3GPP TSG CN Plenary Meeting #14
Japan, Kyoto, 12th – 14th December 2001

3GPP TSG CN Plenary Meeting #14
Japan, Kyoto, 12th – 14th December 2001

Tdoc NP-010588

Source:	TSG CN WG2
Title:	CR on R99 Work Item CAMEL3, Pack 7
Agenda item:	7.2
Document for:	APPROVAL

Introduction:

This document contains 8 CRs on R99 WI CAMEL3 (4 CRs for R99 and the 4 mirror CRs for Rel-4). These CRs have been agreed by TSG CN WG2 and are forwarded to TSG CN Plenary meeting #14 for approval.

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
23.078	352	1	N2-010997	R99	Guidance to the usage of SCI-GPRS in the case of no support of AoC	F	3.10.0
23.078	369		N2-011026	Rel-4	Guidance to the usage of SCI-GPRS in the case of no support of AoC	A	4.2.0
23.078	355	1	N2-011012	R99	Clarification on Connect and ContinueWithArgument about the SII2	F	3.10.0
23.078	370		N2-011027	Rel-4	Clarification on Connect and ContinueWithArgument about the SII2	A	4.2.0
23.078	359	1	N2-010976	R99	Clarification on ATM about simultaneous SS modifications	F	3.10.0
23.078	362		N2-010977	Rel-4	Clarification on ATM about simultaneous SS modifications	A	4.2.0
23.078	363	4	N2-011040	R99	Clarification: use of SS-Code in ATM, ATSI and NSDC	F	3.10.0
23.078	371		N2-011041	Rel-4	Clarification: use of SS-Code in ATM, ATSI and NSDC	A	4.2.0

CR-Form-v5

CHANGE REQUEST

⌘   **23.078** CR **359**   ⌘**rev** **1** ⌘   Current version: **3.10.0** ⌘

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

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

Title:	⌘	Clarification on ATM about simultaneous SS modifications
Source:	⌘	Alcatel
Work item code: ⌘	CAMEL phase 3	*Date:* ⌘ 26-11-19

Category: ⌘ **F (essentail correction)**	*Release:* ⌘ R99

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

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

Reason for change:	⌘	In the 3GPP TS 23.078 in the description flow regarding the ATM request , it is possible for an SCF to request the modification relative to several subscription data (namely CSI and/or CB and/or CF) in one single operation.
		But in the SDL, only one type change (CF or CB or CSI) is described : it is described the change of CF or CB or CSI via an ATM request.
		Moreover, in the 3GPP TS 29.002 the ASN-1 description relative to the ATM result allows the sending of CB **or** CF modified data and not the sending of CF and CB modified data together. So it is not possible to reply to the SCF when this one has requested to modify CB and CF data together.
Summary of change: ⌘		it is proposed to allow the SCF to modify one type of data in one request (namely either CSI, or CB or CF)
Consequences if not approved:	⌘	Missinterpretation of the ATM handling

Clauses affected:	⌘	10.3.1.2

Other specs affected:	⌘	☐ Other core specifications	⌘	
		☐ Test specifications		
		☐ O&M Specifications		

Other comments:	⌘	

*** *First Modified Section* ***

10.3.1.2   Any Time Modification Request

10.3.1.2.1   Description

This IF is used to modify information in the HLR at any time.

10.3.1.2.2   Information Elements

The following information elements are required:

Information element name	Required	Description
gsmSCF Address	M	This IE indicates the address of the interrogating gsmSCF.
Subscriber Identity	M	This IE identifies the subscriber for which the information is requested. The identity shall be either: - IMSI, or - MSISDN
Modification Request for Call Forwarding SS data	~~O~~C1	This IE indicates the data of Call Forwarding data to be modified. It is described in a table below.
Modification Request for Call Barring SS data	~~O~~C1	This IE indicates the data of call barring data to be modified. It is described in a table below.
Modification Request for CAMEL Subscription Information	~~O~~C1	This IE indicates the Modification Request for CAMEL Subscription Information. It is described in a table below.
M Mandatory (The IE shall always be sent). ~~O Optional (Service Logic dependent).~~ C1 Conditional (one and only one of the three IEs shall be sent).		

*** *End of Document* ***

CR-Form-v5

CHANGE REQUEST

| ⌘ | **23.078** CR **362** | ⌘**rev** | **-** | ⌘ | Current version: | **4.2.0** | ⌘ |

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

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

Title:	⌘	Clarification on ATM about simultaneous SS modifications
Source:	⌘	Alcatel
Work item code: ⌘	CAMEL phase 3	*Date:* ⌘ 26-11-19
Category:	⌘ **A**	*Release:* ⌘ REL-4

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

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

Reason for change: ⌘	In the 3GPP TS 23.078 in the description flow regarding the ATM request , it is possible for an SCF to request the modification relative to several subscription data (namely CSI and/or CB and/or CF) in one single operation.
	But in the SDL, only one type change (CF or CB or CSI) is described : it is described the change of CF or CB or CSI via an ATM request.
	Moreover, in the 3GPP TS 29.002 the ASN-1 description relative to the ATM result allows the sending of CB **or** CF modified data and not the sending of CF and CB modified data together. So it is not possible to reply to the SCF when this one has requested to modify CB and CF data together.
Summary of change: ⌘	it is proposed to allow the SCF to modify one type of data in one request (namely either CSI, or CB or CF)
Consequences if not approved: ⌘	Missinterpretation of the ATM handling

Clauses affected: ⌘	10.3.1.2

Other specs affected: ⌘	☐ Other core specifications ⌘	
	☐ Test specifications	
	☐ O&M Specifications	

Other comments: ⌘	

*** First Modified Section ***

10.3.1.2   Any Time Modification Request

10.3.1.2.1   Description

This IF is used to modify information in the HLR at any time.

10.3.1.2.2   Information Elements

The following information elements are required:

Information element name	Required	Description
gsmSCF Address	M	This IE indicates the address of the interrogating gsmSCF.
Subscriber Identity	M	This IE identifies the subscriber for which the information is requested. The identity shall be either: - IMSI, or - MSISDN
Modification Request for Call Forwarding SS data	~~O~~C1	This IE indicates the data of Call Forwarding data to be modified. It is described in a table below.
Modification Request for Call Barring SS data	~~O~~C1	This IE indicates the data of call barring data to be modified. It is described in a table below.
Modification Request for CAMEL Subscription Information	~~O~~C1	This IE indicates the Modification Request for CAMEL Subscription Information. It is described in a table below.
M Mandatory (The IE shall always be sent). ~~O Optional (Service Logic dependent).~~ C1 Conditional (one and only one of the three IEs shall be sent).		

*** End of Document ***

CHANGE REQUEST

| ⌘ | **23.078** CR | **352** | ⌘ rev | **1** | ⌘ | Current version: | 3.10.0 | ⌘ |

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

Title:	⌘	Guidance to the usage of SCI-GPRS in the case of no support of AoC

Source:	⌘	Ericsson

Work item code:	⌘	CAMEL3	*Date:* ⌘	27 November 2001

Category:	⌘	**F** (essential correction)	*Release:* ⌘	R99

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

Reason for change:	⌘	The "Initial DP GPRS" (IDP-GPRS) procedure includes an indication about the SGSN's support of the Advice of Charge (AoC) feature. However, this indication of the SGSN's support of AoC can not be used by the SCP to deduce whether the subscriber has a subscription to the AoC Supplementary Service (SS). The result may be that the SCP uses the "Send Charging Information GPRS" (SCI-GPRS) operation for a subscriber who is not provisioned with the AoC SS. The description of IDP-GPRS does not specify the behaviour of the gprsSSF in the case that the SGSN is not able to execute the SCI-GPRS due to the subscriber not being provisioned with the AoC SS. To ensure consistent behaviour across equipment from different vendors, the present CR proposes that in the above described scenario, the gprsSSF shall ignore the e-parameters contained in SCI-GPRS. This proposed behaviour is in line with the gsmSSF behaviour, for the case that the SCP sends the SCI operation for a subscriber who does not have a subscription to the AoC SS.

Summary of change:	⌘	Specify the behaviour of the gprsSSF in the case that SCI-GPRS is sent for a subscriber that does not have a subscription to AoC SS.

Consequences if not approved:	⌘	Without this CR, there may be interworking problems between equipment from different vendors, possibly resulting in the premature abortion of GPRS CAMEL services.

Clauses affected:	⌘	6.6.2.13

Other specs affected:	⌘	☐ Other core specifications	⌘	
		☐ Test specifications		

	O&M Specifications	

Other comments: ⌘

*** First Modification ***

6.6.2.13 Send Charging Information GPRS

6.6.2.13.1 Description

This IF is used to send e-parameters from the gsmSCF to the gprsSSF. If charge advice information is received from the gsmSCF, it shall replace the charge advice information which would be generated by the SGSN and inhibit any further generation of CAI by the SGSN. Further processing of the charge advice information by the SGSN shall be in accordance with the GSM Advice of Charge Supplementary Service.

If the SGSN supports Advice of Charge, then the gsmSCF may use this IF to send e-parameters to the gprsSSF. However, if the subscriber is not provisioned with the GSM Advice of Charge supplementary service, then no e-parameters shall be sent to the MS and no error due to this fact shall be sent back to the gsmSCF.

If the SGSN does not support Advice of Charge, then the gsmSCF shall not send e-parameters to the gprsSSF.

The SGSN's support of Advice of Charge is indicated in the Initial DP GPRS IF.

NOTE: If charge advice information is received from the gsmSCF after charge information has been generated by the SGSN and sent to the MS, the behaviour of the service may be unpredictable or incorrect; the service designer should therefore ensure that the first set of charge advice information is sent to the gprsSSF before charge information is sent to the to the MS.

6.6.2.13.2 Information Elements

The following information elements are required:

Information element name	Required	Description
GPRS Reference Number	C	This IE consists of a number assigned by the gprsSSF and a number assigned by the gsmSCF. It is used for TCAP dialogue segmentation.
SCI GPRS Billing ChargingCharacteristics	M	This IE defines the Advice Of Charge related information to be provided to the Mobile Station, if supported by the SGSN.
M	Mandatory (The IE shall always be sent).	
C	Conditional.	

GPRS SCI Billing Charging Characteristics contains the following information:

Information element name	Required	Description
AOC GPRS	M	This IE is sent after an Activate PDP Context Accept or Attach Accept has been received from the SGSN. This IE defines the Advice Of Charge related information to be provided to the Mobile Station, if supported by the SGSN.
PDP Id	C	This IE is included if the AoC is applicable to a PDP context. If not present the AoC is applicable to the GPRS session or for a single PDP context for the dialogue.
M	Mandatory (The IE shall always be sent).	
C	Conditional (The IE shall be sent, if available).	

AOC GPRS contains the following information:

Information element name	Required	Description
AOC Initial	M	This IE contains CAI elements as defined in 3GPP TS 22.024 [31].
AOC Subsequent	O	See definition in the next table.
M	Mandatory (The IE shall always be sent).	
O	Optional (Service logic dependent).	

AOC Subsequent contains the following information:

Information element name	Required	Description
CAI Elements	M	This IE contains CAI elements as defined in 3GPP TS 22.024 [31].
Tariff Switch Interval	O	This IE indicates the tariff switch time until the next tariff switch applies.
M Mandatory (The IE shall always be sent).		
O Optional (Service logic dependent).		

*** End of Document ***

CR-Form-v4

CHANGE REQUEST

| ⌘ | **23.078** CR **355** | ⌘ | rev | **1** | ⌘ | Current version: | **3.10.0** | ⌘ |

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

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

Title:	⌘	Clarification on Connect and ContinueWithArgument about the SII2

Source:	⌘	Alcatel

Work item code:	⌘	CAMEL phase 3	***Date:*** ⌘	28-11-19

Category:	⌘	**F (essential correction)**	***Release:*** ⌘	R99

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

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

Reason for change:	⌘	When a supplementary service is currently restricted it is not allowed to a gsmSCF to force the acceptance of a supplementary service (e.g. mpty , ect, …) for the ongoing call ; e.g. when HOLD is not allowed by the CAMEL subscriber for the call then the gsmSCF shall not allow that the CAMEL subscriber can invoke HOLD. The gsmSCF is allowed to change parameters only to the more restrictive direction.

Summary of change: ⌘		Clarification on the Connect and ContinueWithArgument relative to the ServiceInteractionIndicatorsTwo parameter.

Consequences if not approved:	⌘	Various implementations of CAMEL interactions on supplementary services may occur.

Clauses affected:	⌘	§ 4.6.2.6 and 4.6.2.9

Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	

Other comments:	⌘	

4.6.2.6　Connect

4.6.2.6.1　Description

This IF is used to request the gsmSSF to perform the call processing actions to route a call to a specific destination. To do so, the gsmSSF may use destination information from the calling party and existing call set-up information depending on the information provided by the gsmSCF.

4.6.2.6.2　Information Elements

The following information elements are required:

Information element name	MO	MF	MT	VT	Description
Alerting Pattern	-	-	O	O	This parameter indicates the kind of Alerting Pattern to be applied.
Calling Party Category	O	O	O	O	This IE indicates the type of calling party (e.g., operator, pay phone, ordinary subscriber).
Destination Routing Address	M	M	M	M	This IE contains the called party number towards which the call is to be routed.
Generic Number	O	O	O	O	This IE contains the generic number. Its used to convey the additional calling party number, which e.g. could be used to modify the calling line ID presented to the called user.
Carrier	O	O	O	O	This IE is described in the next table.
NA Originating Line Information	O	O	O	O	This IE identifies the type of number in the Charge Number (e.g. subscriber versus PLMN operator number).
Charge Number	O	O	O	O	This IE identifies the chargeable number for the usage of a North American carrier.
O-CSI Applicable	-	-	O	O	This IE indicates that the O-CSI, if present shall be applied on the outgoing leg.
Original Called Party ID	O	O	O	O	This IE carries the dialled digits if the call has met call forwarding on route to the gsmSSF or is forwarded by the gsmSCF.
Redirecting Party ID	O	O	O	O	This IE indicates the directory number the call was redirected from.
Redirection Information	O	O	O	O	This IE contains forwarding related information, such as redirecting counter.
Suppression Of Announcements	-	-	O	O	This IE indicates that announcements or tones generated as a result of unsuccessful call setup shall be suppressed.
Service Interaction Indicators Two	O	O	O	O	This IE is described in a table below.
CUG Interlock Code	O	O	O	O	See 3GPP TS 23.085 [9] for details of this IE.
Outgoing Access Indicator	O	O	O	O	See 3GPP TS 23.085 [9] for details of this IE.
O　　Optional (Service logic dependent).					
-　　Not applicable.					

Carrier contains the following information:

Information element name	MO	MF	MT	VT	Description
Carrier Identification Code	M	M	M	M	This IE uniquely identifies a North American long distance carrier.
Carrier Selection Information	M	M	M	M	This IE indicates the way the carrier was selected e.g.: – dialled – subscribed
M　　Mandatory (The IE shall always be sent).					

Service Interaction Indicators Two contains the following information:

Information element name	MO	MF	MT	VT	Description
Forward Service Interaction Indicator	O	O	O	O	This IE is described in a table below.
Backward Service Interaction Indicator	O	O	O	O	This IE is described in a table below.
HOLD Treatment Indicator	O	-	-	O	This IE allows the gsmSCF to disallow the invocation of HOLD by the CAMEL subscriber. ~~This IE indicates whether the CAMEL subscriber can invoke HOLD for the call.~~
CW Treatment Indicator	O	-	-	O	This IE allows the gsmSCF to disallow the invocation of CW for a call to the CAMEL subscriber whilst this call is ongoing.~~This IE indicates whether CW can be applied for a call to the CAMEL subscriber whilst this call is ongoing.~~
ECT Treatment Indicator	O	-	-	O	This IE allows the gsmSCF to disallow the call leg to become part of an ECT call initiated by the CAMEL subscriber.~~This IE indicates whether the call leg can become part of an ECT call initiated by the CAMEL subscriber.~~
Connected number treatment indicator	O	O	O	O	This IE indicates the treatment of the connected number at the originating side.
Non-CUG Call	O	O	O	O	This IE indicates that no parameters for CUG should be used for the call (i.e. the call should be a non-CUG call).
O Optional (Service logic dependent). - Not applicable.					

NOTE: Non-CUG Call shall not be present if at least one of CUG Interlock Code and Outgoing Access Indicator are present in the Information Flow.

Forward Service Interaction Indicator contains the following information:

Information element name	MO	MF	MT	VT	Description
Conference Treatment Indicator	O	O	O	O	This IE allows the gsmSCF to disallow the call leg to become part of a MPTY call initiated by the CAMEL subscriber.~~This IE indicates whether the call leg can become part of a MPTY call initiated by the called subscriber.~~
Call Diversion Treatment Indicator	O	O	O	O	This IE allows the gsmSCF to disallow the Call Forwarding or Call Deflection Supplementary Services for this call.~~This IE indicates whether the call can be forwarded using the Call Forwarding or Call Deflection Supplementary Services.~~
Calling Party Restriction Indicator	O	-	-	-	This IE allows the gsmSCF to mark the CLI as Restricted for the call.~~This IE indicates whether the CLI shall be marked as Restricted by CAMEL action for the call.~~
O Optional (Service logic dependent). - Not applicable.					

Backward Service Interaction Indicator contains the following information:

Information element name	MO	MF	MT	VT	Description
Conference Treatment Indicator	O	O	O	O	This IE allows the gsmSCF to disallow the call leg to become part of a MPTY call initiated by the calling subscriber.~~This IE indicates if the call leg can become part of a MPTY call initiated by the calling subscriber.~~
Call Completion Treatment Indicator	O	O	O	O	This IE allows the gsmSCF to disallow a CCBS request to be made for the call. See also 3GPP TS 23.093 [38] for description. ~~This IE indicates whether a CCBS request can be made for the call. See also 3GPP TS 23.093 [38] for description.~~
O Optional (Service logic dependent).					

4.6.2.9   Continue With Argument

4.6.2.9.1   Description

This information flow requests the gsmSSF to proceed the call processing with modified information at the DP at which it previously suspended call processing to await gsmSCF instructions. The gsmSSF completes DP processing, and continues basic call processing (i.e., proceeds to the next point in call in the BCSM) with the modified call setup information as received from the gsmSCF.

4.6.2.9.2   Information Elements

The following information elements are required:

Information element name	MO	MF	MT	VT	Description
Alerting Pattern	-	-	O	O	This parameter indicates the kind of Alerting Pattern to be applied.
Calling Party Category	O	O	O	O	This IE indicates the type of calling party (e.g., operator, pay phone, ordinary subscriber).
Generic Number	O	O	O	O	This IE contains the generic number. Its used to convey the additional calling party number, which e.g. could be used to modify the calling line ID presented to the called user.
Carrier	O	O	O	O	This IE is described in the next table.
NA Originating Line Information	O	O	O	O	This IE identifies the type of number in the Charge Number (e.g. subscriber versus PLMN operator number).
Charge Number	O	O	O	O	This IE identifies the chargeable number for the usage of a North American carrier.
Suppression Of Announcements	-	-	O	O	This IE indicates that announcements or tones generated as a result of unsuccessful call setup shall be suppressed.
Service Interaction Indicators Two	O	O	O	O	This IE is described in a table below.
CUG Interlock Code	O	O	-	-	See 3GPP TS 23.085 [9] for details of this IE.
Outgoing Access Indicator	O	O	-	-	See 3GPP TS 23.085 [9] for details of this IE.
O Optional (Service logic dependent). - Not applicable.					

Carrier contains the following information:

Information element name	MO	MF	MT	VT	Description
Carrier Identification Code	M	M	M	M	This IE uniquely identifies a North American long distance carrier.
Carrier Selection Information	M	M	M	M	This IE indicates the way the carrier was selected e.g.: - dialled - subscribed
M Mandatory (The IE shall always be sent).					

Service Interaction Indicators Two contains the following information:

Information element name	MO	MF	MT	VT	Description
Forward Service Interaction Indicator	O	O	O	O	See the Information Flow table for the Service Interaction Indicators Two IE in the Connect operation for an explanation of this parameter.
Backward Service Interaction Indicator	O	O	O	O	See the Information Flow table for the Service Interaction Indicators Two IE in the Connect operation for an explanation of this parameter.
HOLD Treatment Indicator	O	-	-	O	This IE allows the gsmSCF to disallow the invocation of HOLD by the CAMEL subscriber. ~~This IE indicates whether the CAMEL subscriber can invoke HOLD for the call.~~
CW Treatment Indicator	O	-	-	O	This IE allows the gsmSCF to disallow the invocation of CW for a call to the CAMEL subscriber whilst this call is ongoing. ~~This IE indicates whether CW can be applied for a call to the CAMEL subscriber whilst this call is ongoing.~~
ECT Treatment Indicator	O	-	-	O	This IE allows the gsmSCF to disallow the call leg to become part of an ECT call initiated by the CAMEL subscriber. ~~This IE indicates whether the call leg can become part of an ECT call initiated by the CAMEL subscriber.~~
Connected number treatment indicator	O	O	O	O	This IE indicates the treatment of the connected number at the originating side.
Non-CUG Call	O	O	-	-	This IE indicates that no parameters for CUG should be used for the call (i.e. the call should be a non-CUG call).
O Optional (Service logic dependent). - Not applicable.					

NOTE: Non-CUG Call shall not be present if at least one of CUG Interlock Code and Outgoing Access Indicator are present in the Information Flow.

CHANGE REQUEST

| ⌘ | **23.078** CR | **369** | ⌘ rev | ⌘ | Current version: | **4.2.0** | ⌘ |

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

Title:	⌘	Guidance to the usage of SCI-GPRS in the case of no support of AoC
Source:	⌘	Ericsson
Work item code: ⌘		CAMEL3	*Date:* ⌘	29 November 2001
Category:	⌘ A		*Release:* ⌘	Rel-4

Use *one* of the following categories:
F (correction)
A (corresponds to a correction in an earlier release)
B (addition of feature),
C (functional modification of feature)
D (editorial modification)

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

Reason for change: ⌘		The "Initial DP GPRS" (IDP-GPRS) procedure includes an indication about the SGSN's support of the Advice of Charge (AoC) feature. However, this indication of the SGSN's support of AoC can not be used by the SCP to deduce whether the subscriber has a subscription to the AoC Supplementary Service (SS).

The result may be that the SCP uses the "Send Charging Information GPRS" (SCI-GPRS) operation for a subscriber who is not provisioned with the AoC SS.

The description of IDP-GPRS does not specify the behaviour of the gprsSSF in the case that the SGSN is not able to execute the SCI-GPRS due to the subscriber not being provisioned with the AoC SS.

To ensure consistent behaviour across equipment from different vendors, the present CR proposes that in the above described scenario, the gprsSSF shall ignore the e-parameters contained in SCI-GPRS.

This proposed behaviour is in line with the gsmSSF behaviour, for the case that the SCP sends the SCI operation for a subscriber who does not have a subscription to the AoC SS. |
| *Summary of change:* ⌘ | | Specify the behaviour of the gprsSSF in the case that SCI-GPRS is sent for a subscriber that does not have a subscription to AoC SS. |
| *Consequences if not approved:* | ⌘ | Without this CR, there may be interworking problems between equipment from different vendors, possibly resulting in the premature abortion of GPRS CAMEL services. |

Clauses affected:	⌘	6.6.2.13
Other specs affected:	⌘ ☐	Other core specifications ⌘
	☐	Test specifications

	O&M Specifications	

Other comments: ⌘

*** First Modification ***

6.6.2.13   Send Charging Information GPRS

6.6.2.13.1   Description

This IF is used to send e-parameters from the gsmSCF to the gprsSSF. If charge advice information is received from the gsmSCF, it shall replace the charge advice information which would be generated by the SGSN and inhibit any further generation of CAI by the SGSN. Further processing of the charge advice information by the SGSN shall be in accordance with the GSM Advice of Charge Supplementary Service.

If the SGSN supports Advice of Charge, then the gsmSCF may use this IF to send e-parameters to the gprsSSF. However, if the subscriber is not provisioned with the GSM Advice of Charge supplementary service, then no e-parameters shall be sent to the MS and no error due to this fact shall be sent back to the gsmSCF.

If the SGSN does not support Advice of Charge, then the gsmSCF shall not send e-parameters to the gprsSSF.

The SGSN's support of Advice of Charge is indicated in the Initial DP GPRS IF.

NOTE: If charge advice information is received from the gsmSCF after charge information has been generated by the SGSN and sent to the MS, the behaviour of the service may be unpredictable or incorrect; the service designer should therefore ensure that the first set of charge advice information is sent to the gprsSSF before charge information is sent to the to the MS.

6.6.2.13.2   Information Elements

The following information elements are required:

Information element name	Required	Description
GPRS Reference Number	C	This IE consists of a number assigned by the gprsSSF and a number assigned by the gsmSCF. It is used for TCAP dialogue segmentation.
SCI GPRS Billing ChargingCharacteristics	M	This IE defines the Advice Of Charge related information to be provided to the Mobile Station, if supported by the SGSN.
M Mandatory (The IE shall always be sent).		
C Conditional.		

GPRS SCI Billing Charging Characteristics contains the following information:

Information element name	Required	Description
AOC GPRS	M	This IE is sent after an Activate PDP Context Accept or Attach Accept has been received from the SGSN. This IE defines the Advice Of Charge related information to be provided to the Mobile Station, if supported by the SGSN.
PDP Id	C	This IE is included if the AoC is applicable to a PDP context. If not present the AoC is applicable to the GPRS session or for a single PDP context for the dialogue.
M Mandatory (The IE shall always be sent).		
C Conditional (The IE shall be sent, if available).		

AOC GPRS contains the following information:

Information element name	Required	Description
AOC Initial	M	This IE contains CAI elements as defined in 3GPP TS 22.024 [31].
AOC Subsequent	O	See definition in the next table.
M Mandatory (The IE shall always be sent).		
O Optional (Service logic dependent).		

AOC Subsequent contains the following information:

Information element name	Required	Description
CAI Elements	M	This IE contains CAI elements as defined in 3GPP TS 22.024 [31].
Tariff Switch Interval	O	This IE indicates the tariff switch time until the next tariff switch applies.
M Mandatory (The IE shall always be sent).		
O Optional (Service logic dependent).		

*** End of Document ***

CR-Form-v4

CHANGE REQUEST

⌘	**23.078** CR **370**	⌘ rev **-** ⌘	Current version:	**4.2.0**	⌘

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

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

Title: ⌘	Clarification on Connect and ContinueWithArgument about the SII2	
Source: ⌘	Alcatel	
Work item code: ⌘	CAMEL phase 3	***Date:*** ⌘ 29-11-19
Category: ⌘	**A**	***Release:*** ⌘ REL-4

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

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

Reason for change: ⌘	When a supplementary service is currently restricted it is not allowed to a gsmSCF to force the acceptance of a supplementary service (e.g. mpty , ect, …) for the ongoing call ; e.g. when HOLD is not allowed by the CAMEL subscriber for the call then the gsmSCF shall not allow that the CAMEL subscriber can invoke HOLD. The gsmSCF is allowed to change parameters only to the more restrictive direction.
Summary of change: ⌘	Clarification on the Connect and ContinueWithArgument relative to the ServiceInteractionIndicatorsTwo parameter.
Consequences if not approved: ⌘	Various implementations of CAMEL interactions on supplementary services may occur.

Clauses affected: ⌘	§ 4.6.2.6 and 4.6.2.9
Other specs affected: ⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments: ⌘	

CR page 1

4.6.2.6 Connect

4.6.2.6.1 Description

This IF is used to request the gsmSSF to perform the call processing actions to route a call to a specific destination. To do so, the gsmSSF may use destination information from the calling party and existing call set-up information depending on the information provided by the gsmSCF.

4.6.2.6.2 Information Elements

The following information elements are required:

Information element name	MO	MF	MT	VT	Description
Alerting Pattern	-	-	O	O	This parameter indicates the kind of Alerting Pattern to be applied.
Calling Party Category	O	O	O	O	This IE indicates the type of calling party (e.g., operator, pay phone, ordinary subscriber).
Destination Routing Address	M	M	M	M	This IE contains the called party number towards which the call is to be routed.
Generic Number	O	O	O	O	This IE contains the generic number. Its used to convey the additional calling party number, which e.g. could be used to modify the calling line ID presented to the called user.
Carrier	O	O	O	O	This IE is described in the next table.
NA Originating Line Information	O	O	O	O	This IE identifies the type of number in the Charge Number (e.g. subscriber versus PLMN operator number).
Charge Number	O	O	O	O	This IE identifies the chargeable number for the usage of a North American carrier.
O-CSI Applicable	-	-	O	O	This IE indicates that the O-CSI, if present shall be applied on the outgoing leg.
Original Called Party ID	O	O	O	O	This IE carries the dialled digits if the call has met call forwarding on route to the gsmSSF or is forwarded by the gsmSCF.
Redirecting Party ID	O	O	O	O	This IE indicates the directory number the call was redirected from.
Redirection Information	O	O	O	O	This IE contains forwarding related information, such as redirecting counter.
Suppression Of Announcements	-	-	O	O	This IE indicates that announcements or tones generated as a result of unsuccessful call setup shall be suppressed.
Service Interaction Indicators Two	O	O	O	O	This IE is described in a table below.
CUG Interlock Code	O	O	O	O	See 3GPP TS 23.085 [9] for details of this IE.
Outgoing Access Indicator	O	O	O	O	See 3GPP TS 23.085 [9] for details of this IE.
O Optional (Service logic dependent).					
- Not applicable.					

Carrier contains the following information:

Information element name	MO	MF	MT	VT	Description
Carrier Identification Code	M	M	M	M	This IE uniquely identifies a North American long distance carrier.
Carrier Selection Information	M	M	M	M	This IE indicates the way the carrier was selected e.g.: – dialled – subscribed
M Mandatory (The IE shall always be sent).					

Service Interaction Indicators Two contains the following information:

Information element name	MO	MF	MT	VT	Description
Forward Service Interaction Indicator	O	O	O	O	This IE is described in a table below.
Backward Service Interaction Indicator	O	O	O	O	This IE is described in a table below.
HOLD Treatment Indicator	O	-	-	O	This IE allows the gsmSCF to disallow the invocation of HOLD by the CAMEL subscriber. ~~This IE indicates whether the CAMEL subscriber can invoke HOLD for the call.~~
CW Treatment Indicator	O	-	-	O	This IE allows the gsmSCF to disallow the invocation of CW for a call to the CAMEL subscriber whilst this call is ongoing.~~This IE indicates whether CW can be applied for a call to the CAMEL subscriber whilst this call is ongoing.~~
ECT Treatment Indicator	O	-	-	O	This IE allows the gsmSCF to disallow the call leg to become part of an ECT call initiated by the CAMEL subscriber.~~This IE indicates whether the call leg can become part of an ECT call initiated by the CAMEL subscriber.~~
Connected number treatment indicator	O	O	O	O	This IE indicates the treatment of the connected number at the originating side.
Non-CUG Call	O	O	O	O	This IE indicates that no parameters for CUG should be used for the call (i.e. the call should be a non-CUG call).
O	Optional (Service logic dependent).				
-	Not applicable.				

NOTE: Non-CUG Call shall not be present if at least one of CUG Interlock Code and Outgoing Access Indicator are present in the Information Flow.

Forward Service Interaction Indicator contains the following information:

Information element name	MO	MF	MT	VT	Description
Conference Treatment Indicator	O	O	O	O	This IE allows the gsmSCF to disallow the call leg to become part of a MPTY call initiated by the CAMEL subscriber.~~This IE indicates whether the call leg can become part of a MPTY call initiated by the called subscriber.~~
Call Diversion Treatment Indicator	O	O	O	O	This IE allows the gsmSCF to disallow the Call Forwarding or Call Deflection Supplementary Services for this call.~~This IE indicates whether the call can be forwarded using the Call Forwarding or Call Deflection Supplementary Services.~~
Calling Party Restriction Indicator	O	-	-	-	This IE allows the gsmSCF to mark the CLI as Restricted for the call.~~This IE indicates whether the CLI shall be marked as Restricted by CAMEL action for the call.~~
O	Optional (Service logic dependent).				
-	Not applicable.				

Backward Service Interaction Indicator contains the following information:

Information element name	MO	MF	MT	VT	Description
Conference Treatment Indicator	O	O	O	O	This IE allows the gsmSCF to disallow the call leg to become part of a MPTY call initiated by the calling subscriber.~~This IE indicates if the call leg can become part of a MPTY call initiated by the calling subscriber.~~
Call Completion Treatment Indicator	O	O	O	O	This IE allows the gsmSCF to disallow a CCBS request to be made for the call. See also 3GPP TS 23.093 [38] for description. ~~This IE indicates whether a CCBS request can be made for the call. See also 3GPP TS 23.093 [38] for description.~~
O Optional (Service logic dependent).					

4.6.2.9 Continue With Argument

4.6.2.9.1 Description

This information flow requests the gsmSSF to proceed the call processing with modified information at the DP at which it previously suspended call processing to await gsmSCF instructions. The gsmSSF completes DP processing, and continues basic call processing (i.e., proceeds to the next point in call in the BCSM) with the modified call setup information as received from the gsmSCF.

4.6.2.9.2 Information Elements

The following information elements are required:

Information element name	MO	MF	MT	VT	Description
Alerting Pattern	-	-	O	O	This parameter indicates the kind of Alerting Pattern to be applied.
Calling Party Category	O	O	O	O	This IE indicates the type of calling party (e.g., operator, pay phone, ordinary subscriber).
Generic Number	O	O	O	O	This IE contains the generic number. Its used to convey the additional calling party number, which e.g. could be used to modify the calling line ID presented to the called user.
Carrier	O	O	O	O	This IE is described in the next table.
NA Originating Line Information	O	O	O	O	This IE identifies the type of number in the Charge Number (e.g. subscriber versus PLMN operator number).
Charge Number	O	O	O	O	This IE identifies the chargeable number for the usage of a North American carrier.
Suppression Of Announcements	-	-	O	O	This IE indicates that announcements or tones generated as a result of unsuccessful call setup shall be suppressed.
Service Interaction Indicators Two	O	O	O	O	This IE is described in a table below.
CUG Interlock Code	O	O	-	-	See 3GPP TS 23.085 [9] for details of this IE.
Outgoing Access Indicator	O	O	-	-	See 3GPP TS 23.085 [9] for details of this IE.
O Optional (Service logic dependent). - Not applicable.					

Carrier contains the following information:

Information element name	MO	MF	MT	VT	Description
Carrier Identification Code	M	M	M	M	This IE uniquely identifies a North American long distance carrier.
Carrier Selection Information	M	M	M	M	This IE indicates the way the carrier was selected e.g.: - dialled - subscribed
M Mandatory (The IE shall always be sent).					

Service Interaction Indicators Two contains the following information:

Information element name	MO	MF	MT	VT	Description
Forward Service Interaction Indicator	O	O	O	O	See the Information Flow table for the Service Interaction Indicators Two IE in the Connect operation for an explanation of this parameter.
Backward Service Interaction Indicator	O	O	O	O	See the Information Flow table for the Service Interaction Indicators Two IE in the Connect operation for an explanation of this parameter.
HOLD Treatment Indicator	O	-	-	O	This IE allows the gsmSCF to disallow the invocation of HOLD by the CAMEL subscriber. ~~This IE indicates whether the CAMEL subscriber can invoke HOLD for the call.~~
CW Treatment Indicator	O	-	-	O	This IE allows the gsmSCF to disallow the invocation of CW for a call to the CAMEL subscriber whilst this call is ongoing. ~~This IE indicates whether CW can be applied for a call to the CAMEL subscriber whilst this call is ongoing.~~
ECT Treatment Indicator	O	-	-	O	This IE allows the gsmSCF to disallow the call leg to become part of an ECT call initiated by the CAMEL subscriber. ~~This IE indicates whether the call leg can become part of an ECT call initiated by the CAMEL subscriber.~~
Connected number treatment indicator	O	O	O	O	This IE indicates the treatment of the connected number at the originating side.
Non-CUG Call	O	O	-	-	This IE indicates that no parameters for CUG should be used for the call (i.e. the call should be a non-CUG call).
O Optional (Service logic dependent). - Not applicable.					

NOTE: Non-CUG Call shall not be present if at least one of CUG Interlock Code and Outgoing Access Indicator are present in the Information Flow.

CR-Form-v5

CHANGE REQUEST

⌘ **23.078** CR **363** ⌘**rev 4** ⌘ Current version: **3.10.0** ⌘

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

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

Title: ⌘	Clarification: use of SS-Code in ATM, ATSI and NSDC	
Source: ⌘	Siemens AG	
Work item code: ⌘	CAMEL3	***Date:*** ⌘ 30 November 2001

Category: ⌘ **F (agreed by consensus)**   ***Release:*** ⌘ R99

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

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

Reason for change: ⌘	In Any Time Modification request, Any Time Subscriber Interrogation request and Notify Subscriber Data Change, the use of SS-Code is not well clarified. In a certain case, the acknowlegement message can not fully handle the request.

Example: SS-Code = allForwardingSS, SS Status = "Active and Operative" in ATM request. In this case, however, all the call forwarding features are not set "Active and Operative", i.e. CFU, CFB, CFNRy, CFNRc, CD will be set different status. This situation leads the ATM ack unable to handle all the Forwarding Feature list in one SS-Code.

This CR proposes to use only one SS feature, not "combined features" mentioned above. For NSDC, the IF is to be sent at each modification of CF or CB data. |
| ***Summary of change:*** ⌘ | For ATSI and ATM request;

- Specify the acceptable SS-Code within CF or CB category.

For NSDC;

- the IF is sent at each modification of CF or CB data. |
| ***Consequences if not approved:*** ⌘ | If such a request indicated in the "reason for change" column as an example made possible, the acknoledement message would be changed drastically, which leads great change in the stage 3. |

Clauses affected: ⌘	10

Other specs affected: ⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications	
Other comments: ⌘		

*** First modified part ***

10.3.1.1 Any Time Subscription Interrogation Request

10.3.1.1.1 Description

This IF is used to request subscription information from the HLR at any time.

10.3.1.1.2 Information Elements

The following information elements are required:

Information element name	Required	Description
GsmSCF Address	M	This IE indicates the address of the interrogating gsmSCF.
Requested Info	M	This IE indicates the type of subscriber information being requested: This shall consist of one or more of the following list: - supplementary service, described in a table below - Operator Determined Barring - CAMEL Subscription Information, described in a table below - supported CAMEL phases in VLR - supported CAMEL phases in SGSN
Subscriber Identity	M	This IE identifies the subscriber for which the information is requested. The identity shall be either: - IMSI, or - MSISDN
M	Mandatory (The IE shall always be sent).	

Supplementary service contains the following information:

Information element name	Required	Description
SS code	M	This IE indicates a supplementary service as defined in 3GPP TS 22.004 [25]. Due to a restriction of the Any Time Subscription Interrogation acknowledgement IF, oOnly the following supplementary service codes are the Call Forwarding and Call Barring supplementary services are allowed for this IE-: - call forwarding unconditional; - call forwarding on mobile subscriber busy; - call forwarding on no reply; - call forwarding on mobile subscriber not reachable; - barring of all outgoing calls; - barring of outgoing international calls; - barring of outgoing international calls except those directed to the home PLMN; - barring of all incoming calls; - barring of incoming calls when roaming outside home PLMN Country.
Basic Service	O	See 3GPP TS 22.002 [24].
M	Mandatory (The IE shall always be sent).	
O	Optional (Service Logic Dependent).	

CAMEL subscription information contains the following information:

Information element name	Required	Description
CAMEL subscription information	M	This IE indicates which CAMEL Subscription Information is requested. It shall be one of the following elements: O-CSI/T-CSI/VT-CSI/TIF-CSI/GPRS-CSI/SMS-CSI/SS-CSI/M-CSI/D-CSI
M	Mandatory (The IE shall always be sent).	

10.3.1.2 Any Time Modification Request

10.3.1.2.1 Description

This IF is used to modify information in the HLR at any time.

10.3.1.2.2 Information Elements

The following information elements are required:

Information element name	Required	Description
gsmSCF Address	M	This IE indicates the address of the interrogating gsmSCF.
Subscriber Identity	M	This IE identifies the subscriber for which the information is requested. The identity shall be either: - IMSI, or - MSISDN
Modification Request for Call Forwarding SS data	O	This IE indicates the data of Call Forwarding data to be modified. It is described in a table below.
Modification Request for Call Barring SS data	O	This IE indicates the data of call barring data to be modified. It is described in a table below.
Modification Request for CAMEL Subscription Information	O	This IE indicates the Modification Request for CAMEL Subscription Information. It is described in a table below.
M	Mandatory (The IE shall always be sent).	
O	Optional (Service Logic dependent).	

Modification Request for Call Forwarding SS data contains the following information:

Information element name	Required	Description
SS Code	M	This IE indicates Call Forwarding supplementary service as defined in 3GPP TS 22.004 [25]. Due to a restriction of the Any Time Modification acknowledgement IF, only the following supplementary service codes are allowed for this IE; - call forwarding unconditional; - call forwarding on mobile subscriber busy; - call forwarding on no reply; - call forwarding on mobile subscriber not reachable.
Basic Service	O	See 3GPP TS 22.002 [24].
SS Status	O	See 3GPP TS 23.011 [26]. Provisioning and withdrawal are not allowed for the gsmSCF.
Forwarded-to Number	O	See 3GPP TS 23.082 [27].
Forwarded-to Subaddress	O	See 3GPP TS 23.082 [27].
No Reply Condition Time	O	See 3GPP TS 23.082 [27].
Modify Notification Flag	O	This IE contains an instruction to activate or de-activate the Notification-to-CSE flag.
M	Mandatory (The IE shall always be sent).	
O	Optional (Service Logic dependent).	

Modification Request for Call Barring SS data contains the following information:

Information element name	Required	Description
SS Code	M	This IE indicates Call Barring supplementary service as defined in 3GPP TS 22.004 [25]. Due to a restriction of the Any Time Modification acknowledgement IF, only the following supplementary service codes are allowed for this IE; - barring of all outgoing calls; - barring of outgoing international calls; - barring of outgoing international calls except those directed to the home PLMN; - barring of all incoming calls; - barring of incoming calls when roaming outside home PLMN Country.
Basic Service	O	See 3GPP TS 22.002 [24].
SS Status	O	See 3GPP TS 23.011 [26]. Provisioning and withdrawal are not allowed for the gsmSCF.
Password	O	See 3GPP TS 23.011 [26].
Wrong password attempts counter	O	See 3GPP TS 23.011 [26].
Modify Notification flag	O	This IE contains an instruction to activate or de-activate the Notification-to-CSE flag.
M	Mandatory (The IE shall always be sent).	
O	Optional (Service Logic dependent).	

Modification Request for CAMEL Subscription Information contains the following information:

Information element name	Required	Description
Requested CSI	M	This IE indicates which CSI shall be modified. Only one CSI may be changed in one ATM Request.
Modify Notification flag	O	This IE contains an instruction to activate or de-activate the Notification-to-CSE flag.
Modify CSI state	O	This IE contains an instruction to activate or de-activate the CSI.
M	Mandatory (The IE shall always be sent).	
O	Optional (Service Logic dependent).	

*** Next modified part ***

10.3.2.3　　　　Notify Subscriber Data Change

10.3.2.3.1　　　　Description

This IF is used by the HLR to notify to the gsmSCF of the change of subscriber data. This IF is sent at each time subscriber data is changed.

10.3.2.3.2　　　　Information Elements

The following information elements are required:

Information element name	Required	Description
IMSI	M	The IMSI is used to identify the subscriber.
MSISDN	M	The MSISDN is used to identify the subscriber.
Call Forwarding SS data	C	This IE is described in a table below.
Call Barring SS data	C	This IE is described in a table below.
Operator Determined Barring data	C	This IE is described in a table below.
CAMEL Subscription Information	C	This IE is described in a table below.
M	Mandatory (The IE shall always be sent).	
C	Conditional (The IE shall be sent, if available).	

Call Forwarding SS data contains the following information:

Information element name	Required	Description
SS Code	C	This IE indicates Call Forwarding supplementary service as defined in 3GPP TS 22.004 [25].
Forwarding Feature List	C	See the table below.
Notification-to-CSE Flag	C	This IE indicates whether the gsmSCF is notified of a change of Call Forwarding SS data.
C	Conditional (The IE shall be sent, if available).	

Forwarding Feature List contains 1 to 32 items of the following information:

Information element name	Required	Description
Basic Service	C	See 3GPP TS 22.002 [24]. Also compound basic service codes can be used in this operation if the subscriber has used a compound code when modifying the SS (e.g. all bearer services compound code).
SS Status	C	See 3GPP TS 23.011 [26].
Forwarded-to Number	C	See 3GPP TS 23.082 [27].
Forwarded-to Subaddress	C	See 3GPP TS 23.082 [27].
Subscription Options	C	See 3GPP TS 23.082 [27].
No Reply Condition Time	C	See 3GPP TS 23.082 [27].
C	Conditional (The IE shall be sent, if available and applicable).	

Call Barring SS data contains the following information:

Information element name	Required	Description
SS Code	C	This IE indicates Call Barring supplementary service as defined in 3GPP TS 22.004 [25].
Call Barring Feature List	C	See the table below.
Password	C	See 3GPP TS 23.011 [26].
Wrong password attempts counter	C	See 3GPP TS 23.011 [26].
Notification-to-CSE flag	C	This IE indicates whether the gsmSCF is notified of a change of Call Barring SS data.
C	Conditional (The IE shall be sent, if available).	

Call Barring Feature List contains 1 to 32 items of the following information:

Information element name	Required	Description
Basic Service	C	See 3GPP TS 22.002 [24]. Also compound basic service codes can be used in this operation if the subscriber has used a compound code when modifying the SS (e.g. all bearer services compound code).
SS Status	C	See 3GPP TS 23.011 [26].
C	Conditional (The IE shall be sent, if available and applicable).	

Operator determined barring data contains the following information:

Information element name	Required	Description
ODB General Data	C	This IE indicates the set of subscribers features that the network operator or the service provider can regulate.
ODB HPLMN Specific Data	C	This IE indicates the set of subscribers features that the network operator or the service provider can regulate only when the subscriber is registered in the HPLMN.
Notification-to-CSE flag	C	This IE indicates whether the gsmSCF is notified of a change of ODB data.
C	Conditional (The IE shall be sent, if available and applicable).	

CAMEL Subscription Information contains the following information:

Information element name	Required	Description
O-CSI	C	See clause 4.3.1.
D-CSI	C	See clause 4.3.2.
T-CSI	C	See clause 4.3.4.
VT-CSI	C	See clause 4.3.5.
TIF-CSI	C	See clause 4.3.6.2.
GPRS-CSI	C	See clause 6.3.1.
SMS-CSI	C	See clause 7.3.1.
SS-CSI	C	See clause 8.2.1.
M-CSI	C	See clause 9.2.1
C	Conditional (The IE shall be sent, if it was modified).	

*** End of document ***

CR-Form-v5

CHANGE REQUEST

⌘ **23.078 CR 371** ⌘**rev** **-** ⌘ Current version: **4.2.0** ⌘

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

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

Title: ⌘	Clarification: use of SS-Code in ATM, ATSI and NSDC	
Source: ⌘	Siemens AG	
Work item code: ⌘	CAMEL3	***Date:*** ⌘ 30 November 2001
Category: ⌘	**A**	***Release:*** ⌘ Rel-4

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

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

Reason for change: ⌘	In Any Time Modification request, Any Time Subscriber Interrogation request and Notify Subscriber Data Change, the use of SS-Code is not well clarified. In a certain case, the acknowlegement message can not fully handle the request.
	Example: SS-Code = allForwardingSS, SS Status = "Active and Operative" in ATM request. In this case, however, all the call forwarding features are not set "Active and Operative", i.e. CFU, CFB, CFNRy, CFNRc, CD will be set different status. This situation leads the ATM ack unable to handle all the Forwarding Feature list in one SS-Code.
	This CR proposes to use only one SS feature, not "combined features" mentioned above. For NSDC, the IF is to be sent at each modification of CF or CB data.
Summary of change: ⌘	For ATSI and ATM request;
	- Specify the acceptable SS-Code within CF or CB category.
	For NSDC;
	- the IF is sent at each modification of CF or CB data.
Consequences if not approved: ⌘	If such a request indicated in the "reason for change" column as an example made possible, the acknoledement message would be changed drastically, which leads great change in the stage 3.

Clauses affected: ⌘	10		
Other specs affected: ⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	
Other comments: ⌘			

<div style="border: 1px solid black; text-align: center;">

*** First modified part ***

</div>

10.3.1.1 Any Time Subscription Interrogation Request

10.3.1.1.1 Description

This IF is used to request subscription information from the HLR at any time.

10.3.1.1.2 Information Elements

The following information elements are required:

Information element name	Required	Description
GsmSCF Address	M	This IE indicates the address of the interrogating gsmSCF.
Requested Info	M	This IE indicates the type of subscriber information being requested: This shall consist of one or more of the following list: - supplementary service, described in a table below - Operator Determined Barring - CAMEL Subscription Information, described in a table below - supported CAMEL phases in VLR - supported CAMEL phases in SGSN
Subscriber Identity	M	This IE identifies the subscriber for which the information is requested. The identity shall be either: - IMSI, or - MSISDN
M		Mandatory (The IE shall always be sent).

Supplementary service contains the following information:

Information element name	Required	Description
SS code	M	This IE indicates a supplementary service as defined in 3GPP TS 22.004 [25]. Due to a restriction of the Any Time Subscription Interrogation acknowledgement IF, oOnly the following supplementary service codes are the Call Forwarding and Call Barring supplementary services are allowed for this IE.: - call forwarding unconditional; - call forwarding on mobile subscriber busy; - call forwarding on no reply; - call forwarding on mobile subscriber not reachable; - barring of all outgoing calls; - barring of outgoing international calls; - barring of outgoing international calls except those directed to the home PLMN; - barring of all incoming calls; - barring of incoming calls when roaming outside home PLMN Country.
Basic Service	O	See 3GPP TS 22.002 [24].
M		Mandatory (The IE shall always be sent).
O		Optional (Service Logic Dependent).

CAMEL subscription information contains the following information:

Information element name	Required	Description
CAMEL subscription information	M	This IE indicates which CAMEL Subscription Information is requested. It shall be one of the following elements: O-CSI/T-CSI/VT-CSI/TIF-CSI/GPRS-CSI/SMS-CSI/SS-CSI/M-CSI/D-CSI
M　　　　Mandatory (The IE shall always be sent).		

10.3.1.2　　Any Time Modification Request

10.3.1.2.1　　Description

This IF is used to modify information in the HLR at any time.

10.3.1.2.2　　Information Elements

The following information elements are required:

Information element name	Required	Description
gsmSCF Address	M	This IE indicates the address of the interrogating gsmSCF.
Subscriber Identity	M	This IE identifies the subscriber for which the information is requested. The identity shall be either: -　IMSI, or -　MSISDN
Modification Request for Call Forwarding SS data	O	This IE indicates the data of Call Forwarding data to be modified. It is described in a table below.
Modification Request for Call Barring SS data	O	This IE indicates the data of call barring data to be modified. It is described in a table below.
Modification Request for CAMEL Subscription Information	O	This IE indicates the Modification Request for CAMEL Subscription Information. It is described in a table below.
M　　　　Mandatory (The IE shall always be sent). O　　　　Optional (Service Logic dependent).		

Modification Request for Call Forwarding SS data contains the following information:

Information element name	Required	Description
SS Code	M	This IE indicates Call Forwarding supplementary service as defined in 3GPP TS 22.004 [25]. Due to a restriction of the Any Time Modification acknowledgement IF, only the following supplementary service codes are allowed for this IE; -　call forwarding unconditional; -　call forwarding on mobile subscriber busy; -　call forwarding on no reply; -　call forwarding on mobile subscriber not reachable.
Basic Service	O	See 3GPP TS 22.002 [24].
SS Status	O	See 3GPP TS 23.011 [26]. Provisioning and withdrawal are not allowed for the gsmSCF.
Forwarded-to Number	O	See 3GPP TS 23.082 [27].
Forwarded-to Subaddress	O	See 3GPP TS 23.082 [27].
No Reply Condition Time	O	See 3GPP TS 23.082 [27].
Modify Notification Flag	O	This IE contains an instruction to activate or de-activate the Notification-to-CSE flag.
M　　　　Mandatory (The IE shall always be sent). O　　　　Optional (Service Logic dependent).		

Modification Request for Call Barring SS data contains the following information:

Information element name	Required	Description
SS Code	M	This IE indicates Call Barring supplementary service as defined in 3GPP TS 22.004 [25]. Due to a restriction of the Any Time Modification acknowledgement IF, only the following supplementary service codes are allowed for this IE; - barring of all outgoing calls; - barring of outgoing international calls; - barring of outgoing international calls except those directed to the home PLMN; - barring of all incoming calls; - barring of incoming calls when roaming outside home PLMN Country.
Basic Service	O	See 3GPP TS 22.002 [24].
SS Status	O	See 3GPP TS 23.011 [26]. Provisioning and withdrawal are not allowed for the gsmSCF.
Password	O	See 3GPP TS 23.011 [26].
Wrong password attempts counter	O	See 3GPP TS 23.011 [26].
Modify Notification flag	O	This IE contains an instruction to activate or de-activate the Notification-to-CSE flag.
M	Mandatory (The IE shall always be sent).	
O	Optional (Service Logic dependent).	

Modification Request for CAMEL Subscription Information contains the following information:

Information element name	Required	Description
Requested CSI	M	This IE indicates which CSI shall be modified. Only one CSI may be changed in one ATM Request.
Modify Notification flag	O	This IE contains an instruction to activate or de-activate the Notification-to-CSE flag.
Modify CSI state	O	This IE contains an instruction to activate or de-activate the CSI.
M	Mandatory (The IE shall always be sent).	
O	Optional (Service Logic dependent).	

*** Next modified part ***

10.3.2.3   Notify Subscriber Data Change

10.3.2.3.1   Description

This IF is used by the HLR to notify to the gsmSCF of the change of subscriber data. This IF is sent at each time subscriber data is changed.

10.3.2.3.2   Information Elements

The following information elements are required:

Information element name	Required	Description
IMSI	M	The IMSI is used to identify the subscriber.
MSISDN	M	The MSISDN is used to identify the subscriber.
Call Forwarding SS data	C	This IE is described in a table below.
Call Barring SS data	C	This IE is described in a table below.
Operator Determined Barring data	C	This IE is described in a table below.
CAMEL Subscription Information	C	This IE is described in a table below.
M	Mandatory (The IE shall always be sent).	
C	Conditional (The IE shall be sent, if available).	

Call Forwarding SS data contains the following information:

Information element name	Required	Description
SS Code	C	This IE indicates Call Forwarding supplementary service as defined in 3GPP TS 22.004 [25].
Forwarding Feature List	C	See the table below.
Notification-to-CSE Flag	C	This IE indicates whether the gsmSCF is notified of a change of Call Forwarding SS data.
C	Conditional (The IE shall be sent, if available).	

Forwarding Feature List contains 1 to 32 items of the following information:

Information element name	Required	Description
Basic Service	C	See 3GPP TS 22.002 [24]. Also compound basic service codes can be used in this operation if the subscriber has used a compound code when modifying the SS (e.g. all bearer services compound code).
SS Status	C	See 3GPP TS 23.011 [26].
Forwarded-to Number	C	See 3GPP TS 23.082 [27].
Forwarded-to Subaddress	C	See 3GPP TS 23.082 [27].
Subscription Options	C	See 3GPP TS 23.082 [27].
No Reply Condition Time	C	See 3GPP TS 23.082 [27].
C	Conditional (The IE shall be sent, if available and applicable).	

Call Barring SS data contains the following information:

Information element name	Required	Description
SS Code	C	This IE indicates Call Barring supplementary service as defined in 3GPP TS 22.004 [25].
Call Barring Feature List	C	See the table below.
Password	C	See 3GPP TS 23.011 [26].
Wrong password attempts counter	C	See 3GPP TS 23.011 [26].
Notification-to-CSE flag	C	This IE indicates whether the gsmSCF is notified of a change of Call Barring SS data.
C	Conditional (The IE shall be sent, if available).	

Call Barring Feature List contains 1 to 32 items of the following information:

Information element name	Required	Description
Basic Service	C	See 3GPP TS 22.002 [24]. Also compound basic service codes can be used in this operation if the subscriber has used a compound code when modifying the SS (e.g. all bearer services compound code).
SS Status	C	See 3GPP TS 23.011 [26].
C	Conditional (The IE shall be sent, if available and applicable).	

Operator determined barring data contains the following information:

Information element name	Required	Description
ODB General Data	C	This IE indicates the set of subscribers features that the network operator or the service provider can regulate.
ODB HPLMN Specific Data	C	This IE indicates the set of subscribers features that the network operator or the service provider can regulate only when the subscriber is registered in the HPLMN.
Notification-to-CSE flag	C	This IE indicates whether the gsmSCF is notified of a change of ODB data.
C	Conditional (The IE shall be sent, if available and applicable).	

CAMEL Subscription Information contains the following information:

Information element name	Required	Description
O-CSI	C	See clause 4.3.1.
D-CSI	C	See clause 4.3.2.
T-CSI	C	See clause 4.3.4.
VT-CSI	C	See clause 4.3.5.
TIF-CSI	C	See clause 4.3.6.2.
GPRS-CSI	C	See clause 6.3.1.
SMS-CSI	C	See clause 7.3.1.
SS-CSI	C	See clause 8.2.1.
M-CSI	C	See clause 9.2.1
C	Conditional (The IE shall be sent, if it was modified).	

*** End of document ***