for the Packet Switched (PS) domain".

[36]   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".

[37]   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]".

[38]   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]".

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

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

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

[42]   3GPP TS 23.172: "Technical realization of Circuit Switched (CS) multimedia service; UDI/RDI fallback and service modification"

****** Second 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, it indicates the preferred bearer capability for a SCUDIF(as defined in 3GPP TS 23.172 [42]) call.

Information element name	MO	MF	MT	VT	NC	NP	Description
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.
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.

Information element name	MO	MF	MT	VT	NC	NP	Description
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 CF calls, the call reference number is set by the GMSC and included in the CF record in the forwarding MSC.
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, it indicates the basic service which corresponds to the preferred bearer capability for a SCUDIF(as defined in 3GPP TS 23.172 [42]) call.
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 the NP case, the MSC address carries the international E.164 address of the serving VMSC (the NP case in the GMSC will not cause an Initial DP IF).

Information element name	MO	MF	MT	VT	NC	NP	Description
GMSC Address	-	M	-	M	-	S	For CF 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 case, 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.
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.

Information element name	MO	MF	MT	VT	NC	NP	Description
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 [21] for details of this IE.
CUG Interlock Code	C	C	C	C	-	C	This IE shall be set according to 3GPP TS 23.085 [21] 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 [21] 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.
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 Capability2	C	C	C	C	-	-	This IE indicates the type of the bearer capability connection to the user. If Bearer Capability 2 is present, it indicates the less preferred bearer capability for SCUDIF(as defined in 3GPP TS 23.172 [42]) call.
Ext-Basic Service Code2	C	C	C	C	-	-	This IE indicates the type of basic service i.e., teleservice or bearer service. If bearer Capability 2 is present, it indicates the basic service which corresponds to the less preferred bearer capability for a SCUDIF call~~This IE may be present when i~~.

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 shall send to the gsmSCF the.
DFC With Argument	S	This IE indicates that the gsmSCF may send to the gsmSSF 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 DPs. The gsmSCF may instruct the gsmSSF to automatically re-arm the DPs.
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 DPs.
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 Call_Accepted DP.
Change Of Position DP	S	This IE indicates that the gsmSCF may instruct the gsmSSF to arm the O_Change_Of_Position or T_Change_Of_Position DPs. The gsmSCF may instruct the gsmSSF to auromatically re-arm the DPs.
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 IFs. This IE indicates 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 Play 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.

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 [17]. 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.:

Information element name	MO	MF	MT	VT	NC	NP	Description
							- 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 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.

CR-Form-v7

CHANGE REQUEST

⌘ **29.078** CR **330** ⌘rev **2** ⌘ Current version: **5.4.0** ⌘

*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: ⌘	Correction to InitialDP for SCUDIF	
Source: ⌘	NTT DoCoMo, NEC	
Work item code:⌘	CAMEL4	***Date:*** ⌘ 10/08/2003
Category: ⌘	**F**	***Release:*** ⌘ Rel-5

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A (corresponds to a correction in an earlier release)
B (addition of feature),
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Detailed explanations of the above categories can be found in 3GPP TR 21.900.

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Rel-5   (Release 5)
Rel-6   (Release 6)

Reason for change: ⌘	Since only single bearer information is set in initialDP to gsmSCF in the present CAMEL SPEC, gsmSCF cannot grasp the bearer information and basic service correctly in case of SCUDIF calls. In order to provide the service control function associated with SCUDIF, it is necessary to notify two bearer information and two basic service code to gsmSCF. For example, the following cases can be considered. (a)When a certain billing rate is applied for SCUDIF calls. (b)A service which is not applied for data calls can be restricted in advance by obtaining the second bearer information in advance.
Summary of change:⌘	bearer capability2 and Ext-Basic Service Code2 are added to InitialDP.
Consequences if not approved: ⌘	Since SCUDIF calls cannot be recognized by gsmSCF, it cannot offer the service control correctly.

Clauses affected: ⌘	6.1.1, 11.20.1.1, Annex A

	Y	N		
Other specs ⌘	X		Other core specifications ⌘	TS23.078
affected:		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 ****

6.1   gsmSSF/CCF - gsmSCF Interface

6.1.1   Operations and arguments

```
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,
    ...
}
-- 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.
```

**** Second 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 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.

**** third 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
Generic number "additional calling party number"	AdditionalCallingPartyNumber
User service information prime (1st priority) User service information (2nd priority)(Note 3)	BearerCapability ~~BearerCapability2~~
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

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.

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].

-    ~~either~~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.

CR-Form-v7

CHANGE REQUEST

| ⌘ | **29.078** CR **331** | ⌘rev | **1** | ⌘ | Current version: | **5.4.0** | ⌘ |

*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: ⌘	Introduction of extensibility mechanism in Release 5	
Source: ⌘	Siemens AG, Alcatel	
Work item code:⌘	CAMEL4	*Date:* ⌘ 29/08/2003
Category: ⌘	**F** (essential correction)	*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: ⌘	For the Release 6 feature "Change of position procedure armed with criteria" changes in the ASN.1 part of Rel-5 are necessary to include the criteria. It is important that the Release 6 protocol is backward compatible with Relase 5. For that reason some preparation to cope with this are required for Release 5 ASN.1. Please note that Release 5 and Release 6 will use the same Application Context.
Summary of change:⌘	Enhancement of the ASN.1 datatype `DpSpecificCriteria`.
Consequences if not approved: ⌘	Release 6 is not backward compatible to Release 5 and CAMEL interworking between Relaes 5 and Release 6 entities will not work.

Clauses affected: ⌘	5.1, 6.1.1

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

Other comments: ⌘	TR 3GPP TR 30.902 V5.0.1 (2003-03) gives some advise on extensibility.

5.1　Data types

```
BCSMEvent{PARAMETERS-BOUND : bound}::= SEQUENCE {
    eventTypeBCSM                       [0] EventTypeBCSM,
    monitorMode                         [1] MonitorMode,
    legID                               [2] LegID                          OPTIONAL,
    dpSpecificCriteria                  [30] DpSpecificCriteria {bound}
    OPTIONAL,
    automaticRearm                      [50] NULL                          OPTIONAL,
    ...
    }
-- Indicates the BCSM Event information for monitoring.

DpSpecificCriteria {PARAMETERS-BOUND : bound} ::= CHOICE {
    applicationTimer                    [1] ApplicationTimer,
    midCallControlInfo                  [2] MidCallControlInfo,
    dpSpecificCriteriaAlt               [3] DpSpecificCriteriaAlt {bound}
    }
-- Exception handling: reception of DpSpecificCriteriaAlt shall be treated like
-- reception of no DpSpecificCriteria.
-- The gsmSCF may set a timer in the gsmSSF for the No_Answer event.
-- If the user does not answer the call within the allotted time,
-- then the gsmSSF reports the event to the gsmSCF.
-- The gsmSCF may define a criterion for the detection of DTMF digits during a call.
-- The gsmSCF may define other criteria in the dpSpecificCriteriaAlt alternative
-- in future releases.

DpSpecificCriteriaAlt {PARAMETERS-BOUND : bound} ::= SEQUENCE {
    ...
    }
-- This datatype is for extension in future releases.
```

6.1.1　Operations and arguments

```
IMPORTS

...

    AChBillingChargingCharacteristics {},
    AdditionalCallingPartyNumber {},
    AlertingPattern,
    AChChargingAddress {},
    AssistingSSPIPRoutingAddress {},
    BCSMEvent {},
    BCSM-Failure,
    BearerCapability {},

...

FROM CAP-datatypes datatypes


RequestReportBCSMEventArg {PARAMETERS-BOUND : bound} ::= SEQUENCE {
    bcsmEvents                          [0] SEQUENCE SIZE(1..bound.&numOfBCSMEvents) OF
                                            BCSMEvent {bound},
    extensions                          [2] Extensions {bound}             OPTIONAL,
    ...
    }
-- Indicates the BCSM related events for notification.
```